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THE IMPACT OF EMOTIONAL ADS: THE ROLE OF INVOLVEMENT, AD TYPE, AND TYPE OF PURCHASE MOTIVES

François Coderre

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ABSTRACT

The present dissertation examines the impact of advertising message involvement (AMI) and the type of ad (ADTYPE) on the nature (cognitive versus affective) and level of abstraction of the information that is encoded during ad exposure. In addition, it examines the impact of brand response involvement (BRI) and the type of purchase motives (TPM) on the nature and level of abstraction of the information that is used for making a judgment or choice.

An experiment using 372 subjects was conducted. A 2x2x2x2 between subjects design manipulated AMI (low versus high), ADTYPE (rational versus emotional), BRI (low versus high), and TPM (cognitive versus affective). Results indicated that ADTYPE determines the nature of the information that is encoded during ad exposure, whereas AMI determines the level of abstraction of cognitive (but not affective) information encoded. Results regarding the impact of BRI and TPM were not conclusive.

RÉSUMÉ

Cette thèse examine l'impact du niveau d'implication au moment de l'exposition à un message publicitaire (IMP) et du type de message (TM) sur la nature (cognitive versus affective) et le niveau d'abstraction de l'information qui est encodée durant l'exposition au message. De plus, elle examine l'impact du niveau d'implication au moment de faire un choix ou de porter un jugement envers une marque (IJ) et du type de motifs d'achat (TMA) sur la nature et le niveau d'abstraction de l'information qui est utilisée lors du jugement ou du choix.

Une étude expérimentale a été réalisée auprès de 372 sujets. Un plan factoriel 2x2x2x2 manipulant IMP (faible versus élevée), TM (rationnel versus émotionnel), IJ (faible versus élevée) et TMA (cognitif versus affectif) a été utilisé. Les résultats ont démontré que TM détermine la nature de l'information qui est encodée durant l'exposition au message, alors que IMP détermine le niveau d'abstraction de l'information cognitive (mais pas affective) qui est encodée. Les résultats concernant l'impact de IJ et TMA ne sont pas concluants.

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CHAPTER 1

INTRODUCTION

With the advent of the eighties, the study of emotions has become a major research issue in the advertising literature. For example, several books (Alwitt and Mitchell 1985; Cafferata and Tybout 1989; Hecker and Steward 1988; Olson and Sentis 1986; Peterson et al. 1986) and articles (Aaker et al. 1988; Batra and Ray 1986; Burke and Edell 1989; Chattopadhyay and Basu 1990; Chattopadhyay and Nedungadi 1992; Cohen and Areni 1991; Edell and Burke 1987; Shimp 1991; to name a few) addressing the role of emotions have been published by academics over the past few years.

A similar concern with the use of emotional ads has also been observed among advertising practitioners (Yoon 1991). In fact, most current advertisements include an emotional component (Coulson 1989). Furthermore, major firms such as Dupont and Kodak are reported to have shifted from rational to more emotional ads (Kearns and Crane 1991), and advertising agencies are putting considerable efforts into developing new instruments for the measurement of emotional responses to advertisements and their consequences (Davis 1991; Leavitt 1970, 1975; McQueen 1991; Ratchford and Vaughn 1989; Schlinger 1979; Wells 1964; Wells et al. 1971).

This increasing interest in the study of emotions has caused many researchers to modify current cognitive-centred models of persuasion to better incorporate the role of emotions. For example, several researchers have explicitly included emotions as an antecedent to ad attitude (Batra and Ray 1986; Chattopadhyay and Basu 1990; Chattopadhyay and Nedungadi 1992; Edell and Burke 1987; for a review of the attitude toward the ad literature see Brown and Stayman 1992). Other researchers have studied the effects of emotions using the classical conditioning model (Allen and Janiszewski 1989; Bierley, McSweeney and Vannieuwkerk 1985; Gorn 1982; Shimp et al. 1991; for reviews see Cohen and Areni 1991; McSeeney and Bierley 1984; Shimp 1991).

Although these research streams have provided useful insight on the role of emotions, they have mostly focused on the impact of emotions occurring during ad exposure, or immediately after (for an exception see Chattopadhyay and Nedungadi 1992). By doing so, researchers are assuming that the impact of emotions on ad attitude and brand attitude observed during ad exposure (or immediately after) will be observed later on, on the brand choice occasion. However, as noted by many researchers, this might not be the case (Baker and Lutz 1988; Chattopadhyay and Nedungadi 1992; Nedungadi et al. 1991). For example, the information individuals recall on both occasions (Alba et al. 1992; Chattopadhyay and Alba 1988; Chattopadhyay and Nedungadi 1992), as well as their level of involvement (Baker and Lutz 1988), might not be the same. As a

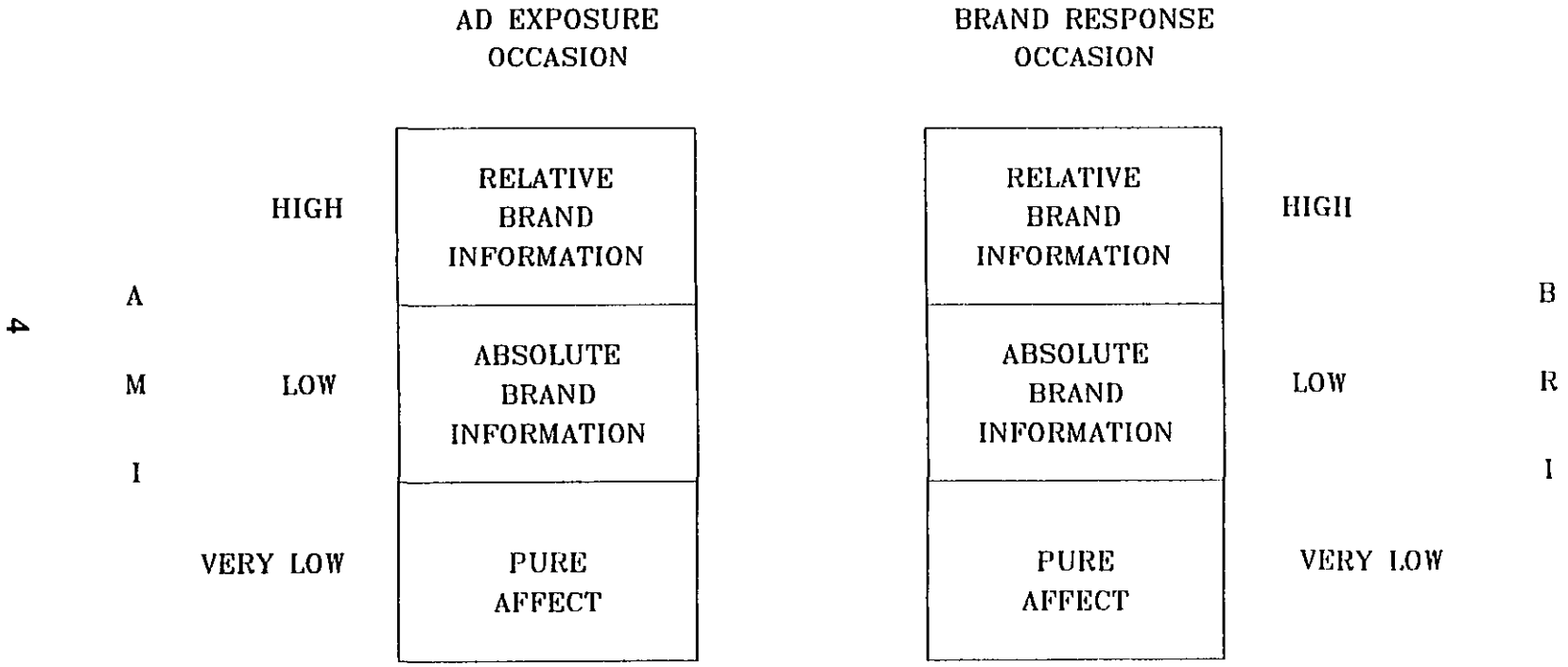
result, different brand evaluations are likely to be reported on each occasion.

This last observation is important if we consider that advertisers are not as interested in what happens right after ad exposure as they are in what happens on choice making occasions (Chattopadhyay and Alba 1988; Keller 1987; Stayman 1991). Thus, from a managerial point of view, it becomes important to develop models of advertising that distinguish the effects occurring on the ad exposure occasion (e.g., home advertising exposure) from those occurring on the brand choice occasion (e.g., in store brand choice). Recently, Baker and Lutz (1988) have developed such a model: the Relevance-Accessibility Model (hereafter, RAM). A brief description of the RAM model may help to understand the implications of the model.

1.1 The RAM model

A complete presentation of the RAM model is not included. Only three major characteristics are described. First, according to Baker and Lutz (1988, p. 68) three levels (or types) of information can be distinguished (see Figure 1.1.1). Pure affect (e.g., emotions generated during ad exposure) is the lowest level of information, providing vague brand information. Heuristic cues are the intermediate level of information. They furnish descriptive information that are used to make general inferences (e.g., credible source). Relative benefits (e.g., usage benefits) is the highest level of information. It "provides specific

Figure 1.1.1
The RAM model



performance information that allows direct comparisons among competing brand alternatives" (Baker and Lutz 1998, p. 68).

Secondly, the RAM model emphasizes the necessity to distinguish the consumer's level of involvement during ad processing (i.e., advertising message involvement) from the consumer's level of involvement during choice (i.e., decision making involvement). Since ad exposure and brand choice do not generally occur simultaneously, except perhaps for point-of-purchase advertising, it can be expected that the consumer's level of involvement might not be the same in these two instances.

Thirdly, the RAM model postulates that advertising message involvement is a major determinant of the type of information that is likely to be encoded during ad processing, and that decision making involvement is a major determinant of the type of information that is likely to be used during choice. For instance, the type of information that is most likely to be encoded under very low, low, and high levels of advertising message involvement is pure affect, heuristic cues, and relative benefits, respectively. Similarly, under very low, low, and high levels of decision making involvement, the type of information that is most likely to be used for choice making is pure affect, heuristic cues, and relative benefits, respectively.

Given that the level of involvement may not be the same during ad exposure and choice, the type of information that will be encoded during ad exposure might differ from the type of information that will be used during choice. Consequently,

ad effectiveness may be considerably reduced when the type of information that is encoded during exposure does not match the type of information that is used for choice.[1] An example taken from Baker (1991, p. 18) will illustrate this point.

> "In any given product category, advertising strategists need to know if their target is most likely to use specific brand performance information, brand quality cues or simple affective reactions to base their brand choice decision.
>
> The information type that is most likely to be used by the targeted consumers for a given brand in a given product category needs to be emphasized in advertising messages for that product category. If most targeted consumers for a given brand of shampoo buy shampoos on the basis of simple affective reactions, then the goal of advertising should be to associate positive feelings to the brand. Communicating relative performance information is a waste of advertising copy if that type of information is not expected to be used by consumer at the point of purchase and is only likely to inhibit advertising effectiveness. Conversely, if targeted consumers buy shampoos on the basis of relative performance information, then the commercial should stress information capable of persuading consumers that the brand is superior on one or performance dimensions and de-emphasize elements of the ad that only generate positive feelings."

Though the RAM model extends extant work on the role of emotions by attempting to specify the conditions under which affective information will be used, the model seems to underestimate the role of emotions. As noted above, according to the RAM model, individuals are likely to use affective information

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1- This description of the RAM model is very brief. In fact, the model is much broader and integrates several streams of research (for a comprehensive review, see Baker 1991; Baker and Lutz 1988).

during choice when the level of involvement is very low, but not when the level of involvement is low or high. In our opinion, confining the role of emotions to very low involvement situations seems to be too restrictive. In fact, there are many highly involving choice situations for which emotions might be a major component of the choice process, such as when a person buys a sports car, motorcycle, perfume, or jewellery (Ratchford 1987; Vaughn 1980, 1986).

Therefore, one thrust of the present research is to extend the RAM model by giving emotions a more important place and specifying the conditions under which emotions are likely to strongly influence consumers' decisions. The proposed framework follows.

1.2 The proposed framework

The framework adopted for this research is presented in Figure 1.2.1. Seven elements of this framework need to be clarified.

First, following the RAM model, a distinction is made between the ad exposure occasion and brand response occasion. The level of involvement during ad exposure (i.e., advertising message involvement, hereafter, AMI) and the level of involvement during judgment/decision (i.e., brand response involvement, hereafter, BRI)[2] vary between high and low.[3] Moreover, as ad exposure and

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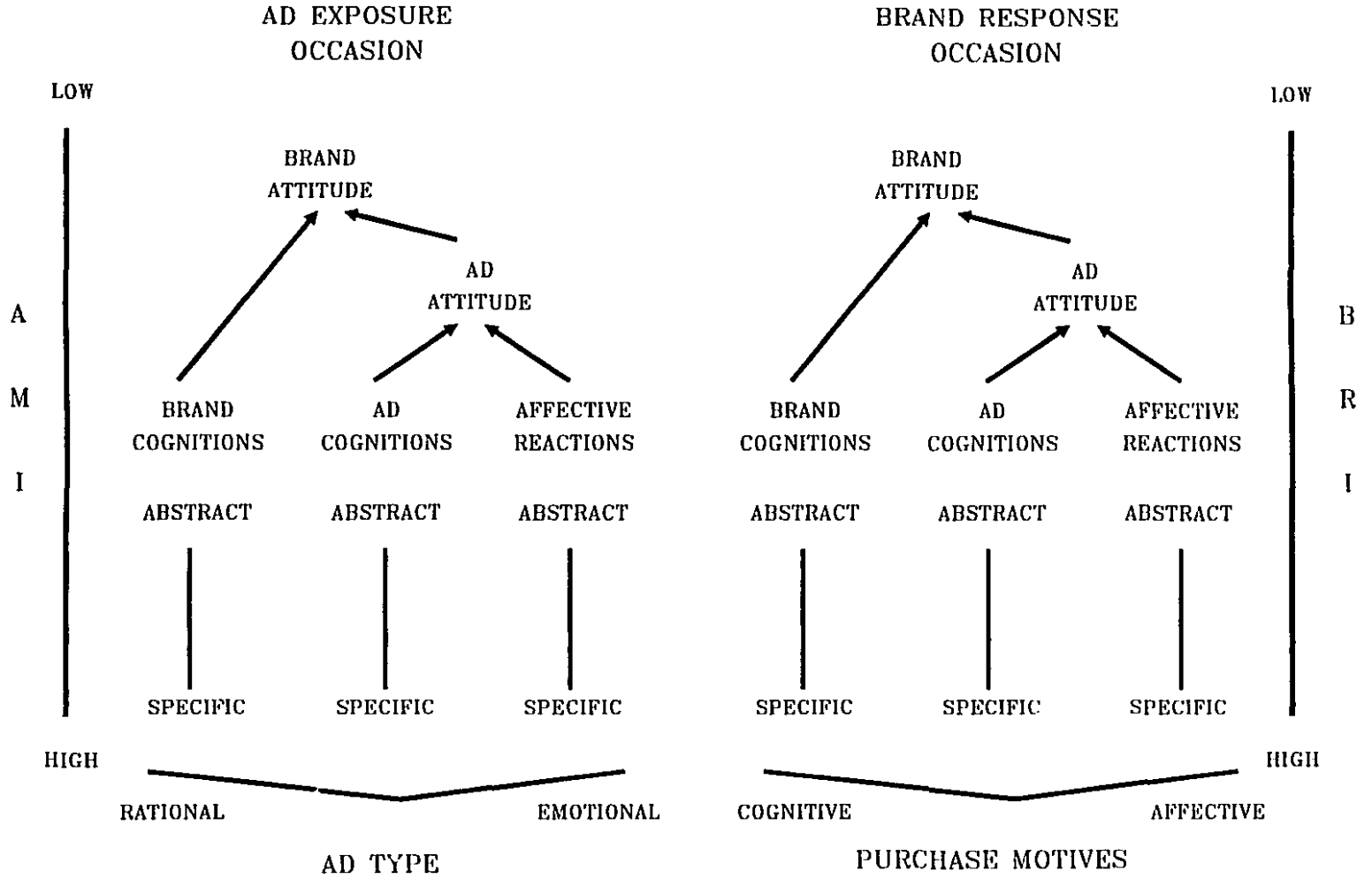
2- Notice that we view brand response occasion to include brand judgment occasion as well as decision making occasion. Since these two processes are not

Figure 1.2.1
The conceptual framework



choice do not generally occur simultaneously, the level of involvement is not necessarily the same on these two occasions (Baker and Lutz 1988).[4]

Secondly, the framework adopts a structural causal model of the impact of advertising that is consistent with recent theorizing (Burke and Edell 1989; Edell and Burke 1987; Lutz 1985; MacKenzie and Lutz 1989). Ad cognitions and affective reactions generated during ad exposure are assumed to be antecedents of attitude toward the ad (hereafter, AAD). In turn, AAD and brand cognitions are assumed to be antecedents of brand attitude (hereafter, AB). As we will discuss later on, in some situations, affective reactions generated during ad exposure may also have a direct impact on AB (Stayman and Aaker 1988; Burke and Edell 1989).

Thirdly, information is distinguished according to its nature (i.e., cognitive

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equivalent (Payne 1982), we prefer to use the term brand response involvement (BRI) rather than decision making involvement to refer to the individual's level of involvement during judgment/choice making (see also Baker 1991).

3- The present research regards involvement as a continuum. Rather than attempting to identify three qualitatively different levels of involvement, the proposed framework focuses on the two extremes, i.e, high and low.

4- The delay between ad exposure occasion and brand response occasion may not only impact on the level of involvement but also on the accessibility of different types of information (Chattopadhyay and Alba 1988; Chattopadhyay and Nedungadi 1992). However, the present research will not directly address the role of delay.

versus affective) and level of abstraction (abstract versus specific).[5] Thus, brand cognitions and ad cognitions are considered cognitive information. Emotions (or feelings) generated during ad exposure are considered affective information (Batra and Ray 1986; Edell and Burke 1987; Stayman and Aaker 1988). Attitude (e.g., AB, AAD) is defined as a global evaluation which can be based on three classes of information: (1) cognitive information (e.g., beliefs), (2) affective information (e.g., emotions), (3) behavioral information (e.g., past behavior). This global evaluation can range from cold evaluation (e.g., "it is a good car") to hot evaluation (e.g., "I like this car") depending on whether it is mainly based on cognitive or affective information (Fazio 1989; Millar and Millar 1990; Zanna and Rempel 1988), respectively.

Brand cognitions, ad cognitions and emotions are further differentiated according to their level of abstraction (see Figure 1.2.1). Based on Chattopadhyay and Alba (1988, p. 3-11), three levels of abstraction among brand cognitions are identified: (1) specific detail (e.g., "the car goes from 0 to 60 mph in 7 seconds"), (2) single-fact interpretation (e.g., when "the car goes from 0 to 60 mph in 7 seconds" is interpreted as "rapid acceleration") and (3) cognitive abstraction (e.g., when "8 cylinders", "turbocharger" and "fuel injected" are associated to infer

5- In this research, the level of abstraction is defined as the inverse of how directly an attribute or emotion denotes a particular object, person or event (see Johnson 1984).

"powerful car").[6] Ad cognitions are also expected to vary according to their level of abstraction. In this research, Chattopadhyay and Alba's classification of brand cognitions will be extended to include ad cognitions.

Similarly, based on the research on the taxonomy of emotions (Shaver et al. 1987; Storm and Storm 1987) three levels of abstraction among affective reactions generated during ad exposure are identified: (1) specific affective reactions (e.g., the ad makes me feel nostalgic, disappointed, guilty, relieved, encouraged), (2) basic affective reactions (e.g., the ad makes me feel sad, happy), and (3) general affective reactions (e.g., the ad makes me feel good, bad). These three levels roughly correspond to those identified in prototype theory, that is, subordinate level, basic level and superordinate level (Rosch et al. 1976). Although the difference between general and basic affective reactions is obvious, the one between specific and basic affective reactions is less apparent, and needs to be clarified.

Specific affective reactions differ from basic affective reactions in that they have a more specialized meaning (Storm and Storm 1987, p. 809). For example, specific emotions such as nostalgia, disappointment and guilt are kinds of sadness. Nostalgia implies the absence of something desired, disappointment involves a

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6- Chattopadhyay and Alba (1988) also considered cold judgment (e.g., "it is a good car") as a forth level of cognitive information. Here, such evaluative judgments will be considered equivalent to brand attitude.

specific external event causing a change, and guilt implicates one's own behavior as the cause. Thus, sadness is considered as a basic affective reaction because it can be substituted for nostalgia, disappointment or guilt with some loss of meaning but little distortion. In contrast, nostalgia, disappointment or guilt can not be used as a substitute without a major distortion.

Finally, in this research, attitude is considered as the information having the highest level of abstraction since it summarizes cognitive and affective information.

As we can see, in the present framework, cognitive information as well as affective information range in a continuum from the specific to the abstract. However, this does not seem to be the case in the RAM model. As we noted previously, according to that model, "pure affect", "heuristic cues" and "relative benefits" are respectively defined as low, intermediary and high levels of information. It may be observed that Baker and Lutz's two highest levels of information (i.e., high and intermediary levels) correspond to cognitive information whereas the lowest level of information corresponds to affective information. Therefore, in the RAM model, the level of abstraction and the nature of the information are confounded. In the present framework, the nature of information and the level of abstraction of information are treated as two independent dimensions. The usefulness of this distinction will become apparent in the following sections as it will be argued that each dimension has different determinants.

As a fourth element, it is suggested that AMI is a major determinant of the level of abstraction of the information that is most likely to be encoded during ad processing. Specifically, the following two propositions are put forward: (1) abstract information (e.g., cognitive abstractions, general affective reactions, AAD, AB) is spontaneously encoded during ad exposure, and (2) as the level of AMI increases, specific information (e.g., specific affective reactions, brand details) becomes more strongly encoded in memory. The first proposition is consistent with findings from research on "automatic" processes (Uleman et al. 1986; Winter and Uleman 1984), spontaneous attitude formation (Kardes 1988) and classical conditioning (Gorn 1982; Shimp et al. 1991). Support for the second proposition can be found in theorizing and research from dual processing models (Chaiken et al. 1989; Fiske and Neuberg 1990; Petty and Cacioppo 1986), cognitive theories of emotion (Lazarus 1991; Weiner 1985), and emotional development (Fischer et al. 1990; Thompson 1989).

Together, these two propositions suggest that when the level of AMI is low, abstract information (e.g., cognitive abstractions, AB, AAD, and general affective reactions) will be spontaneously encoded following a minimal processing of specific information. Consequently, abstract information is likely to be strongly encoded in memory, but not the specific information from which it is based. In contrast, when the level of AMI is high, abstract information will be formed following an extensive processing of specific information, and hence, abstract

information as well as the specific information from which it is based are likely to be strongly encoded in memory.

As a fifth element, it is proposed that BRI is a major determinant of the level of abstraction of the information that is most likely to be retrieved and used during judgment/choice. In particular, the following two propositions are made: (1) abstract information is more accessible than specific information, and (2) as the level of BRI increases, specific information is more likely to be used rather than abstract information in judgment/choice. The first proposition has received empirical support from research on the stability of information over time (Chattopadhyay and Alba 1988; Kintsch and van Dijk 1978) and automatic attitude accessibility (Fazio et al. 1986). Support for the second proposition can be found in the research on recall-judgment-behavior relationship (Alba et al. 1992; Fazio 1990; Gardial and Biehal 1985; Sanbonmatso and Fazio 1990), attitude toward the ad (Burke and Edell 1989; Stayman and Aaker 1988), and mood effects occurring at the time of judgment making (Bless et al. 1990).

Jointly, these two propositions suggest that when the level of BRI is low, individuals will not put a lot of effort in judgment/choice and, therefore, only the most accessible information is likely to be retrieved and used as a basis for judgment/choice. As abstract information is more accessible than specific information, it is more likely to be used as a basis for judgment/choice. In contrast, when the level of BRI is high, individuals are more likely to devote

considerable amount of effort in retrieving all useful information. Therefore, abstract and less accessible information such as specific information are likely to be retrieved. As specific information is more likely to be perceived as relevant than abstract information (because it facilitates the discrimination among alternatives, see Alba et al. 1991), it is more likely to be used as a basis for judgment/choice.

As a sixth element, it is argued that the type of ad (i.e., rational versus emotional ad) will be a major determinant of the nature of the information (i.e., cognitive versus affective) that is most likely to be encoded. In fact, with no specific goal in mind during ad exposure, the ad's salient characteristics may determine the focus of attention and eventually influence the type of information that will be encoded (Chattopadhyay and Nedungadi 1992). Emotional ads should favour encoding of affective responses while rational ads should favour encoding of cognitive responses.[7]

Finally, as a last element, it is proposed that the type of purchase motives (i.e., cognitive versus affective) will be a major determinant of the nature of information that is most likely to be used in judgment/choice (McGuire 1976; Vaughn 1980, 1986). Thus, cognitive information is most likely to be used in

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7- Emotional and rational ads are not expected to represent two extremes of a the same continuum. In fact, an ad can be both highly affective and highly rational. We use a broken line above Ad-Type in the bottom of Figure 1.2.1 to represent this situation.

judgment/choice, if product purchase is associated with utilitarian motives. Inversely, if product purchase is closely associated with affective motives, then affective information should be perceived as more relevant in judgment/choice (Millar and Tesser 1986, 1989).[8]

All these elements will be extensively discussed in the following chapters. Before we do so, below we outline the implications of this framework in light of one controversial issue. It concerns the extent to which AAD is an adequate mediator of all emotional reactions generated during ad exposure.

1.2.1 Implications for the mediating role of AAD in attitude formation

Although early formulation of the mediating role of AAD (Edell and Burke 1987; Lutz et al. 1983; MacKenzie et al. 1986; Mitchell and Olson 1981; Shimp 1981) implicitly suggested that AAD is a mediator of all emotions generated during ad exposure, recent studies from Stayman and Aaker (1988) and Burke and Edell (1989) indicate that this may not be the case in all situations. For instance, Stayman and Aaker (1988) reported situations where after removing the effect of AAD on AB, there is still a significant residual effect of specific emotions (e.g., warmth, amusement and irritation) on AB. Similarly, Burke and Edell (1989)

8- As for Ad-Type, the broken line above Purchase Motives in the bottom of Figure 1.2.1 indicates that cognitive and affective motives are not assumed to represent two extremes of the same continuum. Thus, the purchase decision can be driven by affective and cognitive motives simultaneously.

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found that the effect of upbeat feelings and negative feelings on AB were not totally mediated by AAD and brand attribute evaluation.

The present framework offers a potential explanation for these results. As noted previously, the information encoded during ad exposure should be distinguished from the information retrieved and used during judgment/choice. Thus, it might be expected that under low levels of AMI, individuals will not make much effort in ad processing. They may spontaneously encode some abstract information about the brand (e.g., cognitive abstraction, general affective reactions, initial AB, initial AAD), but forget the specific information (e.g., arguments) on which they were based. In contrast, under high levels of AMI, individuals will put a lot of effort in ad processing. Along with abstract information, individuals are likely to encode the specific cognitive and affective information on which abstract information is based.

Later on, at the brand response occasion, individuals will retrieve from memory, part of the encoded information. If the level of BRI is relatively low, individuals will not put much effort into retrieving all potentially useful information during judgment making. They may simply report their evaluation of the brand based on the most accessible information. Since abstract information is more easily accessible than specific information (Chattopadhyay and Alba 1988), AB and AAD spontaneously encoded during ad exposure are likely to be used as a basis for the judgment. In such a case, AAD should mediate all the effects of

emotions generated during ad exposure on AB.

In contrast, if the level of BRI is relatively high, individuals will put a lot of effort into retrieving all potentially useful information, that is, they may retrieve abstract as well as specific information. Instead of relying on judgments encoded during ad exposure (e.g., initial AB or initial AAD), they may form a new evaluation based on the information perceived to be most useful. If cognitive motives drive the purchase decision (e.g., if individuals think of the utilitarian value of the product while reporting its evaluation), it can be expected that specific emotional reactions will influence their evaluation of the brand minimally (Cacioppo and Petty 1989; Park and Young 1986). Therefore, no direct effect of emotions on AB should be observed.

If affective motives drive the purchase decision (e.g., if individuals think of the feelings generated during the consumption of the product while reporting brand evaluation), it can be expected that their evaluation of the brand will be highly influenced by the recollection of specific emotional reactions (Millar and Millar 1990). Therefore, in addition to the indirect effect of emotions on AB (through AAD), a direct relationship between emotions and AB can be predicted when purchase decision is driven by affective motives. Nevertheless, this direct effect will only occur if specific affective reactions have been encoded during ad processing, that is, if individuals' level of AMI was high during ad exposure.

In conclusion, after controlling for the effect of AAD on AB, a direct effect

of emotions on AB is likely to persist under the following condition: high-AMI/high-BRI/affective purchase motives.

If these predictions are confirmed, this could have interesting managerial implications. For instance, if the consumption of a highly involving product is associated with affective reactions, it will not be sufficient to produce ads that simply generate positive AAD. Rather, ads should be designed to create the specific type of emotional reactions that are expected to occur during product consumption. The recent use of humour in car advertising in Québec broadcasting can therefore be questioned. These ads might create a positive AAD, but later on, at the time of judgment/choice, AAD may be considered irrelevant information. Rather, consumers may look for specific types of emotions that they expect to be associated with driving a car (and of course, may also look for specific cognitive information).[9]

To conclude, all these predictions hinge on four major postulates: (1) information can be distinguished according to its nature (cognitive versus affective) and level of abstraction, (2) AMI and BRI are major determinants of the level of information that is more likely to be encoded, retrieved and used during ad processing and judgment/choice, (3) the type of ad (hereafter, ADTYPE) is a

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9- One could argue that humour is used to attract viewers' attention rather than be used to create a positive attitude toward the ad. In such a situation, the strategy may also not be adequate. Humour may distract viewers from encoding specific cognitive and affective information.

major determinant of the nature of the information that will be encoded during ad exposure, and (4) the type of purchase motives (hereafter, TPM) is a major determinant of the nature of the information that is more likely to be used in judgment/choice.

All these issues will be discussed in the chapters that follow. Chapter 2 presents the cognitive-affective and abstract-specific distinctions. Chapter 3 reviews the literature of the effect of AMI and BRI on the level of abstraction of the information that is most likely to be (1) encoded during ad exposure, and (2) used and retrieved during judgment/choice. Chapter 4 documents (1) the effect of ADTYPE on the nature of the information that will be encoded during ad processing and (2) the effect of TPM on the nature of the information that will be used in judgment/choice making. Chapter 5 presents the hypotheses. Pretests are reported in Chapter 6. The research design is described in Chapter 7. Finally, the results are presented in Chapter 8 and discussed in Chapter 9.

CHAPTER 2

THE TYPE OF INFORMATION: DEFINITIONS

Two characteristics of the information that is encoded, retrieved and used during ad processing and judgment/choice are important to the present proposal. They are the distinction between cognitive and affective information, and the distinction between abstract and specific information. In the next two sections, a review of how these distinctions have been addressed in the cognitive psychology, social psychology, and marketing literature will be presented. The usefulness of these two distinctions will become apparent in the following chapters when we will discuss the effects of involvement, ADTYPE, and TPM on the nature of information that is most likely to be retrieved, encoded, and used during ad processing and judgment/choice.

2.1 The distinction between cognitive and affective information

The distinction between cognition and affect can be found in the writings of early philosophers such as Plato and Aristotle "who identified three aspects of the human spirit: thoughts, feelings, and desires" (Cohen and Areni 1991, p. 188). In fact this distinction has strong historical basis not just in the psychological field but in Western philosophy in general (Zanna and Rempel 1988). However, despite the

widespread acceptance of the tripartite division of the mind, there is still no consensus in psychology, social psychology, and consumer behavior about what distinguishes cognitive and affective information.

In psychology, for instance, there seems to be no set definition of emotion (Berscheid 1990; Kleinginna and Kleinginna 1981; Lazarus 1984; Zajonc 1984). The debate between Zajonc and Lazarus on the independence of affect and cognition illustrates well the situation. While Lazarus (1984, p. 125) questioned whether preference should be considered as an emotion, Zajonc (1984, p. 117) challenged Lazarus' definition of emotion as being arbitrary. In fact, the terminological problem in the study of emotion is such that Berscheid (1990) compared it to the communication problems that appeared during the raising of the great tower of Babel as told in Genesis. She even suggests that we abandon the quest to identify "what an emotion is or is not" simply because "it is not clear what the criteria for the correct answer would be" (p. 33-34).

Similarly, in social psychology, despite the influential history of the concept of attitude, "agreement on precisely what an attitude is and how it can be identified has proven to be somewhat elusive" (Zanna and Rempel 1988, p. 315; see also Chaiken and Stangor 1987; Fishbein and Ajzen 1972; Greenwald 1968; McGuire 1985; Tesser and Shaffer 1990). For example, Fishbein and Ajzen (1972) found almost 500 different operational definitions of attitude. Although some convergence can be identified among these definitions (Greenwald 1968, McGuire 1985), there

is still disagreement on major aspects. For some researchers attitude and affect are isomorphic (Ajzen 1984; Fishbein 1979; Thurstone 1931; Zajonc and Markus 1982). In contrast, for other researchers attitude and affect are distinct entities (Abelson et al. 1982; Cacioppo and Petty 1989; Zanna and Rempel 1988).

The same semantic confusion concerning the definition of attitude has been found in the field of consumer behavior (Cohen 1990; Cohen and Areni 1991). This is not surprising since consumer behavior has borrowed much from the domains of psychology and social psychology.

Confronted by this problem of defining terms such as emotion, attitude, affect, evaluation, mood, and so forth, several researchers (Berscheid 1990; Izard et al. 1984; Moore and Isen 1990) have argued that it is too premature to impose any definition. Rather, contributors are requested to clarify the meaning of the terms they are using. In turn, these definitional schemes should be evaluated according to their utility. Thus, based on these recommendations, the following convention will be adopted throughout this research.

First, cognitive information will refer to those facts, beliefs, inferences, and abstractions that an individual holds about an object/person/issue (Chattopadhyay and Alba 1988). Their representation in memory will be referred to as cognitive traces (Cohen and Areni 1991).

Secondly, affective information will include affective reactions such as, mood, feelings, and emotions that are experienced by individuals during ad exposure or

product consumption.[10] The memory representation of these affective states will be referred to as affective traces (Cohen 1990). In turn, they will be distinguished from cognitive traces in that "their instantiation implies more than merely retrieval of information. In particular, when the memory of such an episode is brought to mind it may well have the capacity of eliciting the same feeling or emotion (though not always to the same degree)" (Cohen and Areni 1991, p. 190).

Third, attitude is viewed here as a global evaluation of an object/person/issue which can be based on three classes of information: (1) cognitive information (e.g., beliefs), (2) affective information (e.g., emotions), (3) behavioral information (e.g., past behaviors). This is consistent with recent theorizing in social psychology (Cacioppo and Petty 1989; Millar and Millar 1990; Petty and Cacioppo 1986; Zanna and Rempel 1988) and to some extent, with recent research in advertising (Chattopadhyay and Nedungadi 1992; Edell and Burke 1987; MacKenzie et al. 1986; Mitchell and Olson 1981; Stayman and Aaker 1988).[11] In

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10- Mood generated as a consequence of ad exposure should be distinguished from the individual's mood prior to ad exposure. In the former case, the impact of mood is directly attributed to ad exposure. As we will see later, such affective reaction will be referred to as general affective information. In the latter case, the impact of mood is attributable to the context surrounding ad exposure (Lutz 1985), such as the program in which the ad is inserted (Goldberg and Gorn 1987; Pavelchak, Antil and Munch 1988). Since the impact of this type of mood does not refer to the ad's effects per see, the present proposal is not concerned with this particular type of affective reaction.

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In addition, this global evaluation can either be classified as cognitive or affective information depending on the class of information having the strongest influence (Millar and Millar 1990, Fazio 1989). Thus, when individuals' evaluation is mainly based on cognitive information, attitude will be considered as cognitive information as it reflects a cold evaluation (e.g., "It is a good car"). In contrast, when individuals' evaluation is mainly based on affective information, attitude will be considered as affective information as it reflects a hot evaluation (e.g., "I like this car").

2.2 The distinction between abstract and specific information

In the proposed framework, information is also distinguished according to its level of abstraction. Although different definitions of abstractness have been proposed in the literature, for the purpose of this research, abstractness is defined as the inverse of how directly a concept (e.g., attribute, emotion) denotes a particular object, person or event (see Bettman and Sujan 1987; Johnson 1984; Johnson and Fornell 1987). This definition of abstractness is consistent with the following three notions: information integration (Sherman et al. 1989), inclusiveness (Rosch et al. 1976; Rosch 1978), and substitutibility (Storm and Storm 1987).

For instance, according to information processing theories, abstract information refers to a summary or integration of several bits of information. In

contrast, specific information refers to raw information from which abstract information is formed (Sherman et al. 1989, p. 282-283). For instance, in the context of product attributes, abstract attributes of an object are inferred or computed from specific attributes. As emphasized by Johnson (1984, p. 743), "as attributes become more abstract, they also become common to more and more alternatives".

Similarly, in the area of categorization, abstractness is equated with inclusiveness. As noted by Rosch and her colleagues (Rosch et al. 1976, p. 283), "a *taxonomy* is a system by which categories are related to another by means of class inclusion." Thus, the greater is the inclusiveness (i.e, level of abstraction) of a category within a taxonomy, the greater is the number of objects it includes.

Finally, in the area of linguistics, the criterion of substitutibility is used to distinguish the level of abstraction of words. According to this criterion, words occupying higher levels are broader in meaning than words at more specific levels. Thus, specific terms can be replaced by general terms with some loss of meaning but little distortion (Storm and Storm 1987, p. 809). For example, specific affective reactions such as nostalgia, disappointment, and guilt can be substituted by sadness (i.e., a basic affective reaction) with little distortion, whereas nostalgia, disappointment, or guilt cannot be used as substitutes without a major distortion. Therefore, according to the substitutibility criterion, the more abstract a term, the larger the number of objects, persons, or events it describes.

In the present research, it is argued that cognitive as well as affective information can be distinguished according to their level of abstraction, although the distinction has been drawn more frequently for cognitive than for affective information. A review of how this distinction has been addressed in several research areas is presented separately for cognitive and affective information, in turn.

2.2.1 The distinction between abstract and specific cognitive information

The idea that cognitive information exists at different levels of abstraction or generality is not new. For instance, it has been well recognized in various research areas such as memory (Bartlett 1932; Just and Carpenter 1980; Kintsch and van Dijk 1978; Neisser 1981), person perception (Anderson and Hubert 1963; Carlston 1980; Hastie and Park 1986; Lingle and Ostrom 1979), communication (Greenwald 1968; Hovland et al. 1949; Petty and Cacioppo 1981), and marketing (Chattopadhyay and Alba 1988; Kardes 1988; Wright 1980). Thus, along with the raw data, individuals appear to encode some summary judgments and inferences which have an important impact on subsequent processing and decisions (Chattopadhyay and Alba 1988; Higgins and Bargh 1987). Although, the present research focus is on marketing, a brief review of other areas will be provided (reviews of these areas are available from Chattopadhyay 1986; Fiske and Taylor 1984; Higgins and Bargh 1987; Sherman et al. 1989).

In the area of memory, a major assumption of models of discourse comprehension is that along the more detailed information of a text, individuals encode some abstract representation of the original stimuli which summarizes the meaning or the gist of the text (Just and Carpenter 1980; Kintsch and van Dijk 1978; Mandler and Johnson 1977; Rumelhart 1975; Thorndyke 1977; van Dijk and Kintsch 1988). For instance, according to Kintsch and van Dijk (1978), the semantic content of a text is represented within a micro-structure and a macro-structure. The micro-structure consists of micro-propositions which represent the ideas and the concepts expressed in the text or during an interaction. In contrast, the macro-structure consists of a series of macro-propositions hierarchically structured which preserve the truth and the meaning of the text.

Research in this area showed that these high level propositions, compared to low level propositions, are more likely to be recalled (Bartlett 1932; Christiaansen 1980; Cirilo and Foss 1980; Kintsch and Keenan 1973; Kintsch et al. 1975; Kintsch and van Dijk 1978; Thorndike 1977; see also Neisser 1981 for an example in the domain of interpersonal conversation).

Similarly, research in the field of person perception has developed around an implicit hierarchy where "behaviors are at the most specific level, trait attributes are at an intermediate level, and a global evaluation of the target is at the most general level" (Sherman et al. 1989, p. 289; see also Hastie 1980; Hastie and Park 1986; Fiske and Taylor 1984; Higgins and Bargh 1987; Schul 1983; Srull and

Wyer 1989; Wyer and Srull 1986). For example, Srull and Wyer (1989, p. 59) describe the impression formation process as one where "subjects attempt to interpret each of the target's behaviors in terms of a more general trait concept" and "partially on the basis of the trait inferences they have made, subjects try to form a general evaluation concept of the person as, for example, likeable or dislikeable". Once stored in memory, these traits and evaluation are likely to be used in subsequent judgment rather than/or in combination with the specific information from which they were based (Anderson and Hubert 1963; Carlston 1980; Kardes 1986; Hastie and Park 1986; Lingle and Ostrom 1979; Lingle et al. 1979)

Early research in communication also recognised that information encoded during exposure is likely to differ in term of its level of abstraction (Hovland et al. 1949; Watts and McGuire 1964). For example, Hovland et al. (1949, p. 274) noted that "the specific-versus-general continuum is one of the dimensions along which facts are differentiated from opinions or attitudes". Similarly, Watts and McGuire (1964) distinguished among the recall of the topic of a message, the recall of the side taken in the topic, and the recall of specific arguments.

Finally, in marketing, the distinction between abstract and specific information is pervasive and has been drawn in many areas of research (Johnson and Fornell 1987). For example, in the preference/choice modeling literature, a distinction is made between features and perceptions (or dimensions). Perceptions are described

as an abstraction (or summary) of the physical characteristics (Green et al. 1975; Holbrook 1981; Tybout and Hauser 1981). Consumers are expected to use these perceptions rather than the specific features when forming evaluative judgments about brands.

Similarly, a major premise of both benefit segmentation (Haley 1968; Lancaster 1971) and market structure (Srivastava et al. 1984) is that abstract benefits rather than products per se are the underlying causes of consumer segments and product markets (Wedel and Steenkamp 1991). For instance, Lancaster (1971) argued that utility does not come from the products per see, but from their characteristics. For example, the characteristics he used to describe the United States automobile market included accommodation (size and comfort of seating, etc.), ride quality, handling, and engine (quietness and performance). In the same way, Srivastava et al. (1984, p. 32) define product market as "the set of products judged to be substitutes within those usage situations in which similar patterns of benefits are sought by groups of customers ".

More recently, Johnson (1984, 1986, 1988, 1989) argued that individuals used abstract instead of concrete attributes when making comparisons among noncomparable products, that is, when faced with products that are not comparable on their concrete attributes. Consider Johnson's (1984) example of a choice between a refrigerator, a stereo, and a television. Since these three products differ in term of their concrete attributes, any direct comparison is impossible. An

intermediate level of abstraction can be reached when comparing a stereo and a television in terms of "entertainment" which summarized specific attribute such as screen size, number of speakers, and colour quality. However, in order to compare all three products simultaneously, the consumer may use "necessity", an even more abstract attribute (see Bettman and Sujan 1987 and Park and Smith 1989, for a different interpretation).

In advertising, the distinction has also been drawn between the level of abstraction of the information that individuals are likely to encode during ad processing. Using the cognitive response approach, Chattopadhyay and Alba (1988, p. 3) have classified consumers' thoughts into four levels of abstraction. Thus, cognitive responses were classified as factual details (i.e., specific information about a single attribute described in the advertisement such as, "AM-FM radio"), single-fact interpretations (i.e., a subjective interpretation of an attribute appearing in the advertisement such as when the assertion "goes from 0 to 60 in 7.5 seconds" is interpreted as rapid acceleration), abstractions (i.e., summary of specific attributes such as when "8 cylinders", "turbocharger" and "fuel injected" are associated to a powerful car), and global evaluations (i.e., statements of overall judgment, such as "good car"). Similarly, Bettman and Sujan (1987) have proposed a three level scheme where cognitive responses were classified as a concrete attribute, an abstract attribute, or an overall evaluation.

The Chattopadhyay and Alba (1988) classification scheme will be used in this

research to classify brand cognitive responses according to their level of abstraction.[12] Two reasons justify this choice. First, this scheme is grounded on research from cognitive and social psychology (Chattopadhyay 1986). Second, successful empirical tests of the scheme have been provided within an advertising context (Chattopadhyay and Alba 1988).

However, since Chattopadhyay and Alba's scheme does not include ad cognitions, the present research will extend it to incorporate such types of cognitions. From a conceptual perspective, three levels of abstraction among ad cognitions can be identified. As for brand cognitions, ad cognitions can be classified as factual details (e.g., "The coach has a strong voice"), single-fact interpretations (e.g., when the strong coach's voice is interpreted as "He is an authoritarian coach""), or abstractions (e.g., when the whole ad is interpreted as "This is a sentimental ad"). Pre-tests assessing the reliability and validity of the proposed extension is reported in Chapter #6.

2.2.2 The distinction between abstract and specific affective information

It was noted in the introduction that the term affective information will include affective reactions generated during ad exposure or product consumption. As one

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12- In Chattopadhyay and Alba (1988), global evaluation was considered as the fourth level of brand cognition. In the present research, evaluation is considered an expression of attitude.

might expect, a wide variety of affective reactions is likely to occur. Affective reactions that have drawn marketers' attention are: warmth, irritation, and amusement (Aaker et al.1986, Stayman and Aaker 1988), happiness and sadness (Alpert and Alpert 1986), positive, negative, and upbeat feelings (Burke and Edell 1989; Edell and Burke 1987), social affection, deactivation, and SEVA (Surgency, Elation, Vigor/Activation) (Batra and Ray 1986), fear (Rotfeld 1988; Sternthal and Craig 1974; Tanner, Hunt and Eppright 1991) humour (Chattopadhyay and Basu 1990; Scott, Klein and Bryant 1990; Sternthal and Craig 1973), happy/sad mood (Goldberg and Gorn 1987; Pavelchak et al. 1988; Sherman and Smith 1987), the eight emotions of Plutchick's taxonomy of emotions (Havlena and Holbrook 1986; Holbrook and Westwood 1989; Murry, Lastovicka and Singh 1992), the ten emotions of Izard's taxonomy (Allen, Machleit and Marine 1988; Westbrook 1987; Westbrook and Oliver 1991).

Perhaps more important to the present discussion are the distinctions that can be made among affective reactions elicited during ad exposure or product consumption. Indeed, several distinctions have already been made in the literature. In psychology (Lorr et al. 1967; Nowlis 1965; Russell and Mehrabian 1977; see, Watson and Tellegen 1985 for a review) and to a lesser extent in consumer behavior (Burke and Edell 1989; Edell and Burke 1987; Havlena and Holbrook 1986; Holbrook and Batra 1988; Holbrook and Westwood 1989), there is a long history of research on the structure of emotions. This stream of research has found

that a large number of affective terms and facial and vocal emotional expressions (Abelson and Sermat 1962; Schlosberg 1952; see Russell 1980 for a review) can be represented with a few dimensions; usually from 2 to 3, although some have found up to 12 (Nowlis 1965).

The distinction proposed in this research, however, is not based on this dimensional approach to emotion. As noted by Clore, Ortony and Foss (1987) the dimensions generally reported in these studies are so universal that they apply to any concept that can be scaled. Therefore, they are uninformative about what distinguishes emotions from other concepts and on what distinguishes among emotions themselves. Similarly, Lazarus (1991, p. 63) argued that "much of value is lost by putting these reactions into dimensions, because the simplifying or reductive generalizations wipe out important meanings about person-environment relationships, which the hundreds of emotion words were created to express".

Instead, the distinction emphasized in this research is more in the spirit of the taxonomical approach to emotion. According to this approach, emotions are regarded as discrete categories which are gathered together in an hierarchical structure according to their level of abstraction. Several such structures have been presented in the social psychological (Agnoli et al. 1989; Fehr and Russell 1984; Shaver et al. 1987; Scherer 1988; Storm and Storm 1987; Wallace and Carson 1973) and advertising (Aaker et al. 1988) literature. Three examples of comprehensive classifications are described in turn.

As a first example, Shaver et al. (1987) submitted a list of 213 emotional terms to a group of subjects with the instructions to indicate the extent to which they would or would not considered these terms as emotion. Based on these judgments, a reduced list of 135 terms were selected as good exemplars of the emotion domain. Next, the list was submitted to another group of subjects with instructions to sorting the terms into categories according to their similarity. Finally, based on these judgments a matrix of co-occurrence was formed and used in hierarchical cluster analysis. A three level structured solution was found with 2, 6, and 25 categories, respectively. At the top of the hierarchy positive emotions were distinguished from negative emotions. At the middle of the hierarchy, the six categories identified were labelled as love, joy, surprise, anger, sadness, and fear. Finally, at the bottom of the hierarchy, the 25 categories identified were labelled as affection, lust, longing, cheerfulness, zest, contentment, pride, optimism, enthralment, relief, irritation, exasperation, rage, disgust, envy, torment, suffering, sadness, disappointment, shame, neglect, sympathy, horror, and nervousness. The classification of the 135 terms into these categories is presented in Appendix 2.1.

Contrary to Shaver et al. (1987), the two step procedure used by Storm and Storm (1987) to develop their hierarchical structure is mostly based on experts' judgment. In the first step, students' judgments were used in sorting and clustering analysis in order to identify an initial grouping of emotional terms. Eighteen

categories were identified. Then, in the second step, using an iterative procedure, four experts were asked to assign an extensive list of emotional terms into these 18 categories. Unplaced terms, possible subdivisions within categories and the relation of categories to each others were discussed among experts. Consensus was reached on a three level structure taxonomy with 7, 20, and 61 categories, respectively. Five hundred and twenty five terms have been classified into this hierarchical structure (see Appendix 2.1). Interestingly, some of the categories are empty suggesting that the English vocabulary is not precise enough to identify these kinds of affective reactions.

Finally, the last example is borrowed from the advertising field. Recently, Aaker et al. (1988) selected 180 emotional terms (from a list of 655 terms) that were perceived by students to be good examples of the kind of emotions that are likely to be elicited by advertising. Then, similarity judgments between these 180 terms were collected and submitted to cluster analysis. The results revealed that positive and negative emotions could be classified into 22 categories and in turn be subdivided into 31 categories. The terms classified into this hierarchical structure are presented in Appendix 2.1.

Among the above three taxonomies, the one developed by Storm and Storm (1987) seems particularly appropriate to classify affective responses generated during ad exposure according to their level of abstraction. Several reasons justify this choice. First, out of these three taxonomies, it is the most extensive one. With

its 525 terms, this classification can accommodate the vast variety of affective reactions that are elicited during ad exposure and product consumption. It also includes most of the terms classified in Shaver et al.'s (1987) taxonomy (i.e., 124/135) and in Aaker et al.'s (1988) taxonomy (i.e., 129/180).

Second, this classification permits us to identify the level of abstraction of affective terms used by subjects to report their feelings and emotions. Although all three taxonomies recognized that there are different levels of abstraction among affective reactions, only the classification of Storm and Storm (1987) provides a list of emotional terms corresponding to upper levels of the hierarchy. In fact, Shaver et al. (1987) and Aaker et al. (1988) only provided a label for the categories at the top or at the intermediary levels of the hierarchy. In addition, in the case of the Aaker et al. (1988) classification, many terms assigned to bottom-level categories (e.g, bad, good, great) clearly belong to higher levels.

Third, despite differences in the number of categories and in the number of levels, there are important similarities between the taxonomy developed by Storm and Storm (1987) and those developed by the researchers exploring the notion of basic-level categories from a prototype perspective (Fehr and Russell 1984; Shaver et al. 1987). For example, most of the basic emotions identified by Fehr and Russell (1984) and by Shaver et al. (1987) can be found within the intermediary level of Storm and Storm's (1987) taxonomy. The differences between these taxonomies are partly attributable to the fact that Storm and Storm (1987) were

less restrictive in their list of emotional terms (see Storm and Storm 1992 for a discussion).

Finally, Storm, Storm and Ratchford (1988) performed a series of three studies testing the validity of their classification. They made a series of comparisons between basic terms (e.g., happiness, sadness, anger, fear, and surprise) and specific terms from the bottom of the hierarchy (e.g., joy, satisfaction, disappointment, despair, and so forth). They found that basic terms were perceived by a group of subjects as having a broader meaning (study #1), conveying less information (study #2), and being more global (study #3) than specific emotions. However, it should be mentioned that there is some difficulty in the interpretation of their results, as unexpected significant differences were also reported among pairs serving as a control group (see Storm et al. 1988 for a discussion).

Four additional issues need to be clarified concerning this classification of affective reactions. First, affective reactions located at the top of the hierarchy are very similar to what has been referred to as mood in psychology (Clark and Isen 1982; Fiske and Taylor 1984; Isen 1984; Moore and Isen 1990; Schwarz 1990) and consumer behavior (Cohen and Areni 1991; Gardner 1985b). Terms under this category (e.g., bad, awful, not good, good, nice) correspond to general affective reactions. These general feelings are vague in the sense that no specific cause (or multiple causes) can be associated with them. As noted by Schwarz (1990, p.536) they "may result from a series of mildly pleasant or unpleasant events, none of

which needs to be sufficiently intense to produce an emotion by itself, but which collectively leave one in a generalized positive or negative feeling state", or "may develop as the residue of a specific emotion, once the emotion's intensity dissipates and its cause is no longer in the focus of attention". For instance, in the context of advertising they represent the affective reaction that remains at the end of an ad. In the context of product consumption, they refer to the overall feeling that we associate with a single consumption experience.[13] Although these affective reactions are frequently labelled as mood by others (Cohen and Areni 1991; Gardner 1985b; Lazarus 1991; Schwarz 1990), we prefer to use the term general affective reactions. In the advertising literature, mood effects refer to the impact of the individual's emotional state prior to ad exposure and not to the effects attributable to the ad (Goldberg and Gorn 1987; Pavelchak et al. 1988).

Second, the distinction between basic affective reactions and specific affective reactions should not be confounded with the debate about basic and non basic emotions (see the discussion from Ortony and Turner 1990). The present

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13- This general affective information can also be formed as a result of the integration of different affective reactions occurring at different occasions. For example, different affective reactions can be associated to different ad exposure occasions as shown by studies on wearout effect (Belch 1982; Pechmann and Stewart 1988). Similarly, different affective reactions can occur at different product consumption occasions (Westbrook and Oliver 1991; Westbrook 1987). The present research focused on the impact of affective reactions associated to a single ad exposure and does not examine how affective reactions are integrated on different occasions.

distinction does not regard basic affective reactions as biologically primitive and specific affective reactions as not biologically primitive. Rather, it only emphasizes that some emotional reactions are less differentiated than others and, in that sense, they are more general than others.

Third, it is important to emphasize that the classification of Storm and Storm (1987) concerns emotional terms. There is not necessarily a direct correspondence between the structure of emotional terms and the structure of affective reactions (see Ortony and Turner 1990). Nevertheless, it seems reasonable to believe that the structure of emotional terms reflects, to some extent, the "real" structure of affective reactions (see Shaver et al. 1987, p. 1062 and Gehm and Scherer 1988b, p. 100). Therefore, for the purpose of this research, we will assume that when individuals experience vague affective reactions, they will use more general terms to express it.

Finally, attitude should not be confounded with general affective reactions experienced during ad exposure or product consumption; it is a more abstract information. Thus, to say that we like an ad (or a brand) is very different from the statement that an ad (or a brand) makes us feel good or bad (Aaker et al. 1988; Burke and Edell 1989; Edell and Burke 1987). In fact, the present research regards attitude as the information having the highest level of abstractness because it integrates cognitive and affective information (see Figure 1.2.1 in Chapter 1).

In summary, two major distinctions are made in this chapter. A first

distinction is made between cognitive and affective information. For the purpose of this research, cognitive information includes facts, beliefs, inferences, and abstraction that an individual holds about an object/person/issue. Affective information includes feelings and emotions experienced by individuals. Attitude, which is described as a global evaluation based on cognitive, affective, and behavioral information, can range from cold evaluation to hot evaluation depending on whether it is principally based on cognitive or affective information.

A second distinction is made between abstract and specific information. Three levels of abstraction are identified among brand and ad cognitions: abstractions, single-fact interpretations, factual details. Three levels of abstraction are also identified among affective reactions generated during ad exposure or product consumption: general affective reactions, basic affective reactions, specific affective reactions. Furthermore, AB and AAD are considered the most abstract level of information as they integrate cognitive and affective information.

The usefulness of distinguishing information according to its type and level of abstraction will be addressed in the next chapters.

CHAPTER 3

THE ROLE OF INVOLVEMENT IN AD PROCESSING AND IN JUDGMENT/CHOICE MAKING

As emphasized in the introduction, it is proposed that the level of involvement is a major determinant of the level of abstraction of the information that individuals encode during ad processing, and retrieve and use during judgment/choice.

To address these issues, a general definition of involvement will be adopted, and a distinction between advertising message involvement (AMI) and brand response involvement (BRI) will be made. The two subsequent sections will present a literature review from various areas of cognitive psychology, social psychology, and consumer behavior concerning the role of involvement on the level of abstraction of the information that is likely to be (1) encoded during ad processing, and (2) retrieved and used during judgment/choice.

3.1 Definition of involvement

Early work on involvement is generally attributed to researchers from social psychology (Sherif and Cantril 1947; Sherif and Hovland 1961; Zimbardo 1960). Since then, the concept has been borrowed by marketers and has become a major

concept (Wilkie 1990), despite little agreement on its definition (Cohen 1983; Johnson and Eagly 1989, 1990; Laurent and Kapferer 1985; Mitchell 1981; Petty and Cacioppo 1990; Ratchford 1987; Zaichkowsky 1985).

This research adopts the view that it is important to distinguish involvement from its antecedents and its consequences. Thus, following the recommendations of several researchers, involvement is defined as a motivational state of arousal that energizes and directs consumers' cognitive processes and overt behaviors (Baker and Lutz 1988; Cohen 1983; Mitchell 1981). This motivational state is determined by the consumers' perceived relevance of an object, person, or issue (Celci and Olson 1988).

Based on this definition, involvement can be distinguished from its antecedents and its consequences. For example, what has previously been labelled as enduring and situational involvement (Houston and Rothshild 1978) and some of the facets of involvement proposed by Laurent and Kapferer (1985) is best described as sources of involvement rather than types of involvement. Similarly, what has been previously labelled as personal involvement (Krugman 1965) and audience involvement (Greenwald and Leavitt 1984) is best described as consequences of involvement.

It has been well documented that the level of involvement influences the amount of effort that individuals will spend in information processing. Thus, under low levels of involvement, individuals are likely to engage in "automatic",

"heuristic", "shallow", "spontaneous", "peripheral" processing, whereas under high levels of involvement they are expected to engage in "controlled", "systematic", "deep", "deliberative", "central" processing (Bargh 1984; Chaiken 1980; Craik and Lockhart 1972; Fazio 1990; Petty and Cacioppo 1981). In turn, the amount of effort with which information is processed is known to influence the strength of its memory trace and therefore, its accessibility over time (Biehal and Chakravarti 1983; Chaiken 1980; Craik and Lockhart 1972; Feldman and Lynch 1988). "Information processed to a greater depth, perhaps in a more elaborated manner, will be more easily retrieved" (Gardial and Biehal 1985, p. 414).

Based on the above general definition of involvement and following Baker and Lutz's (1988) suggestion, this research distinguishes between the level of involvement during ad processing (i.e., AMI) and the level of involvement during judgment/choice (i.e., ERI). Thus, AMI is defined as a motivational state of arousal that energizes and directs consumers' cognitive processes during ad exposure. This motivational state is determined by consumers' perceived relevance of the advertisement to which they are exposed. A major consequence of AMI concerns the amount of effort that consumers will put into processing the content of the ad (Baker and Lutz 1988; Chaiken 1980; Greenwald and Leavitt 1984; Petty and Cacioppo 1981). When the level of AMI is low, individuals are expected to engage in "effortless" processing (e.g., heuristic, peripheral processing) of ad content, whereas when the level of AMI is high, individuals are assumed to engage

in deep processing (e.g., systematic, central processing) of ad content.

Similarly, BRI is defined as a motivational state of arousal that energizes and directs consumers' cognitive processes during judgment/choice making. This motivational state is determined by consumers' perceived relevance of the judgment or choice with which they are confronted. Again, a major consequence of BRI concerns the amount of effort that consumers will devote when making judgments/choices (Baker and Lutz 1988; Gardial and Biehal 1985; Mitchell 1981, Mittal 1989; Sanbonmatsu and Fazio 1990). When the level of BRI is low, individuals are expected to engage in effortless processing during judgment/choice, whereas when the level of BRI is high, they are believed to engage in deep processing.

Keeping these definitions in mind, the next section will examine the impact of AMI on the level of abstraction of the information that will be encoded during ad processing. The last section will address the impact of BRI on the level of abstraction of the information that will be retrieved and used during judgment/choice. Although, these operations (i.e.,encoding, retrieving, and using) will be discussed separately in this chapter, it should be clear that they almost always influence each other (Best 1986), and that in many studies it might be difficult to isolate their specific impact.

3.2 The role of advertising message involvement in the encoding of abstract and specific information

A wide variety of cognitive and affective responses are likely to be encoded during ad exposure. Some of these responses will be more abstract than others. In the present research, it is proposed that the level of advertising message involvement (i.e., AMI) is a major determinant of the level of abstraction of the cognitive and affective information that will be encoded during ad processing.

In order to understand the impact that involvement has on the level of abstraction of the information that is encoded during ad exposure, this section will look at the processes involved in the formation of abstract information and will determine how involvement interacts with these processes. The encoding of cognitive and affective information will be discussed separately because they refer to very different literatures. Moreover, for reasons of simplified exposition, the level of abstraction of cognitive and affective information will be treated as a dichotomy (abstract versus specific), although it is a matter of degree (see Chapter 2).

3.2.1 The encoding of abstract and specific cognitive information

The processes involved in the formation of abstract cognitive information (e.g., person impression, judgment, attitude)[14] have generated a tremendous

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amount of theorizing and research. For example, over the 1950-1981 period, in a review of the consumer behavior literature, Hegelson et al. (1984) inventoried more than twelve hundred published reports on attitude alone. This is not surprising if we consider that making judgments and evaluations about objects, persons and events is a basic human activity.

Within this vast research stream, different paradigms have been adopted such as the information integration paradigm (Anderson 1971), the multi-attribute paradigm (Fishbein and Ajzen 1975), the dual processing paradigm (Chaiken 1980; Petty and Cacioppo 1981), and the categorization paradigm (Rosch et al. 1976; Cantor and Mischel 1979). Thus, according to the information integration model (Anderson 1971), three major steps are involved in the formation of abstract judgment: valuation, integration, and response. When making a judgment about an object, individuals will select a subset of the object's characteristics (e.g., attributes, dimensions, features) and will (1) generate a weight and a scale value for each characteristic, (2) apply a mathematical integration rule on these values to obtain an overall judgment, and (3) transform this judgment into an observable response. Empirical support for this model has been reviewed by Anderson (1981).

Using a similar algebrical logic, multi-attribute models assume that the formation of attitude occurs in a computer-like manner where individuals combine several pieces of information into a coherent judgment. For instance, according to Fishbein and Ajzen's (1975) model, for each object, individuals form a belief

system that represents the subjective probability of various attributes being associated with an object. An implicit evaluative response is assumed to be attached to each attribute. Thus, individuals determine their overall attitude toward an object by multiplying, for each attribute, the subjective probability that an attribute is associated with the object by the evaluative response attached to the attribute, then summing over the entire range of beliefs (see also Bass and Talarzyk 1972; Fishbein and Ajzen 1980; Rosemberg 1956). A considerable amount of empirical support for the multi attribute model has been accumulated over the years (for reviews from the consumer literature see, Lutz and Bettman 1977, Sheppard, Hartwick and Warshaw 1988, and Wilkie and Pessemier 1973).

More recently, some researchers have proposed that attitude formation could follow two different modes of processing: systematic/central or heuristic/peripheral (Chaiken 1980; Petty and Cacioppo 1981). When systematic processing occurs, attitude formation results from a detailed analysis of message content. In contrast, attitudes formed through heuristic processing are the result of a limited processing of message content. In such cases, individuals are expected to use simple heuristics (e.g., who is the source of this information) as a basis for attitude formation. Individuals' level of involvement and ability to process information are assumed to determine which mode of processing is most likely to be used. Several reviews of this literature have been presented (Chaiken and Stangor 1987; Petty et al. 1991).

Finally, according to categorization models individuals set objects into categories on the basis of their perceived similarity (Rosch et al. 1976). The cognitive structure associated with each category, or what is often termed the schema, contains the attributes describing the category and the relationship among these attributes (Alba and Hutchinson 1987; Cohen and Basu 1987; Fiske and Pavelchak 1986). A judgment or evaluation is made when a new object (person or event) is identified as being a member of a category, as the cognitive structure of the category is associated with the new object (Cantor and Mischel 1979; Cohen 1982; Fiske 1982; Smith and Zárate 1992). For example, consider the case of a consumer who is processing information about a new car and who has in memory a category labelled "Japanese car", to which judgments and evaluations such as "reliable car", "powerful car," and "good car" are associated. If during the identification process that consumer assigns the new brand to the existing "Japanese car" category, then the brand will be described as "reliable", "powerful," and "good".

The categorization model has generated considerable amounts of research and theorizing. For instance, it has been demonstrated that individuals' knowledge is organized into hierarchically structured categories; generally into three distinctive levels: superordinate, basic, and subordinate (Rosch et al. 1976; Rosch 1978). Three models of the representation of the categories in memory have been proposed: the classical model, the prototypical model, and the exemplar model

(Medin 1989; Smith and Medin 1981). In addition, the study of the processes involved in object categorization has taken an important place in researchers' agendas. Nonanalytical and analytical processes, as well as automatic and controlled processes, have been under investigation (for review see Alba and Hutchinson 1987; Cohen and Basu 1987; Schneider 1991).

Regardless of the type of model which is adopted, it is well documented that the processes involved in the formation of abstract cognitive information can operate under different levels of effort or involvement (Baker and Lutz 1988; Cantor and Mischel 1979; Chaiken 1980; Cohen and Basu 1987; Elio and Anderson 1981; Greenwald and Leavitt 1984; Petty and Cacioppo 1981).

The present research proposes that the level of involvement during information processing will have an impact on the strength with which information from different levels of abstraction will be encoded.[15] To illustrate, consider the case of a person who is exposed to an ad for a new car. In order to make sense of this new stimuli, the individual will spontaneously form first impressions of the new car.

According to dual processing models, if the level of involvement is low, these first impressions of the new car will be based on a limited processing of ad content

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15- Other factors such as consumers' opportunity and ability to process specific information (Baker and Lutz 1988) and consumers' expertise (Bettman and Sujan 1987) are also expected to determine the level of abstraction of the information that is most likely to be encoded during ad processing.

and/or simplistic heuristics (Chaiken 1980; Petty and Cacioppo 1981). Individuals may neither be aware of the specific ad elements used in impression formation (Chaiken et al. 1989), nor of the operations made upon these elements (Nisbett and Wilson 1977). Consequently, individuals will strongly encode general impressions of the car (e.g., good car, reliable car), but will not strongly encode the specific information considered in the formation of these impressions (e.g., single-fact interpretations or brand details). In contrast, if the level of involvement is high, information about the car attributes is likely to be processed more deeply. For example, it can be assumed that brand details will be transformed into single-fact interpretations; single-fact interpretations will be combined into cognitive abstractions; cognitive abstractions will be integrated into an overall evaluation. As a result, it can be expected that this person will strongly encode information from all four levels of abstraction, that is: brand details, single-fact interpretations, cognitive abstractions, and global evaluation.

If we take a categorization approach, similar predictions can be made concerning the impact of involvement. Consider again the case of a person who is exposed to an ad for a new car. This individual may already possess in memory some categories about cars; perhaps a superordinate category such as "Car," a few basic categories such as "Japanese car", "European car", "North-American car," and some subordinate categories such as "Toyota", "Honda," and "Ford." Considering that higher level categories are described in more general terms

(Cantor and Mischel 1979; Johnson 1984; Johnson and Fornell 1987; Rosch et al. 1976), the superordinate category "Car" may be described as "liberty" and "prestige"; the basic category "Japanese car" as "reliable" and "economic"; and the subordinate category "Toyota" as "a good engine", "low gas consumption," and "good acceleration".

According to the categorization approach, when an individual is exposed to an ad for a new car, s/he spontaneously assigns the car to an existing category. If the level of involvement is low, only a broad classification is likely to occur. That is, the car will be assigned to a high level category; probably at the basic level (e.g., "Japanese car") (Cohen and Basu 1987; Rosch et al. 1976;). In this case, the individual may not even be aware of the specific details used as a basis for categorization (Brewer 1988). Consequently, the abstract judgments corresponding to the basic category (i.e.,"Japanese car" category) will become strongly associated with the new car, but not the specific information used as a basis for categorization.

In contrast, when the level of AMI is high, the individual is likely to make finer categorizations (Cohen and Basu 1987). That is, the new car will first be categorized as a "Japanese car" and then, through greater processing of brand details, it will be categorized into a lower level category (e.g., "Toyota"). Therefore, abstract judgments associated with higher level categories, specific judgments associated with lower level categories, and brand details will be strongly

associated with the new car.

As suggested by the above discussion, the following two propositions can be made concerning the encoding of cognitive information during ad processing: (1) abstract cognitive information is spontaneously encoded during ad exposure and (2) as the level of AMI increases, specific cognitive information such as single-fact interpretations and brand details, become more strongly encoded in memory.

Support for the first proposition has been reported from studies on spontaneous processes (Kardes 1988; Uleman 1989; Uleman et al. 1986; Winter and Uleman 1984; Winter et al. 1985; for review see Higgins and Bargh 1987; Sherman et al. 1989). The research on dual processing modes that has appeared in fields such as impression formation (Brewer 1988; Erber and Fiske 1984; Fiske and Neuberg 1990; Harkness et al. 1985; Kruglanski and Freund 1983; Neuberg and Fiske 1987), attitude formation (Axsom, Yates and Chaiken 1987; Chaiken 1980; Leippe and Elkin 1987; Petty and Cacioppo 1979; Petty, Cacioppo and Goldman 1981; Petty, Cacioppo and Heisacker 1981), and marketing (Petty, Cacioppo and Schumann 1983; Miniard et al. 1991) is consistent with the second proposition.

Before presenting empirical findings concerning these two propositions, it is worth mentioning that the present research is not suggesting that specific information will not be encoded under low levels of AMI. In fact, it is the strength with which specific information is encoded (i.e., its accessibility) that is expected to be influenced by the level of AMI.

3.2.1.1 Research on spontaneous processes

The idea that some cognitive processes can occur very rapidly has been recognized for some time. For example, in the early development of the impression formation field, Asch (1946) claimed that trait inferences (i.e., abstract information) could occur fairly quickly. He wrote:

> "We look at a person and immediately a certain impression of his character forms itself in us. A glance, a few spoken words are sufficient to tell us a story about a highly complex matter. We know that such impressions form with remarkable rapidity and great ease" (p. 258).

With the mid seventies, the issue of automaticity has become a major empirical question (Posner and Snyder 1975; Schneider and Shiffrin 1977; Shiffrin and Schneider 1977; see Uleman and Bargh 1989 for discussion).[16] For instance, in the area of impression formation, convincing demonstrations of spontaneous trait inferences have been presented by Uleman and his group (Uleman et al. 1986; Uleman 1989; Winter and Uleman 1984; Winter et al. 1985).

In a typical study by this group, Winter and Uleman (1984) asked a group of

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16- Their is no clear definition of automatic and spontaneous processes (see, Bargh 1989 for a discussion of various non controlled processes). We adopt the view that spontaneous processes occur in a middle range of a continuum in which extremes are automatic and controlled processes (see Kardes 1988 for a similar view). Our interest in the findings from the literature on spontaneous and automatic processes is that they demonstrate that abstract information can be encoded under very low level of effort. Whether the encoding occurs in a uncontrolled matter (i.e., outside individuals awareness) is not essential for the purpose of this research.

subjects to read and remember sentences that were known to imply some traits (e.g., "The professor has his new neighbours over for dinner" suggests the trait "friendly"), but subjects were not explicitly told to make such trait inferences. Later on, subjects were asked to recall 18 such sentences. They found that for those subjects provided with trait cues (e.g., friendly), the recall accuracy was at least as good as for those subjects provided with strong semantic cues (e.g., teacher or party), and it was significantly better than for those subjects not provided with any cues. Furthermore, subjects reported being unaware of inferring traits at encoding. They interpreted these results as evidence that people spontaneously infer personality traits from behavior, otherwise there is no reason that trait cues should facilitate recall as do strong semantic cues.

Although other studies seem to indicate that trait inferences are not made entirely in a spontaneous or uncontrolled matter (Bassili and Smith 1986; Smith and Miller 1979), in their review of the social psychology literature, Sherman et al. (1989, p.284) concluded that under very minimal conditions (such as those postulated in a low involvement situation), "trait inferences from behavior are made relatively spontaneously as part of the comprehension process".

In the field of consumer behavior, Kardes (1988) has recently reported results suggesting that attitude (i.e., abstract cognitive information) is also spontaneously encoded during ad processing. This study is particularly interesting as it used a measure of time latency, providing direct evidence of what is encoded during ad

processing.

Kardes (1988) was interested in the conditions under which individuals spontaneously infer conclusions from arguments contained in an ad. The experimental procedure involved several steps. First, prior to ad exposure, individuals' level of involvement (high versus low) was manipulated. The subjects were then exposed to an ad containing three sets of arguments for a target compact disc player, the "CT-2000", which implied the following three conclusions: (1) "Inserting a disc is easy with the CT-2000", (2) "The CT-2000 filters out sampling frequency distortions at less cost", and (3) "The CT-2000 reduces more distortion from surface irregularities than most CD players". For half of the subjects these three conclusions were explicitly stated. For the other half, these conclusions were omitted. Later, the subjects' response latencies to questions about the three conclusions (i.e., conclusion latency measure) and about brand attitude (i.e., evaluation latency measure) were recorded. Measurement of brand attitude was also assessed on seven-point scales. The response latencies were obtained through a micro computer. For instance, in the case of brand evaluation latency, as a brand name (e.g., CT-2000) appeared on a monitor, subjects were requested to either press a button labelled "Like" or a button labelled "Dislike". The time required to perform this task was automatically recorded.

Although Kardes was primarily concerned with spontaneous inferences made during ad processing, he did provide results concerning spontaneous attitude

formation. In fact, Kardes' experiment also included a two level independent variable labelled "consolidation". Thus, one group of subjects completed the standard pencil-and-paper attitudinal task before the evaluation latency task. The other group of subjects completed the pencil-and-paper attitudinal task after the evaluation latency task.

Neither a main effect of consolidation nor interactions involving consolidation was found on the evaluation latency measure (see Kardes 1988, footnote #2); that is, the time subjects required to report their attitude toward the brand "CT-2000" was not influenced by the fact that the evaluation latency task was performed after or before the paper-and-pencil attitude measurement task. Kardes reasoned that if subjects don't spontaneously form an attitude toward the brand during ad processing, the assessment of the attitude through the paper-and-pencil task would force them to do so. Therefore, subjects who report their attitude toward the brand on a paper-and-pencil task before (versus after) the evaluation latency task should require less time to report their evaluation of the "CT-2000" compact disc, as for this group, a brand evaluation would already be available. The absence of any significant differences involving the consolidation variable can be interpreted as suggesting that brand attitude was spontaneously encoded during ad exposure, regardless of the experimental condition.

As a whole, these studies on spontaneous processes suggest that abstract cognitive information is "spontaneously" encoded during ad processing, regardless

of the level of AMI.

3.2.1.2 Research on dual processing models

The stream of research on dual processing models is directly associated with the development of research on spontaneous processes. According to the dual approach, individuals may not be engaged in effortful information processing all the time. Rather, under some occasions, they may prefer an effortless mode of processing. Common to most of these dual processing models that have appeared in impression formation (Brewer 1988; Fiske and Neuberg 1990), as well as in attitude (Chaiken 1980, Petty and Cacioppo 1981) and marketing (Batra and Ray 1985), is the assumption that the level of involvement is a major determinant of the mode of processing that is most likely to be used. When the level of involvement is low, individuals will use an effortless processing, whereas when it is high, they will engage in effortful processing.

For example, in the domain of impression formation, Fiske and Neuberg's (1990) model posits that individuals will form their impression of a target person through categorization processes, if the attributes of the person (e.g., individual's behaviors) fit an existent category (i.e., that there is an informational fit) and there is no motivational factor (e.g., low need to form an accurate impression) requiring specific attention to attribute information. Since these categorization processes are relatively effortless (Bechtold et al. 1986) and occur rapidly (Fiske

et al. 1986), it can be expected that after a short while, individuals may "be unable to retrieve the specific category-consistent information on which the categorization" of the target person was initially based (Brewer, p.24).

In contrast, when individuals are highly motivated to form accurate impressions (e.g., because of high fear of invalidity), they are likely to engage in an individuating processing mode. That is, they will "integrate the available information in some sort of piecemeal attribute-by-attribute fashion" (Fiske and Neuberg 1990, p. 8).[17] As this specific information received greater attention, their memory traces should be stronger.

Recent studies from impression formation effectively indicate that as the level of involvement increases, individuals are more likely to engage in deep processing of specific attribute information about a target person. For example, Kruglanski and Freund (1983, Experiment #1) conducted a study in which subjects viewed a video tape portraying a target person at work. Two versions of the tape were presented. For half of the subjects, the target person was portrayed positively in the first part of the tape and negatively in the last part. For the other half of the subjects the sequence was reversed, i.e., the target person was first portrayed negatively and then positively. Before the presentation, the subjects' motivation

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17- Increase in involvement will not always result in an increase in the use of the attribute orientation process. See Fiske and Neuberg (1990) for a discussion in which this might not be the case.

(high versus low apprehension evaluation) and opportunity to process information (high versus low time pressure) were manipulated. After the presentation, subjects were asked to report their evaluation of the target person.

They found that for those subjects under high evaluation apprehension (i.e., when subjects were expected to explain and compare their evaluation) and low time pressure (i.e., when subjects had no time limit to complete their evaluation of the target worker) a primacy effect was less likely to occur than in the other conditions. These results suggest that highly involved individuals will not form impressions of others based on the first few bits of information, if they have the opportunity to engage in deep information processing (for additional evidence see Berscheid et al. 1976; Erber and Fiske 1984; Harkness et al. 1985; Kruglanski and Freund 1983; Neuberg and Fiske 1987).

The dual process models developed in the attitude domain such as the Heuristic-Systematic model (Chaiken 1980, 1984, Chaiken et al. 1989) and the Elaboration Likelihood model (Petty and Cacioppo 1981, 1986) also suggest that specific information is more likely to be intensively processed under high (versus low) levels of involvement. Consider Chaiken's Heuristic-Systematic model.[18] Simply stated this model posits that when individuals lack motivation (or ability)

18- Because the Elaboration Likelihood model and the Heuristic-Systematic model are very similar, we only present the Heuristic-Systematic model. For a discussion of the differences the reader should see Chaiken (1984).

during stimulus processing, they will form an attitude based on heuristic processing which requires little resources. In fact, they even suggest that some times, individuals can engage in heuristic processing almost "spontaneously, with little awareness of having done so" (Chaiken et al. 1989, p. 213). In contrast, when individuals are highly involved with the issue (and have the ability), they are more likely to engage in systematic processing of the stimuli. They will judge the validity of the message by integrating all the relevant information and relating it to other knowledge they already have.

Considerable empirical support for Chaiken's model and Petty and Cacioppo's model has been reported in the literature (Axsom, et al. 1987; Chaiken 1980; Leippe and Elkin 1987; Petty and Cacioppo 1979; Petty, Cacioppo and Goldman 1981; Petty, Cacioppo, and Heisacker 1981; Petty, Cacioppo, and Schumann 1983; Miniard et al. 1991). Since several comprehensive reviews are already available (Chaiken and Stangor 1987; Eagly and Chaiken 1984; Petty and Cacioppo 1986; Petty et al. 1991; Tesser and Shaffer 1990), there is no need to duplicate them here. It might be sufficient to note that although there are no agreements on the number of modes of processing (i.e., are there two, three, or more routes to persuasion?; see, respectively Petty and Cacioppo 1981, Baker and Lutz 1988, Greenwald and Leavitt 1984, MacInnis and Jaworski 1989 for diverging conceptions) and on the interaction among these modes of processing (see Tesser and Shaffer 1990 for a discussion), there seems to be a consensus that

involvement is a major determinant of the extent to which specific brand information will be processed during ad exposure.

For example, empirical studies indicate that arguments are more likely to be processed under high (versus low) levels of AMI (see Petty and Cacioppo 1986) and that individuals are more likely to recall them when they have been processed under high (versus low) levels of AMI (Chaiken 1980; Leippe and Elkin 1987).

Considering the theorizing and the research on dual processing models, it can be argued that when the level of AMI is low, specific cognitive information will not be strongly encoded in memory, whereas when the level of AMI is high, it will be strongly encoded.

3.2.2 The encoding of abstract and specific affective information

As noted previously, a wide variety of affective reactions is likely to be experienced during ad exposure. Several theories have been elaborated to describe the processes involved in the generation of emotional responses (for a review see Strongman 1987). For the purpose of this research, we will restrict our discussion to cognitive theories. In particular, our focus will be on the role involvement plays in these theories and on the impact it has on the level of abstraction of the affective reactions that will be experienced during ad exposure.

According to cognitive theories, emotions emerge as a result of an appraisal (or interpretation) process (Arnold 1960; Ellsworth and Smith 1988; Fischer,

Shaver and Carnochan 1990; Frijda 1987; Lazarus 1991; Leventhal 1984; Mandler 1984; Manstead and Tetlock 1989; Ortony et al. 1990; Roseman 1991; Schachter 1959, 1964; Scherer and Ekman 1984; Weiner 1985). Depending on how a situation is evaluated in terms of an individual's well-being, different emotions will be generated.

For example, according to Weiner's attribution theory (1985), when an outcome occurs, it is valuated by individuals as a failure or a success. If the outcome is perceived as a success (failure), an immediate general positive (negative) affective reaction will be experienced by the individual. Following this "primary appraisal", the individual will search to determine the cause of the outcome. Depending on which cause is identified and where it is located on the causal dimensions (i.e., locus, stability, controllability) different affective reactions will be experienced. To illustrate, consider Weiner's example of a little league baseball player who performed poorly during the game. The boy will interpret this outcome as a failure and he will immediately experience a general negative affective reaction. He may then begin to search in order to identify the cause of his performance (Why did I perform so poorly?). Suppose that he attributes his bad performance to his ability (e.g., I am not good at baseball). If he perceived this lack of ability as an internal cause, he may experience low self-esteem. In addition, if he also perceived his lack of ability as a stable cause, he may also experience a feeling of hopelessness.

Although different theorists have different viewpoints of the appraisal process and of the components that are included in it (a comparison of these theories is beyond the scope of this research), many of them explicitly recognize that the appraisal process is not always deliberate or conscious, and that it could occur spontaneously (or automatically) (Buck 1985; Fischer et al. 1990; Hoffman 1984; Lazarus 1984, 1991; Leventhal 1980, 1984; Leventhal and Scherer 1987; Otorny et al. 1990; Tsal 1985, Weiner 1985).

According to Lazarus, appraisal processes could take one of two forms; automatic (or unconscious) or deliberate (or conscious). Lazarus (1991, p. 188) argued that "some emotions are the result of time-consuming, deliberated, volitional, and conscious forms of reasoning, which draw on our abstract, symbolic capacities" and that others "are the results of automatic, involuntary, and unconscious cognitive activity that is very rapid" (Lazarus and Smith 1988). Concerning the level of abstraction of the affective reactions that are likely to be experienced under these two different levels of processing, Lazarus (1991) holds that emotions resulting from automatic processes are likely to be ambiguous whereas those generated under deliberate processes are likely to be finely graded.

Similarly, the perceptual-motor theory developed by Leventhal and his colleagues (Leventhal 1980, 1984; Leventhal and Scherer 1987) also suggests that different levels of processing are involved in the generation of emotions. They identified three levels of processing; expressive-motor level, schematic level, and

conceptual level. We focus here on the distinction between schematic and conceptual level as it parallels Lazarus' distinction between automatic and deliberate processes. The expressive-motor level corresponds to a more primitive mode of generation of emotion.

Regarding the schematic level, Leventhal (1984, p. 135) wrote that "the main function of schematic emotional memory is to provide a rapid (i.e., automatic) perceptual-emotional appraisal of current situations parallel to volitional cognitive activity". These emotional schematas are postulated to "shape our subjective experience of objects and events without effort and without awareness of their activity". In contrast, "the conceptual processes are closely related to deliberately controlled, skilled motor performance, and to propositional thinking" (Leventhal 1984, p. 141). The individual is expected to "reflect upon, abstract, and draw conclusions about the environment and his or her responses to it" (Leventhal and Scherer 1987, p. 11).

Concerning the level of abstraction of the affective reactions that will be experienced under the different levels of processing, Leventhal's position echoes Lazarus's position. He suggests that higher level of processing will result in finer emotional reactions. Consider, Leventhal's (1984, p. 131) following statement:

> "The entire emotional system, including overt emotional reactions and subjective feelings, can be stimulated to activity by processing at any level of the system. The speed and clarity with which emotion will be experienced and the cognitive content accompanying emotional arousal will vary according to which levels

> of the system are active. For example, if an emotional sequence is initiated by activity at the visceral or autonomic level ..., emotional behavior and experience may be relatively ambiguous because autonomic activity accompanies many types of intense activity. The feeling state would become more distinct and be experienced as fear, anger, joy, and so forth when a central expressive-motor program is activated by either external stimulation ... or through cognitive activity that stimulates central expressive-motor activity."

Thus, as suggested above by Lazarus and Leventhal, and by many other researchers (Bower 1992; Ortony et al. 1990; Weiner 1985), individuals will not always engage in controlled appraisal processes, and those who engage in controlled processes (versus those who engage in spontaneous processes) are more likely to experience specific (or differentiated) emotions. Therefore, in order to determine when individuals will experience abstract or specific affective reactions, it is necessary to identify conditions under which controlled and spontaneous processes are likely to predominate.

In the present research, it is suggested that AMI is one of the variables that determines whether individuals' emotional responses will be generated through spontaneous or controlled processes during ad exposure. Specifically, it is argued that as the level of AMI increases, the likelihood that individuals engage in controlled processes increases, and consequently, the likelihood that emotional reactions experienced during ad exposure become more specific also increases. The rationale behind this postulate is straightforward. If controlled processes require a greater amount of processing, they are more likely to occur when

individuals are disposed to engage in deeper processing; that is, when AMI is high.

Based on the above comments, the following two propositions can be put forward concerning the level of abstraction of the affective reactions that will be experienced during ad exposure: (1) abstract affective reactions (e.g., general affective reactions, AB, AAD)[19] will be spontaneously experienced during ad exposure, and (2) as the level of AMI increases, affective reactions experienced during ad exposure will become more specific.

Although we can cite the vast stream of research on classical conditioning in support to the first proposition, empirical studies concerning the second proposition are more rare. To our knowledge, studies have not directly addressed the impact of AMI on the level of abstraction of the affective reactions that are likely to be experienced during ad exposure. However, as we will see, the theorizing and empirical research on emotional development are in accord with the second proposition.

3.2.2.1 Research on classical conditioning

As described by Brewer (1974, p.1) classical conditioning occurs when "the repeated pairing of a Conditioned Stimulus (CS) with an Unconditioned Stimulus

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19- In this section, AB and AAD refer to hot evaluation.

(US) will cause the CS to elicit a Conditioned Response (CR) in an unconscious, automatic fashion".[20] For instance, when a brand (i.e., CS) is frequently paired with positive music (i.e., US), this will cause the brand to elicit positive responses. Since Pavlov's (1927) studies, numerous investigations of classical conditioning have appeared in psychology, social psychology, and consumer behavior (for a review see McSweeney and Bierley 1984).

In consumer behavior, the interest in classical conditioning is relatively recent. The first notable study in this domain is attributed to Gorn (1982). In Gorn's first experiment, subjects were informed that they would participate in a study for an advertising agency which was trying to select the background music for a pen ad. Using a 2x2 factorial design, subjects were told to watch a slide for a pen (either a blue or a beige pen was presented) while background music was playing (either a liked or a disliked music was played). Following the presentation of the ad, subjects evaluated the music. In order to thank them for their participation in the study, subjects were asked to select a blue or a beige pen donated by the company manufacturing the brand. The analysis of the colours of pens that were chosen,

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20- Although different types of classical conditioning effects have been identified, we are concerned here with the transfer of affect (i.e., how manifested feeling state transfers to the conditioned stimulus) and not with the transfer of very simplistic responses controlled by the autonomic and skeletal nervous system such as in Pavlov's study or with the transfer of meaning (for a discussion see Allen and Madden 1985). For a discussion of the optimal conditions under which classical conditioning is more likely to occur, see McSeeney and Bierley (1984).

revealed that subjects were more likely to select the advertised pen when the background music was liked, but that they were more likely to select the non-advertised pen when the background music was disliked. Gorn interpreted these results as consistent with classical conditioning phenomenon (see Allen and Madden 1985 and Kellaris and Cox 1989 for different a interpretation).

Since Gorn's study, several other empirical studies in consumer behavior have reported classical conditioning effects (Allen and Janiszewski 1989; Bierley et al. 1985; Shimp et al. 1991; Stuart et al. 1987; for reviews see Cohen and Areni 1991; McSweeney and Bierley 1984; Shimp 1991). For example, using a more rigorous conditioning procedure (e.g., use of random control group), Stuart, Shimp, and Engel (1987) did four experiments to assess the impact of (1) the number of learning trials, (2) the pre-exposure to the conditioned stimuli, and (3) the sequence of presentation of conditioned and unconditioned stimulus. All four experiments involved the pairing of an unfamiliar brand of toothpaste (labelled "L") with attractive water scenes (e.g., mountain waterfall). Results from Experiment #1 indicated that for all levels of learning trials (i.e., 1, 3, 10, 20) the pairing of the toothpaste brand with attractive water scenes produced more positive attitudes toward the brand "L". However, contrary to expectations, the magnitude of this effect, was not significantly affected by the number of learning trials. Results also showed that pre-exposure to the toothpaste brand (i.e., when prior to the conditioning trial sequence, the toothpaste brand was presented several times

in the absence of attractive water scenes) tends to inhibit classical conditioning effects (see Experiment #2). Finally, stronger conditioning effects were observed when the toothpaste brand is presented before (versus after) attractive scenes (Experiments #3 and #4).

Allen and Janiszewski's (1989) study provides further insight into classical conditioning, particularly with respect to a very controversial issue: the assumption of cognitive mediation. They performed two experiments using a computerized word game to investigate whether awareness was a necessary condition for classical conditioning. In experiment #1, subjects were informed that a string of twelve letters would be appearing on a screen for three seconds. After it disappeared a Norwegian word (e.g., Nedpa) would appear on the screen. They were asked to press a key "Y" (yes) or a key "N" (no) whether they believed the Norwegian word could be spelled out from the previous twelve letter string. Immediately after pressing the key, subjects either received a positive feedback (e.g., excellent) or received no feedback. The overall game consisted of 50 plays where five Norwegian words (of five letters each) were presented 10 times each during the game. The feedback was preprogrammed in such a way that for some words, subjects received positive feeling 0%, 20%, 50%, 80%, or 100% of the time. At the end of the game, attitude toward the five Norwegian words was measured.

The analysis of subjects' attitude toward the Norwegian words showed that

there was a significant conditioning effect. However, no conditioning effect was found for subjects that were unaware of the purpose of the study (i.e., demand awareness) or unaware of the CS/US pairing pattern (i.e., contingency awareness). Therefore, these results seem to indicate that the mechanism through which affect is transferred is cognitively mediated.

Perhaps the most comprehensive investigation of classical conditioning ever undertaken in consumer behavior is Shimp, Stuart and Engel's (1991) research program. They conducted 21 experiments involving control groups. In all experiments subjects were exposed to 20 conditioning trials (where a brand of cola was paired with attractive water scenes) and 60 filler trials (where non-conditioned cola brands were paired with neutral scenes). Subjects's familiarity with the conditioned cola brand and the filler context (i.e., whether familiar or unfamiliar cola brand were used in filler trials), was manipulated across experiments. The results showed that stronger conditioning effects occur when unfamiliar or moderately familiar (versus very familiar) brands were used as conditioned stimuli. In contrast, the filler context has only a minimal impact on the size of conditioning effects, except when brands used as the conditioned stimulus were moderately familiar.

Two aspects of classical conditioning research are particularly important for the purpose of this research. First, according to our framework, the level of abstraction of affective reactions that were under investigation in classical

conditioning studies are likely to correspond to abstract affective reactions. For example, unconditioned stimuli such as music (Bierly et al. 1985; Gorn 1982), pictures (Shimp et al. 1991; Stuart et al. 1987), and positive feedback (Allen and Janiszewski 1989) may not have the power to elicit specific affective reactions such as pride, shame, and guilt. At best, they may elicit general positive or negative feelings. Secondly, regardless of the controversy about the assumption of cognitive mediation, there seems to be a consensus that classical conditioning effects occur almost spontaneously, or at least do not require considerable processing (Allen and Janiszewski 1989; Allen and Madden 1985; Brewer 1974; Wilkie 1990).

Therefore, empirical results from classical conditioning suggest that individuals spontaneously experience abstract affective reactions during ad exposure and through a process, which has yet to be identified, these abstract affective reactions are linked to brand information contained in memory.

3.2.2.2 Research on emotional development

As noted previously, we are not aware of any empirical study that has directly investigated the impact of AMI on the level of abstraction of the affective reactions that will be experienced during ad exposure. Nevertheless, theorizing and empirical findings in the area of emotional development shed some light on this issue.

According to contemporary cognitive theories of emotional development, the

emergence of emotions depends on cognitive development. It is generally believed that during infancy, children experience general and/or a few basic affective reactions resulting from simple appraisal processes. As they become older and their cognitive ability develops, they will engage in more complex appraisal processes producing affective reactions that are more specific (Bower 1992; Campos et al. 1983; Fischer et al. 1990; Lazarus 1991; Oatley and Jenkins 1992; Weiner 1985). Two lines of investigation supporting this interpretation are reviewed below: research on childrens' use of emotional terms (Bretherton et al. 1981; Bretherton and Beeghly 1982; Bretherton et al. 1986; Smiley and Huttenlocher 1989; Russell and Ridgeway 1983), and research on childrens' understanding of emotions (Harter et al. 1987; Harter and Whitesell 1989; Thompson 1989; Weiner 1985).

Several researchers place the onset of emotional language from around 18-20 months (Bretherton et al. 1986). For example, Bretherton and his colleagues conducted longitudinal studies on infants from 10 months to 28 months. Using parental reports on children's use of emotional terms, they found that by the age of 20 months a few infants use emotional terms such as "happy", "scared," and "sad" in order to express their internal state (Bretherton et al. 1981). By 28 months, Bretherton and Beeghly 1982 reported that infants use emotional terms such as "love," "like," "have fun," "happy," "mad", "scared," and "sad" (see also Smiley and Huttenlocher 1989).

Children's lexicon expands greatly during early school years. For instance, Russell and Ridgeway (1983) asked a group of teachers to list all the emotional words that they considered their third, forth and fifth grade students would be able to understand. This list (64 terms) was given to the students with the instruction to provide a synonym for each word. The list of words whose meaning was understood--the exact frequency is not reported--included general affective reactions (e.g., nice, awful, like, bad), basic affective reactions (e.g., mad, happy, loving, sad), and also many specific affective reactions (e.g., cheerful, pleased, lonely).

As we can see, the first emotional terms used by children to express their emotions corresponds to what has been previously labelled in this research as general affective reactions and basic affective reactions. Children's use of specific affective reactions occurs much later (Harter and Whitesell 1989). It seems reasonable to suppose that this late appearance of specific affective terms into childrens' lexicon could be partially explained by childrens' cognitive ability. Thus, younger children (compared to older children and adults) are less likely to experience specific affective reactions because they are unable to engage in the complex appraisal processes.

The body of research on childrens' understanding of emotions supports this interpretation. Several studies show that very young infants can understand general and basic affective reactions, but it is not much before 8 years old that they can

understand specific affective reactions. For example, Hatter and Whitesell (1989) reported findings which indicate that very early, children understand the general distinction between positive and negative emotions. They told a group of children from 3 to 11 years old to sort facial photographs corresponding to six basic emotions (happy, sad, mad, loving, scared, surprised). They found that children as young as four years sorted facial photographs into two superordinate categories: positive feelings and negative feelings (see also Russell 1989).

Similarly, it is well documented that children's understanding of basic emotions occurs very early (for a review see Harter and Whitesell 1989, Masters and Carlson 1984, Schwartz and Trabasso 1984). For example, Harter and Whitesell (1989) found that almost all the children they investigated from 3 to 11 years of age could provide descriptions and examples of five basic emotions: happy, sad, mad, loving, and scared. In addition, the type of causes children associated with basic emotions were very similar to those of adults.

In contrast, it is not much before the age of 8 that children understand specific emotions (Harter and Whitesell 1989; Thompson 1989). Consider for instance, Harter et al. (1987) study on pride and shame. They constructed different versions of vignettes representing a child that should either experience pride or shame. For instance, the pride vignettes presented a child who goes to the playground and successfully performs a flip on the bars that s/he was unable to accomplish before. In one version of the vignette, the child's parents were observing the child

performing the flip whereas in the other version, no one was in the playground observing the kid. The vignettes for shame represented a child that had taken money from a jar in the parents bedroom, even after they had forbidden the child to do so. In the first version, no one found out the child's act, whereas in the second version, the parents caught the child in the act.

These vignettes were presented to a group of children from 4 to 11 years old with the directions to identify the kind of emotions the child would be experiencing in the four different situations. It was found that with respect to pride, children of approximately 5 years old reported that the child would feel happy, glad, or excited, regardless if the parents were or were not observing the action. There was no mention of pride by these children. Children between 6 and 7 reported that the child would be proud if the parents were watching, but not if they were not. Only the group of 8 year-olds and older reported that the child would be experiencing pride even if the parents were not observing. Similar patterns have been observed with respect to shame. Thus, children of approximately 5 years old reported that the child would feel bad, scared or worried, but no one mentioned shame. Children between 6 and 7 reported the child would feel shame if the parents found out their child took money, but not if they did not. Again, only children from 8 years and older reported that the child would feel shame even if no one found out that the child had taken the money from the jar.

Findings reported by Weiner and his colleagues regarding the attribution-

emotion model also point in the same direction (Thompson 1989; Weiner 1985). As previously described, the attribution framework involves two steps. The first step, termed "primary appraisal", consists of an outcome evaluation. That is, if an outcome is evaluated positively (negatively), individuals will experience a global positive (negative) emotional reaction. According to Weiner, these "outcome-dependent emotions" should include reactions such as happy, sad and frustrated. Following this primary appraisal, individuals are expected to engage in a search to determine the cause of the outcome. This secondary appraisal should lead to attribution-dependent emotions such as guilt, pride, anger, gratitude, shame, and hopelessness. As noted by Thompson (1989, p. 122), these "attribution-dependent emotional reactions are cognitively more complex that are outcome-dependent emotions, because they rely on consideration not only of whether success or failure has occurred, but also its underlying causes". If we consider that young children (compared to older children and adults) are less likely to spontaneously engage in causal attribution (because causal attributions are cognitively demanding), it can be expected that they will exhibit a tendency to rely on primary appraisal.

This prediction was confirmed in a recent study by Thompson (1989), who developed 12 paragraph length stories describing a sequence of events that should lead the story character to experience different affective reactions. The 12 stories were designed according to a factorial design involving two domains (achievement and moral), two outcomes (success or failure), and three causes for the outcome

(personal effort, another's intervention, or luck). After hearing each of the 12 stories, second grade children, fifth grade children and adults were requested to describe in their own words how the character would feel at the end of the story, and also to explain why he would feel this way.

The results were consistent with the attribution-emotion model. The analysis of the causes identified by the respondents revealed that second grade children provided a greater proportion of outcome-dependent inferences than did fifth grade children and adults. Inversely, fifth grade children and adults reported a greater proportion of attribution-dependent inferences.

To summarize, the following two conclusions can be drawn from these studies on emotional development: (1) older children and adults are more likely to engage in complex appraisal processes than younger children and (2), as the complexity of appraisal processes increases, individuals experience affective reactions that become more specific.

These two observations are important for the purpose of the present research if we consider that a parallel can be drawn between the infant-adult distinction and the low-high AMI distinction. Thus, the situation of infants of studies on emotional development may resemble the situation of low involved individuals. Infants used in these studies did not have the ability to engage in complex cognitive processes, whereas low involved individuals do not have the motivation to engage (although they may have the ability to) in complex cognitive appraisals. Consequently, in

both cases, they will engage in simple appraisal processes. The situations of adults used in emotional development studies is comparable to that of highly involved individuals, as both groups are likely to engage in complex appraisal process. Adults used in these studies engaged in deep processing because they had the ability, whereas high involved individuals engage in deep processing because they have the motivation.

Therefore, theorizing and research from emotional development suggest that when the level of AMI is low, individuals will engage in simple appraisals producing general and/or basic affective reactions. In contrast, when the level of AMI is high, they are likely to engage in complex appraisals generating specific affective reactions.

3.3 The role of brand response involvement in the retrieval and use of abstract and specific information in judgment/choice making

In most judgment or choice situations, individuals will have to consult their memory (Lynch and Srull 1982). However, not all brand information stored in memory will necessarily be considered during judgment/choice. In fact, some of the available information may not be retrieved or may be retrieved but not perceived as relevant at the time the judgment or choice (Feldman and Lynch 1988; Baker and Lutz 1988).

Several factors are likely to determine what information will be retrieved and

what will be perceived as relevant during judgment or choice. For example, it has been shown that the delay since the most recent activation (Wyer and Srull 1986), the amount of interfering information (Keller 1987), the intensity with which the original information has been processed (Biehal and Chakravarti 1983; Chaiken 1980; Craik and Lockhart 1972), the characteristics of the information (Reyes, Thompson and Bower 1980; Chattopadhyay and Alba 1988), and the cues present at the time of judgment (Keller 1987) are among the factors that directly influence information accessibility. Similarly, the judgment context (Chattopadhyay and Alba 1988), the similarity between the current and previous judgments (Lingle and Ostrom 1979), and the discriminative power of prior judgments (Alba et al. 1991) are among the factors that are likely to determine whether individuals will use prior judgments as a basis for the current judgment or whether they will compute a new judgment based on the specific information that will be retrieved from memory.

The aim of this section is not to review all the factors having an impact on information accessibility and its perceived relevance (for a good review see Feldman and Lynch 1988). The scope is much more modest. It is limited to the characteristics of the information, particularly its level of abstraction. The first objective of this section is to compare the accessibility of information from different levels of abstraction. The second objective is to determine the impact of BRI on the perceived relevance of abstract and specific information during

judgment/choice.

Studies addressing these issues will be discussed below. Again, cognitive and affective information are presented separately because they refer to very distinct literatures, and the level of abstraction will be treated as a dichotomy (abstract versus specific), although it is a matter of degree.

3.3.1 The retrieval and use of abstract and specific cognitive information

A considerable amount of empirical results has been accumulated concerning the retrieval and use of cognitive information. For example, several researchers have shown that the likelihood that a specific piece of information will be retrieved depends on its level of abstraction (Alba et al. 1992; Chattopadhyay and Alba 1988; Christiaansen 1980; Just and Carpenter 1980; Kintsch and Keenan 1973; Lynch et al. 1988; Thorndyke 1977; to name just a few). Similarly, it is well documented that not all the items that can be recalled are necessarily used in judgment. Indeed, many field studies (Gibson 1983; Grass and Wallace 1969; Ross 1982) and laboratory studies (Beattie and Mitchell 1985; Dickson 1982; Hastie and Park 1986; Kardes 1986; Keller 1987; Lichtenstein and Srull 1985; Loken and Hoverstad 1985; Srull 1989) have reported low levels of correlations between recall and judgment.

In the present research, two major propositions are made concerning the retrieval and use of abstract and specific cognitive information. It is proposed that

(1) abstract cognitive information is more accessible than specific cognitive information and that (2) as the level of BRI increases, specific cognitive information is more likely to be used in judgment/choice than abstract cognitive information.

The research on the stability of cognitive information over time is consistent with the first proposition. The second proposition is supported by research on the recall-judgment relationship (Sanbonmatsu and Fazio 1990), mixed choice (Gardial and Biehal 1985; Alba et al. 1992), and mood effects at the time of judgment (Schwarz et al. 1991).

3.3.1.1 Research on the stability of cognitive information over time

Memory is a faculty that forgets! However, not all the information is forgotten at the same rate. For example, we may easily recall that our first grade teacher was kind and gentle, but we may have more difficulties in recalling her/his name, the way s/he dressed or the car s/he had. In fact, several studies have demonstrated that specific cognitive information tends to be forgotten more rapidly than abstract cognitive information. This phenomenon has been reported in areas such as memory (Bartlett 1932; Neisser 1981; Thorndike 1977; English, Wellborn and Killian 1934), text comprehension (Kintsch et al. 1975; Kintsch and van Dijk 1978; Miller, Perry and Conningham 1977), impression formation (Carlston 1980; Lingle et al. 1979), communication (Hovland et al. 1949), and consumer behavior

(Alba et al. 1992; Chattopadhyay and Alba 1988) (for a extensive review see Chattopadhyay 1986).

For instance, pioneering work in the domain of memory by Bartlett (1932) has been very influential. Bartlett found that even when the detail of a folk tale is forgotten, subjects were able to recall its gist (see also English et al. 1934). More recently, Neisser (1981) reached similar conclusions concerning the recall of conversations. He made a comparison between John Dean's (former counsel to President Richard Nixon) testimony in front of the Senate Watergate Investigating Committee concerning conversations he had with President Nixon one year before, and the tape of these conversations that were secretly recorded and now available. His analysis revealed that John Dean was fairly inaccurate in his reporting of the details of these conversations, and also that even John Dean's memory for the gist of these conversations was not always accurate. Nevertheless, at a higher level of abstraction, he was right; there was a "cover-up" attempt and many individuals were involved.

The research conducted by Kintsch and his colleagues on the representation of text in memory also pointed in the same direction. As mentioned in Chapter 2, Kintsch and van Dijk (1978) developed a model of text comprehension in which individuals are postulated to encode along with more detailed information of a text, some abstract representations (macro-propositions) that summarize its meaning or gist. In an empirical test of their model, they asked three groups of subjects to

read at their own speed a report titled :"Bumperstickers and the Cops". Immediately, one month or three months later, they were told to recall as much as they could the content of the report. They were not required to recall the report verbatim. These protocols were then decomposed into propositions. The analysis of these propositions indicated that the forgetting rates of micro-propositions within a three month period, was four times greater than that of macro-propositions. Similar patterns of results were also reported by Kintsch et al. (1975) and by Miller et al. (1977).

A few studies from the domain of impression formation offer further insight concerning the retrieval of abstract and specific cognitive information. For example, Lingle et al. 1979 (Experiment #2) provided subjects with a description of a hypothetical person. The description consisted of a small picture and of eleven traits. Subjects were told to indicate the suitability of this person for an occupation (either pilot or comedian). After a short delay (either one day or one week), subjects were asked to recall their prior judgment and to recognize the eleven traits that were previously presented among a list of 22 traits. The results indicated that the accuracy in the recall of the prior judgment was not affected by the duration of the delay. In contrast, they observed a significant decrease in the recognition accuracy of the eleven traits as the delay increased. In a somewhat similar type of study, Carslton (1980) also found that subjects were very accurate in reporting prior judgment after a one week delay.

Perhaps more important for the purpose of this research are the studies by Chattopadhyay and Alba (1988) and Alba et al. (1992) conducted in the field of consumer behavior. In Chattopadhyay and Alba (1988) study, subjects were exposed to a printed advertisement with instructions to carefully consider the information presented. Immediately after as well as one week later, subjects were told to report the thoughts they had during ad processing and asked to recall, as accurately as possible, all the information presented about the advertised brand. These cognitive responses and the information recalled from the ad were classified according to their level of abstraction as recall (e.g., "goes from 0 to 70 mph in 7.5 seconds"), single-fact interpretation (e.g., "good acceleration"), abstraction (e.g., "powerful car"), or global evaluation (e.g., "good car"). The proportion of information recalled immediately after ad exposure but not recalled one week later was estimated for each category. This analysis indicated that specific details about product's attributes were forgotten more rapidly than single fact interpretations, which in turn were forgotten more rapidly than abstractions. The forgetting rates of abstractions and global evaluations were similar.

Recent findings from Alba et al. (1992, experiment #2) further confirm this phenomenon. The authors argued that if abstract information is more stable over time than specific information, it is more likely to be used as a basis for judgment when a delay is introduced between encoding and judgment making. In order to test this proposition, they created two fictitious brands of cameras, which, through

the exposure to mock ads, were positioned on two different dimensions. Brand A was positioned as a technically sophisticated brand. To be precise, a puffed claim[21] was made about its technical characteristics, and information on specific technical features was provided. At the bottom of the ad, it was also said that the camera was easy-of-use, but this claim was only supported by three uncompelling features. In contrast, the Brand B was positioned as "easy-of-use". This puffery claim was supported by several impressive easy-of-use features. At the bottom of the ad, technical information about the brand was presented. Regardless of the positioning statement, Brand B's profile was designed is such a way that on both dimensions (i.e. technical sophistication and easy-of-use) it was objectively superior to brand A.

The experimental procedure consisted of two steps. First, subjects were allowed 90 seconds to examine the ad for Brand A and to rate it in terms of its "technical sophistication" and "easy of use". Second, either immediately after or seven days later, subjects were asked to reproduce their judgments about Brand A on the same two dimensions. Then, they were told to examine for 90 seconds the ad for Brand B and to report their judgments about this brand on the two

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21- As noted by Alba et al. (1992, p. 11), a puffed claim can be considered as abstract information because it represents a statement, labelled in an exaggerated form, about the superiority of the brand in terms of its overall quality (e.g., "the best that money can buy"), or in terms of a particular product dimension (e.g., "the most comfortable").

dimensions. A comparison of the evaluation of the brands on these two dimensions showed that Brand B was rated by 94% of the subjects as superior to Brand A in terms of its easy-of-use, regardless of the amount of delay. This is not surprising considering that Brand B is objectively superior to brand A and it was positioned as an easy-of-use brand. The pattern of results for the technical sophistication dimension is very different. When there is no delay between the two exposure occasions, only 26% of the subjects rated brand A as superior to brand B. When there was a 7 day delay between the two exposure occasions, 65% of the subjects rated brand A as superior to brand B.

These results are consistent with the view that abstract cognitive information is more accessible than specific cognitive information. Thus, in the condition of no delay, subjects may have easily retrieved the specific information about the technical characteristics of the memory brand A. Because, on the basis of the specific technical information, Brand B is superior to brand A, only a few respondents (i.e., 26%) reported that brand A was superior to brand B. In contrast, in the 7 day delay condition, subjects may have tried to retrieve specific technical information about the memory brand A, but may have retrieved only the abstract information (i.e., the puffed claim). Since brand A was positioned as a technically sophisticated brand, more subjects (i.e., 65%) reported that brand A was superior to brand B on the technical dimension, although on the basis of specific information it was not superior.

This review from memory, impression formation, and consumer behavior domains indicate that abstract cognitive information is more accessible than specific information and tends to be forgotten less rapidly.

3.3.1.2 Research on recall-judgment relationship

Many studies in fields such as impression formation (Anderson and Hubert 1963; Carlston 1980; Hastie and Park 1986; Lingle and Ostrom 1979; Lingle et al. 1979; Loken 1984), attitude formation (Jamieson and Zanna 1989; Sanbonmatsu and Fazio 1990; Sherman et al. 1983), and consumer behavior (Alba et al. 1992; Beattie and Mitchell 1985; Chattopadhyay and Alba 1988; Kardes 1986; Lichtenstein and Srull 1985; Loken and Hovertad 1985; Srull 1989) showed that rather than compute a new judgment based on a subset of specific information that can be retrieved, individuals are instead likely to use prior judgment as a basis for subsequent judgments (for a discussion of different theoretical explanations, see Hastie and Park 1986; Kardes 1986). To illustrate, consider the third experiment conducted by Lingle and Ostrom (1979). Subjects were presented with either one, three, five, or seven traits describing hypothetical individuals, and were asked to make a judgment about the suitability of these individuals for different occupations. This stimuli-based judgment was followed by a memory-based judgment (i.e., the set of traits was no more available) where subjects were asked about the suitability of these individuals for another occupation. The results

showed that the time requested by the subjects to report their second judgment was unaffected by the size of the set of traits describing the target individuals at the time of the stimuli-based judgment. The authors interpreted these results as suggesting that rather than retrieving all previous information, subjects used their prior judgment as a basis for their second judgment.

Many studies of the recall-judgment relationship show that abstract cognitive information is likely to be used in judgment making, but only a few have explicitly manipulated the individual's level of involvement during judgment/choice and hence, provide direct evidence of the role of BRI. These are the studies conducted by Fazio and his colleagues on the attitude-behavior relationship (Fazio 1990; Sanbonmatsu and Fazio 1990).

Fazio (1990) has recently presented the MODE model which explicitly emphasizes that the level of motivation and the opportunity to engage in in-depth processing during decision making are two important determinants of the level of information (i.e., attitude versus specific attribute information) that is most likely to be used by individuals in guiding their behavior. The model posits that when individuals lack motivation and/or do not have the opportunity to engage in in-depth processing of all potential information, they are likely to retrieve prior attitude and use it as a basis for guiding their behavior (Fazio et al. 1989). In contrast, if they are highly motivated and have the opportunity to engage in deep processing, they are more likely to compute a new attitude based on the specific

retrieved attributes in a fashion similar to Ajzen and Fishbein's model (1980).

An empirical test of the MODE model was recently provided by Sanbonmatsu and Fazio (1990). As it constitutes the only study involving a direct test of the MODE model, it will be described in detail below.

Sanbonmatsu and Fazio (1990, experiment #1) told subjects to read two series of 12 statements describing a camera department and 5 other departments (two statements for each department) of two fictitious stores (Smith and Brown). Then, subjects reported their overall attitude toward each store. The description of the stores was such that the overall evaluation of the Smith store (8 of the 12 statements were favorable) was superior to the Brown store's overall evaluation (8 of the 12 statements were unfavorable). However, the direction of the evaluation for the specific camera department in each store was reversed. Brown's camera department was described more positively (2 favorable statements) than Smith's camera department (2 unfavorable statements). The authors argued that when choosing a store to buy a camera, if subjects simply retrieved their overall evaluation of the stores, they would select the store with the superior overall evaluation (i.e., Smith). In contrast, if they retrieved specific information about the camera department and computed an evaluation for each camera department, they would select the store with the highest evaluation for the camera department (i.e., Brown).

Further in the experiment, subjects were asked to choose which was the best

store to buy a camera. Prior to reporting their choice, individuals' motivation (fear of invalidity) and opportunity (time pressure) to process information was manipulated. Subjects in high fear of invalidity were advised that their answer to the question that was to follow would be compared with other subjects' answers and that they would have to explain (to other subjects and to the experimenter) their response. No such instruction was given to subjects in low fear of invalidity condition. Subjects not under any time pressure were informed that they would have all the time they needed to answer the next question, while those in time pressure condition were advised that they would only have 15 seconds to answer the next question.

As predicted, the distribution of store choice indicated that subjects in high fear of invalidity and no time pressure conditions were more likely to select the Brown store. Conversely, subjects in the three other groups were more likely to select the Smith store. Sanbonmatsu and Fazio's (1990) second experiment reproduced the effect of motivation and opportunity observed in the first experiment.

These results suggest that when subjects are motivated and have the opportunity to engage in effortful processing, they will use a computational strategy; that is, they will recall specific information about each camera department and compute an evaluation for each of them. In contrast, when they are not motivated or do not have the opportunity to engage in deep information

processing, they will use a retrieval strategy; that is, they will used prior overall store evaluation to guide their choice.

3.3.1.3 Research on mixed choice

Recent research about consumers' use of external information versus internal information provides additional evidence for the role of BRI. A research program conducted by Biehal and his colleagues (Biehal and Chakravarti 1983, 1986; Gardial and Biehal 1985) was concerned with individuals' propensity to use previously encoded information, when external information was provided. Although they were primarily interested in the effect of information accessibility on choice, the impact of involvement during decision making was also assessed. We focus here on the study of Gardial and Biehal (1985), which has directly addressed the role of BRI.

In the first part of their experiment, Gardial and Biehal (1985) provided subjects with information on three attributes of five camera brands. Half of the subjects were told to learn the information while the other half were asked to classify the brands. Once this task was completed, previous information was removed and new information on four other attributes for the same five brands was provided. Then subjects were either assigned to the low or high involvement condition. In the low involvement condition, subjects were told to choose the best brand based on all the provided information using a pre-specified attribute weight

as a guide. In the high involvement condition, subjects were instructed to choose the best brand using the same pre-specified attribute weight but with an indication that they were making a choice for a good friend and that they will eventually receive feedback on their choice. While performing this task, individuals' concurrent verbal protocols were recorded. An analysis of these protocols indicated that subjects in the high (versus low) involvement condition were more likely to retrieve and use specific information encoded during the first part of the experiment. This trend however was marginally significant ($p = 0.10$).

Recent findings from Alba et al. (1992, experiment #3), however, seem to indicate that motivation is not sufficient to guaranty the use of specific information under high levels of BRI. An individual's ability to retrieve specific information is another factor to consider. Alba et al. conducted a mixed choice experiment where subjects had to choose between a memory brand and a stimulus brand. Two factors were manipulated in their study: brand description (weak versus strong) and level of involvement during choice (low versus high). Specifically, in a first session, subjects were told to read a description for a television brand and to give their evaluation of it. Subjects either read a strong brand description or a weak brand description. The strong brand was described by three important attributes (i.e., resolution, warranty, and audio capacity), whereas the weak brand was described by the same three attributes plus five other unimportant attributes (e.g., earphone jack). In addition, for two of the three common attributes the strong

brand was presented as superior to the weak brand; for the other one it was presented as inferior. After reporting their evaluation of the brand, subjects were told to come back two days later.

In a second session, subjects were asked to read the description of another television brand (i.e., the stimulus brand) and to choose the best brand between this new brand and the one they evaluated two days ago. The stimulus brand was described by the same three common attributes plus another unimportant one. In addition, the intermediate levels of the three common attributes were assigned to the stimulus brand so that objectively it was superior to the weak memory brand, but inferior to the strong memory brand. Just before reporting their choice, subjects in the high involvement condition were advised that in a few days someone would call them on the phone and ask them to indicate which brand they chose and to provide a reason for their choice.

An interaction between brand description and involvement was predicted. Among the subjects exposed to the strong memory brand, it was predicted that those in the high (versus low) involvement condition should be more likely to select the memory brand. Inversely, it was expected that among the subjects exposed to the weak brand, those under high (versus low) level of involvement should be less likely to select the memory brand. The rationale behind these predictions is that highly involved subjects will retrieve and use specific information when comparing the memory brand with the stimulus brand.

Therefore, when comparing the two brands on the basis of specific information, those exposed to the strong memory brand should be more likely to select the memory brand over the stimulus brand, and those exposed to the weak memory brand should be less likely to select the memory brand.

A significant interaction was found, but not in the expected direction. Thus, subjects exposed to the strong memory brand, were less likely to select the memory brand when the level of involvement was high (versus low). Inversely, those exposed to the weak memory brand were more likely to select the memory brand when the level of involvement was high (versus low). A possible explanation for these unexpected results is that specific information may not have been strongly encoded in memory during the first session. Thus, subjects under high level of involvement may have tried to retrieve the specific information stored in memory, but because of the two day delay they may not have been able to. As a result, they may have used the only information they could recall as a basis for choice; that is, the number of attributes describing the brand. Since the weak memory brand was described with more attributes than the stimulus brand it was selected more frequently. In contrast, since the strong memory brand was described by less attributes than the stimulus brand, it was selected less frequently.

As noted by Alba et al. (1992, p. 414) these results are consistent with the heuristic-systematic model which predicts that "when ability to engage in extensive processing is limited, noncentral information may become more influential,

particularly when motivation is high" (for a similar prediction see also Schwarz et al. 1991, p. 184).

3.3.1.4 Mood effects at the time of judgment

The research on mood effects also sheds some light on the relationship between BRI and the level of information used in judgment making. According to the mood literature, a parallel can be drawn between the positive-negative mood distinction and the low-high BRI distinction. Thus, individuals in a positive mood, as low involved individuals, prefer to use simple heuristics rather than engage in a complex cognitive effort, unless they are required to do so. In contrast, individuals in a negative mood, as highly involved individuals, are more likely to spontaneously engage in a deep information processing. For instance, it has been found that individuals in a positive mood, compared to those in a neutral or negative mood, are less likely to engage in causal reasoning (Bohner et al.1988; Schwarz and Clore 1983), in analytical reasoning (Bless et al. 1990; Mackie and Worth 1989), and in a deep information seeking (Hildebrand-Saints and Weary 1989). Discussions of the reason underlying this phenomenon is available in Isen (1984), Mackie and Worth (1989), and Schwarz et al. (1991)

If we agree with this parallel, then the findings obtained in a recent study by Bless and Mackie (described in Schwarz et al. 1991) is relevant for the present research. In that study, subjects were given two different tasks either permitting

the formation of a global representation of a persuasive message or the formation of a detailed representation. In the global representation condition, subjects were told to evaluate the perceived quality of the arguments. In the detailed representation condition, they were required to indicate the number of different arguments presented to them. Then, before reporting their attitude toward the issue discussed in the message, subjects' mood was manipulated. They were either put into a positive, a neutral, or a bad mood. Results indicated that subjects in a good mood were more likely to retrieve and use global representations as a basis for attitude, whereas those in the bad mood were less likely to retrieve and use global representations of the message. Subjects in the neutral mood either used abstract or detailed representations, depending on which was the most accessible.

Therefore, these results confirm that abstract cognitive information is more likely to be used when BRI is low and specific cognitive information is more likely to be used when BRI is high.

To summarize, the findings reported in the domains of recall-judgment relationship, mixed choice, and mood effects at the time of judgment demonstrate that individuals under a high (versus low) level of BRI are more likely to use specific cognitive information in judgment/choice; assuming that they have the opportunity to engage in a deep information processing, and that they have the ability to retrieve specific information.

3.3.2 The retrieval and use of abstract and specific affective information

The various affective reactions that will be experienced during ad exposure will leave some traces in memory. At the time of judgment, individuals are likely to retrieve and use some of these affective traces. This is well illustrated by Cohen and Areni's (1991, p.191) example of a consumer who goes to a large department store looking for a television set:

> "... Now, let us say that the store has put some changes into place between the consumer's last visit and the present visit. The lighting has been made softer, pleasant music has been added, displays have been made a little less cluttered. While hurrying to look at televisions, our consumer experiences positive feelings in response to his or her surroundings and may even be vaguely aware of that. When the television salespersons approaches, our consumer smiles and makes a cheerful remark. Later, over dinner, the consumer recalls feeling good in the store and attribute these feelings to a plausible focal objects (e.g., the store rather than the time of day). The resulting inference is that it is a pretty good store, and so the consumer form an intention to go back there to look for a new coffee maker."

In the present research, the following two propositions are put forward regarding the retrieval and use of abstract and specific affective information during brand response occasion: (1) abstract affective information is more accessible than specific affective information, and (2) as the level of BRI increases, specific affective information is more likely to be used as a basis for judgment/choice than abstract affective information.

These two propositions are not as strongly grounded in empirical studies as

those concerning the retrieval and use of cognitive information. In fact, there is a paucity of studies directly comparing the retrieval and use of abstract and specific affective reactions. Nevertheless, partial support for the first proposition can be found in the research on automatic attitude accessibility (Fazio et al. 1986; Sambonmatsu and Fazio 1986; Sanbonmatsu and Fazio 1986). Regarding the second proposition, theorizing and research from AAD (Batra and Ray 1986; Burke and Edell 1989; Edell and Burke 1987; Stayman and Aaker 1988), and the Elaboration Likelihood model (Cacioppo and Petty 1989; Petty and Cacioppo 1986) will be discussed.

3.3.2.1 Research on automatic attitude accessibility

This recent stream of research is associated with Fazio and his group (Fazio 1989; Fazio et al. 1986; Sanbonmatsu and Fazio 1986; Sanbonmatsu et al. 1986). According to these authors, an attitude is likely to be spontaneously activated from memory upon mere observation or mention of the attitude object.

In order to test their hypothesis, Fazio and his colleagues used a priming procedure. They argued that if attitudes are automatically activated upon mere presentation of the attitude object, then the presentation of an object can be used as a prime in another task. To illustrate, consider Fazio et al.'s (1986, p. 231) example of an individual who is required to identify as quickly as possible the valence of a target adjective:

> "Assume that the attitude object vodka is evaluated positively by an individual. Presentation of vodka as the prime may automatically activate a positive evaluation. If the target adjective that is presented is also positive, then the individual may be able to indicate relatively quickly that the target has a positive connotation. That is, facilitation should occur. In a similar manner, facilitation is expected in the case of a negatively valued object serving as the prime when it is followed by a negative target adjective, as in cockroach/disgusting." p.231

A series of three experiments conducted by Fazio et al. (1986) confirmed this hypothesis. The first experiment consisted of two parts. In the first part, 70 attitude objects (e.g., music, party, Democrats) were presented to subjects with instructions to indicate their judgment of the object by pressing a key labelled either good or bad. Individuals' reaction time was automatically recorded. Based on these latency measurements and on the direction of the judgments, 16 words were selected (for each subject) as prime for the second task. These words represented four categories: positive-highly accessible, positive-weakly accessible, negative-highly accessible, and negative-weakly accessible. The category "positive-highly accessible" for instance, corresponds to objects for which the judgment was positive and highly accessible (i.e., very short reaction time).

In the second part, subjects were presented with 10 positive and 10 negative adjectives and instructed to assess, as quickly as possible, the positive versus the negative connotation of these adjectives by pressing a key. They were also told that the presentation of each adjective would be followed by the presentation of a

memory word (one of the 16 words selected from the first part or one of 4 other words that were used as baseline, see Fazio et al. 1986, p. 232). Subjects were explicitly told to recite these words as they appeared on the screen.

An analysis of the response time measurements indicated that a facilitation effect occurred for congruent pairs but not for incongruent pairs. When a positively evaluated object was used as a prime for a positively connoted adjective, the reaction time was lower than when a positively evaluated object was used as a prime for a negatively connoted adjective and vice versa. Moreover, this facilitation effect occurred only when the words used as a prime corresponded to objects for which the attitude was highly accessible.

Fazio et al. (1986) conducted two additional experiments using a similar procedure. The second experiment indicated that the facilicitation effect tended to decrease as a longer delay was introduced between the presentation of the memory word and the target adjective. The third experiment essentially replicated the findings of the two previous experiments, but this time by manipulating rather than measuring attitude accessibility.

The results from Fazio et al. (1986) and from two others unpublished studies reported in Fazio (1989, i.e., Sanbonmatsu and Fazio 1986 and Sanbonmatsu et al. 1986) indicate that attitude (i.e. abstract affective information) can be easily retrieved to the extent that the object-attitude link is relatively strong.

Unfortunately, any conclusion about the retrieval of specific affective

information cannot be made on the basis of these studies. In fact, researchers have not yet examined the relative stability of abstract and specific affective information over time.[22] Therefore, for the purpose of this research, we will assume that, parallel of the pattern for cognitive information, specific affective information is less accessible than abstract information.

3.3.2.2 Research on attitude toward the ad

Since the publication of Mitchell and Olson's (1981) article, a considerable number researches have confirmed that AAD is a major determinant of AB, under a variety of different conditions (for a review see Brown and Stayman 1992). For example, significant AAD-AB relationships have been found under brand processing (Gardner 1985a; Laczniak and Carlson 1989; Mitchell 1986; Mittal 1990), ad processing (Batra and Ray 1986; Edell and Burke 1987; Gardner 1985a; Lutz et al. 1983; MacKenzie et al. 1986; MacKenzie and Lutz 1989), for individuals with high and low knowledge (Homer 1990; Laczniak and Carlson 1989; Lutz et al. 1983), for high and low levels of repetition (Edell and Burke 1989).

22- To our knowledge, only Burke and Edell (1986) have compared the relative stability of abstract and specific affective information. However, as they re-exposed all the subjects to the ads before ads evaluation, their study does not make it possible to compare the accessibility of abstract and specific affective information.

One issue frequently discussed in this literature concerns the mediating role of AAD. Many studies have tried to determine whether the effects of emotions on AB are mediated by AAD. Empirical results regarding this issue however are mixed. Some studies reported that AAD mediates all the effects of emotions on AB (Batra and Ray 1986; Edell and Burke 1987; Holbrook and Batra 1987). Others found that even after controlling for the effect of AAD on AB, there is still a direct effect of emotions on AB (Burke and Edell 1989; Stayman and Aaker 1988).

This issue is a good example of studies comparing the use of abstract versus specific affective information in judgment making. Thus, if there is no effect of emotions on AB after controlling for the effect of AAD on AB, this would suggest that individuals use abstract affective reactions (i.e., AAD) as a basis for judgment. In contrast, if there is still a significant impact of emotions on AB, this would suggest that individuals use specific affective reactions (i.e., emotions) as a basis for their judgment.

According to our framework, individuals are more likely to use specific affective reactions (i.e., emotions) when the level of involvement is high. Therefore, we would predict that AAD will mediate all the effects of emotions on AB when the level of involvement is low, but not when the level of involvement is high. Unfortunately, the studies examining the emotion-AAD-AB relationship have not considered the role of involvement. An examination of the study design does not permit one to draw a clear conclusion regarding the role of involvement,

because of the differences among these studies in terms of instructions given to subjects, ads selected, specific emotions considered and so on.

Nevertheless, the Elaboration Likelihood Model developed by Petty and Cacioppo (1981, 1986) is consistent with this prediction.

3.3.2.3 The Elaboration Likelihood Model

According to the Elaboration Likelihood Model (hereafter, ELM), the role of affect differs depending on the individual's level of elaboration likelihood. When the elaboration likelihood is low, affect may simply be used as peripheral cue. In contrast, when the elaboration likelihood is high, affect might be used as a persuasive argument. Specifically, about the different roles that affect can play in attitude formation, Cacioppo and Petty (1989, p. 82) wrote:

> "In short, according to the ELM, relevant affective states should serve as persuasive arguments or help in assessing the cogency of arguments when the elaboration likelihood is high (as when fear may contribute to a person's assessment of the danger inherent in not following a specific recommendation). When the elaboration likelihood is high but irrelevant affective states are induced, it is postulated that the affect will have little to no effect on attitudes and that any influence it does have will be to bias issue-relevant thinking by making affectively consonant thoughts and ideas more accessible in memory....
> In contrast to the postulated impact of affective states when the elaboration likelihood is high, affect, whether relevant or irrelevant, serves as a simple peripheral cue when people are either relatively unmotivated or unable to engage in the cognitive work necessary to evaluate the central merits of an attitude object or issue. As a cue, affect should enhance attitude when it is pleasant but have a negative effect when it is unpleasant, unless, of course , the cue is

so distal or weak that it has no effect whatsoever."

This extract is very interesting as it suggests that when the level of involvement is low, it is the valence of affective reactions that matters. In contrast, when the level of involvement is high, it is the relevance of the affective reaction that matters. If we consider that AAD captures the valence of the set of emotions elicited by the ad but not the relevance of these emotions for brand attitude, then the predictions of ELM about the mediating role of AAD are similar to ours. When the level of BRI is low, it is the valence of the affective reactions generated during ad exposure that will influence AB. As AAD captures the valence of these affective reactions, it should mediate all the effects of emotions on AB. In contrast, when the BRI is high, it is the relevance of the affective reactions in brand attitude formation that matters. As AAD does not capture this aspect of the affective reactions, it will not mediate all the effects of emotions on AB.

To our knowledge, this prediction has not been tested yet. This research will offer such an opportunity.

In summary, this chapter distinguishes the level of involvement during ad exposure (i.e., AMI) from the level of involvement during judgment/choice (i.e., BRI). Moreover, based on a review of different streams of research, it was demonstrated that the level of AMI is a major determinant of the level of abstraction of the cognitive and affective information encoded during ad

processing. Similarly, it was shown that the level of BRI is a major determinant of the level of abstraction of the cognitive and affective information retrieved and used during judgment/choice.

In the next chapter, we document the role of ADTYPE and TPM on the nature (cognitive versus affective) of the information that is most likely to be encoded during ad processing and used during judgment/choice.

CHAPTER 4

THE ROLE OF AD TYPE AND THE TYPE OF PURCHASE MOTIVES

According to our framework, neither AMI nor BRI is postulated to determine whether cognitive or affective information will be encoded during ad processing or be used as a basis for judgment or choice. First, this research posits that the type of ad (ADTYPE) will be a major determinant of the nature of information that will be encoded during ad processing. Second, it suggests that the type of purchase motives (TPM) will be a major determinant of the nature of information that will be used in judgment/choice.

To address these issues, the present chapter is organized around two sections. In the first section, the cognitive and affective dimensions of ads are presented and a classification of ads on these two dimensions is provided. In the second section, the distinction between cognitive and affective motives is discussed and empirical support for its usefulness is reviewed.

4.1 The role of ad type in the encoding of cognitive and affective information

Two aspects of attention have frequently been discussed in the literature; the

amount of attention and the focus of attention (Chattopadhyay and Nedungadi 1992; Fiske and Taylor 1984; Kahneman 1973; Lynch and Srull 1982). As emphasized in Chapter 3, involvement is postulated to be a major determinant of the amount of attention devoted to process a stimulus or to perform a task. In contrast, the focus of attention is likely to be determined by the characteristic of the stimuli, as indicated by the research on "salient effects", "vividness effects" and "novelty effects" (for reviews see, Fiske and Taylor 1984; Hastie 1981; Lynch and Srull 1982; Taylor and Fiske 1978).

This last point is important because it suggests that characteristics of the ad will determine the focus of attention and therefore the kind of information that will be encoded. Although ads can be characterized on several dimensions, the present research focuses on the cognitive and affective dimensions. By determining the position of an ad on these two dimensions, it becomes possible to predict whether cognitive or affective information is likely to be encoded during ad processing. Even though this may appear obvious, it remains important to clarify the meaning of the cognitive and affective dimensions and to stress the relationship between these two dimensions.

A large variety of labels have been used in the literature to refer to cognitive and affective types of ad. For example, cognitive ads have been labelled as rational ads (Millar and Millar 1990), informational ads (Laskey, Day and Crask 1989; Puto and Wells 1984), informative ads (Aaker and Norris 1982), and thinking ads

(Vaughn 1980). Affective ads have been labelled as feeling ads (Vaughn 1980; Mitchell 1988), emotional ads (Millar and Millar 1990), mood ads (Coulson 1989), and transformational ads (Laskey et al. 1989; Puto and Wells 1984).

It is worth noting that the present research does not regard cognitive and affective as two kinds of ads. Rather, they are viewed as two dimensions on which ads can be positioned. For the purpose of this research, the cognitive dimension will refer to the potential of the ad for providing information about the brand. This includes information about the traditional "utilitarian" attributes of the brand (e.g., a brand of shampoo "moisturizes hair", "removes greasiness") as well as information about "image" attributes of a brand (e.g., "a high fashion brand", "for people who buy the best things in life", see Mittal 1990, p. 212; Mittal, Racthford, and Prabhakar 1990). The affective dimension will refer to the potential of the ad to evoke affective reactions.

Furthermore, the cognitive and affective dimensions are not regarded as two extremes of the same continuum, but as two independent dimensions. Thus, a combination of these two dimensions allows us to distinguish four major categories of ads: high cognitive/high affective, high cognitive/low affective, low cognitive/high affective, low cognitive/low affective. An empirical test of this classification would require a major study on its own, which is beyond the scope of the present research. Nevertheless, this conceptual classification is largely consistent with the well-know classification of Puto and Wells (1984). Their

distinction between informational and transformational ads is very similar to our distinction between cognitive and affective dimensions. They also suggested that the informational and the transformational categories are not mutually exclusive and that four major categories of ads can be identified: high informational/high transformational, high informational/low transformational, low informational/high transformational, low informational/low transformational.

Perhaps more important to the present research is the assumption of orthogonality between cognitive and affective dimensions. This assumption suggests that in order to assess the effects of emotions through experimental manipulations, the strategy of comparing the impact of a rational ad (i.e., high cognitive/low affective) with the impact of an emotional ad (i.e., low cognitive/high affective) is inappropriate. Such a strategy would confound the effects of emotions with the effects of cognitions. Rather, a better design would be to compare the impact of two ads equivalent on the cognitive dimension but different on the affective dimension.

For the purpose of this research, two ads will be created in such a way as to provide equivalent cognitive information about the brand but differing in their potential to elicit affective reactions (for a similar strategy, see Chattopadhyay and Basu 1990; Chattopadhyay and Nedungadi 1992). A detailed description of the two ads that will be used in this research is presented in Chapter 6.

4.2 The role of the type of purchase motives in the use of cognitive and affective information

The proposed framework suggests that the type of motives driving the purchase decision is likely to determine the perceived relevance of cognitive and affective information in judgment/choice. In order to address this issue, the following four sections will: (1) distinguish between cognitive and affective purchase motives, (2) propose a classification of purchase decisions, (3) identify the determinants of the type of motives activated during purchase situations, and (4) review empirical findings supporting that purchase motives drive the type of information used in judgment/choice making.

4.2.1 The distinction between cognitive and affective purchase motives

The behavior of consumers is generally assumed to be goal directed. The goals or reasons underlying consumer behavior are frequently referred to as motives (McGuire 1976). Rather than attempting to identify all the different motives that might exist (as suggested by the enumeration provided by authors such as Murray (1938), Rockeach (1973), and McGuire (1976), the number is likely to be large), the present research focuses on the distinctions between cognitive and affective motives.

Two considerations have motivated this orientation. The first consideration concerns our interest in identifying a variable that is a major determinant of the

use of cognitive and/or affective information in judgment/choice. If the TPM is a major determinant of the type of information that is likely to be perceived as relevant during judgment/choice, it becomes obvious that classifying purchase motives as cognitive or affective will allow us to determine the relative impact of cognitive and affective information in judgment/choice. The second consideration that justifies this orientation is that many researchers have already made this distinction by mentioning that individuals do not engage in consumption behavior only to fulfil utilitarian needs, but also to fulfil hedonic needs (Holbrook and Hirschman 1982; Mittal et al. 1990; Ratchford 1987; Ratchford and Vaughn 1989; Rossiter and Percy 1985; Rossiter, Percy, and Donovan 1991; Srinivasan 1987; Vaughn 1980, 1986).

However, the authors who distinguish cognitive from affective purchase motives have not always used the same terminology. Terms such as utilitarian-hedonic (Holbrook and Hirschman 1982), functional-expressive (Mittal et al. 1990), think-feel (Vaughn 1980), and informational-transformational (Rossiter and Percy 1985) have been used. In addition, when similar terms were used, they were not always identically defined. For example, for Hirschman and Holbrook (1982, p. 92), hedonic motives designate "those facets of consumer behavior that relate to the multi-sensory, fantasy and emotive aspects of one's experience with products." In contrast, for Ahtola (1985, p.8) hedonic motives "relate to pleasure experienced or anticipated from the behavior" and the multi-sensory or fantasy

experiences are rather considered as determinants of emotional reactions.

Despite differences in the terminology and in the definitions, authors systematically included a reference to the search for an emotional state in their definition of affective motives. See the definitions of hedonic motives by Ahtola (1985, p. 8) and Hirschman and Holbrook (1982, p. 92), the definition of expressive motives by Mittal et al. (1990, p. 138), the definition of affective motives by McGuire (1976, p. 315) and Millar and Tesser (1986, p. 271), the definition of "feel" motives by Ratchford and Vaughn (1989, p. 293-4), and the definition of transformational motives by Rossiter et al. 1991, p. 16). Building on the similarity among these definitions, the present research will confine affective purchase motives to the motives which stress the search for an affective state. Cognitive purchase motives will refer to the motives which stress the physical function of the product. The following example from Engel et al. (1990, p. 518) provides a good illustration of the difference between cognitive and affective motivations:

> "Utilitarian motivations during the purchase of athletic shoes could lead to examination of a shoe's price and construction, whereas hedonic motivations might lead to consideration of the feelings that come from product ownership and usage (e.g., the person who buys Nike in order to project a desirable image)."

4.2.2. The classification of purchase decisions

The present research regards cognitive and affective motives as dichotomous.

That is, a motive is either cognitive or affective (Ahtola 1985). However, purchase decisions are not regarded as being either cognitive or affective. Thus, cognitive and affective motives can be simultaneously involved in a purchase decision (Racthford 1987; Rossiter et al. 1991; Srinivasan 1987). Therefore, it becomes necessary to classify purchase decisions along cognitive and affective dimensions. If we consider that cognitive and affective dimensions are orthogonal, and further consider that some motives are more important than others, it is possible to identify four major purchase decisions: (1) purchase decisions where important cognitive and affective motives are involved (e.g., when a person buys a sports car), (2) purchase decisions where important cognitive motives are involved but unimportant affective motives are involved (e.g., when an undergraduate student buys a calculator for his statistics course), (3) purchase decisions where unimportant cognitive motives are involved but important affective motives are involved (e.g., when an adolescent girl buys fashion clothes or cosmetics), and (4) decisions where unimportant cognitive and affective motives are involved (e.g., when a person buys a disposable razor).

Similar classifications of purchase decisions have been presented in the literature. For example, according to the FCB grid proposed by Vaughn (1980; Ratchford 1987), purchase decisions can be classified along two dimensions: involvement and think/feel. Involvement refers to the importance of the decision, think implies utilitarian motives (and cognitive information processing), and feel

refers to affective motivations (and affective information processing). Although, think and feel are two separate dimensions, they were combined by the authors into a single dimension in order to reflect the relative contribution of each type of motive in the purchase decision. Thus, as suggested by the FCB grid, both type of motives can be simultaneously involved in purchase decisions (see also the grid proposed by Rossiter and Percy (1985)).

4.2.3 The determinants of the type of purchase motives

Three classes of determinants might determine which type of motives will be activated during judgment/choice. First, it has been well recognized that some products are more likely to be associated with affective motives and others with cognitive motives. For instance, Hirschman and Holbrook (1982) distinguished utilitarian products (e.g., washing machines) from hedonic products (e.g., theater). Srinivasan (1987), defining utilitarian and hedonic as two dimensions, identified four types of product: low utilitarian-high hedonic products (e.g., art products), low utilitarian-low hedonic products (e.g., low involvement goods), high utilitarian-high hedonic products (e.g., automobile), and high utilitarian-low hedonic products (e.g., insurance). Similarly, in a major scale study, Ratchford (1987), classified 254 products according to the think/feel dimension of the FCB grid. Thus, products such as batteries and insurance were classified as think products, whereas perfume and greeting cards were classified as feel products.

Products such as family car and stereos were considered as having elements of both think and feel products.

A second determinant of the type of motives activated during purchase decisions is the individual characteristics. For example, it has been observed that subjects high in need for cognition are more likely to be engaged in deep thinking activities (Axsom et al. 1987; Cacioppo and Petty 1982; Haugtverdt et al. 1988; Petty and Cacioppo 1986). In opposition, it has been reported that impulsive buyers do not buy products so much for their utilitarian value as they do for the feeling associated with the purchase of the products (O'Guinn and Faber 1989; Rook 1987).

Finally, a third determinant of purchase motives is the purchase situation. As noted by Belk (1975, p.159), a person shopping an object for personal use is in a different situation than a person shopping a wedding gift for a good friend. In the former situation, one might expect that the consumer will be concerned with the utilitarian value of the product, whereas in the latter situation s/he might be more concerned with the hedonic aspects of the product (i.e., the pleasure expected of the person who will receive the gift). Research on gift-giving (Sherry 1983) and self-giving (Mick and DeMoss 1990) indeed indicate that affective considerations are highly associated with giving situations.

4.2.4. The relationship between purchase motives and information used in judgment/choice making

A major thrust in this research is that when determining the perceived relevance of cognitive and affective information in a judgment or a choice situation, individuals are likely to consider the type of motives driving the purchase decision (at least when the level of BRI is high).[23] Information that is related to their purchase motives is likely to be perceived as relevant and should receive special attention during judgment/choice. On the contrary, information which is unrelated to their purchase motives is likely to be perceived as irrelevant and should be disregarded during judgment/choice. For example, if cognitive motives drive consumer purchase decisions, cognitive information (e.g., product's utilitarian characteristics) is likely to be perceived as relevant for the judgment/choice, whereas if affective motives drive the purchase decision, affective information (e.g., feeling that comes from product usage) is likely to be perceived as relevant for the judgment/choice.

As we will see below, recent findings from the attitude-behavior relationship

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23- Purchase motives may not only operate on the judgment making occasion, but also on the ad exposure occasion influencing the type of information that will be encoded. For instance, when the purchase of a product category is cognitively driven, individuals might be more likely to focus on cognitive information during ad processing. Although this issue is important, it is not directly addressed in the present research. In fact, in the proposed study (see Chapter 7), the manipulation of the TPM occurs after ad exposure.

literature support this proposition.

4.2.4.1 Research on the attitude-behavior relationship

Although early reviews demonstrated a weak support for the attitude-behavior relationship (Fazio and Zanna 1981; Wicker 1969), recent empirical findings indicate that a strong relationship between attitude and behavior could exist under some circumstances. For instance, strong attitude-behavior relationships were reported: when attitude and behavior are assessed at equivalent levels of specificity (Ajzen and Fishbein 1977), when affective and cognitive components of attitude are consistent (Norman 1975), when attitude is held with confidence (Fazio and Zanna 1978), and when attitude is highly accessible (Fazio 1990).

For the purpose of this research, the strong attitude-behavior relationship reported when the type of attitude matches the type of motives driving the behavior is of particular interest. Thus, it has been found that cognitively based attitudes are better predictors of cognitively based behaviors, and that in contrast affectively based attitudes are better predictors of affectively based behaviors (Millar and Tesser 1986,1989).

For instance, Millar and Tesser (1986) conducted an experiment in which they manipulated the type of attitude (cognitive versus affective) and the type of motives driving the behavior (cognitive versus affective). More specifically, they informed a group of subjects that their study was an attempt to evaluate the effectiveness of

five different types of puzzles to increase analytical abilities. Half of the subjects were told that at the end of the experiment they would be tested on their analytical abilities (instrumental condition). The other half of the subjects were instructed that at the end of the experiment, they would be given an unrelated test on their social sensitivity (consummatory condition). Participants were also informed that they would be given 5 minutes to familiarize themselves with the puzzles.

Furthermore, before starting to familiarize themselves with the puzzles, half of the subjects in each condition were told that while working with each puzzle they should focus on the reason they feel the way they do about each puzzle (cognitive focus condition). The other half was asked to focus on how they feel about each puzzle (affective focus condition) while working with the puzzles.

Once having completed the familiarization with the puzzles, subjects reported their evaluation of each puzzle. It was expected that for the subjects in the cognitive focus condition, the cognitive component of attitude would be more salient when reporting their evaluation of the puzzles, and hence would have a strong impact on their overall attitude. Alternately, for the subjects in the affective condition, it was expected that the affective component of attitude would be more salient when reporting their evaluations of the puzzles, and hence would have a strong impact on their overall attitude.

Finally, after having reported their evaluations of the five puzzles, subjects were given another opportunity to play as they wished with any of the puzzles (a

seven minute period was allowed). The length of time subjects played with each puzzle was recorded. It was expected that individuals in the instrumental condition would view this new opportunity to play with the puzzles as a means of improving their performance on the upcoming test (i.e, their behavior would be cognitively driven). In contrast, subjects in the consummatory condition would view this new opportunity to play with the puzzle as a means to please themselves (i.e., their behavior would be affectively driven).

For each subject, the correlation between the rank order rating of the five puzzles and the time spent playing with each puzzle was estimated. Results indicated that attitude-behavior correlations were stronger when both attitude and behavior were based on the same component. Thus, a cognitively (versus affectively) based attitude was a better predictor of a cognitively based behavior. Similarly, an affectively (versus cognitively) based attitude was a better predictor of an affectively based behavior.

Recently, Millar and Tesser (1989) reproduced these findings. Using the same procedure, they found a similar pattern of results when the cognitive and affective components of attitude were highly inconsistent, but not when they were consistent.

These results from Millar and Tesser (1986; 1989) confirm that the type of motives driving behavior is a major determinant of the type of information used as a basis for guiding behavior. By extension, it is reasonable to expect that these

conclusions stand in the case of the type of information used as a basis for judgment/choice making.

To summarize, in the first section of this chapter, a classification of ads along cognitive and affective dimensions was presented. In the second section, a distinction between cognitive and affective motives was made, a classification of purchase decisions according to cognitive and affective dimensions was proposed, the determinant of the type of motives activated during purchase decisions were identified, and empirical support for the role of purchase motives on the type of information used for judgment/choice was reviewed.

Formal hypotheses concerning the predictions made in this chapter and those formulated in the previous one are presented in the next chapter.

CHAPTER 5

HYPOTHESES

In the previous chapters, distinctions between the nature (cognitive versus affective) and the level of abstraction of the information were discussed (Chapter 2), and a review of the literature was presented concerning: (1) the impact of AMI and ADTYPE on the type of information that is encoded during ad processing, and (2) the impact of BRI and TPM on the type of information that is retrieved and used during the judgment/choice (Chapters 3 and 4).

In this chapter, formal hypotheses about the impact of these four variables (i.e, AMI, ADTYPE, BRI, TPM) are formulated. Before presenting these hypotheses, a brief description of the experimental procedure is provided to facilitate the comprehension of the hypotheses.

5.1 Experimental procedure

The experiment will consist of a 2 (neutral versus emotional ADTYPE) x 2 (low versus high AMI) x 2 (low versus high BRI) x 2 (cognitive versus affective TPM) between-subjects factorial design. Subjects will either be exposed to a neutral ad or to an emotional ad for an unfamiliar brand of camera. Prior to ad exposure, the subjects' level of AMI (low versus high) will be manipulated. Right

after ad exposure, cognitive and affective responses generated during ad exposure will be collected and AAD will be measured. Then, after a short delay (where a filler task will be introduced), subjects' level of BRI (low versus high) and the TPM (cognitive versus affective) will be manipulated. Finally, AB, purchase intention (hereafter, PI), and choice will be measured (for a detailled description see Chapter 7).

The next four sections will present hypotheses related to the effects of the four independent variables on: (1) the type of information encoded during ad exposure, (2) AAD, (3) AB, PI and choice, and (4) the mediating role of AAD.

It is worth noting that not all manipulations will occur during ad exposure and, thus, not all dependent variables will be influenced by the four independent variables. For example, the level of BRI and the TPM cannot influence the type of responses generated during ad exposure, because the manipulation of these two variables occurs after the cognitive and affective responses are collected. Furthermore, when two-way or three-way interactions are predicted, lower order effects will not be discussed.

5.2 Hypotheses on the type of information encoded during ad exposure

In this research, the recollection of cognitive and affective responses generated during ad exposure is assumed to be a good indicator of information processing occurring during ad exposure (Wright 1980). In particular, six indices of cognitive

and affective responses are considered: (1) the proportion of affective responses, (2) the proportion of positive affective responses, (3) the proportion of positive ad cognitive responses, (4) the proportion of positive brand cognitive responses, (5) the proportion of specific cognitive responses, and (6) the proportion of specific affective responses.[24] For each index, a specific hypothesis is put forward.

The first four hypotheses derive directly from the way the emotional ad and the neutral ad are constructed. As described in detail in Chapter 6, special care was taken to ensure that both ads contained identical brand information, but differed in their potential to elicit affective reactions. If we consider that the emotional ad is designed to produce stronger positive affective reactions (e.g., because a more appealing music was used in the emotional ad), then a higher proportion of affective responses, a higher proportion of positive affective responses, and a higher proportion of positive ad cognitive responses should be produced by the subjects exposed to the emotional ad. However, individuals exposed to the emotional (versus neutral) ad are not expected to report a higher proportion of positive brand responses, because both ads contain identical information about the attributes of the brand.[25]

24- Hypotheses about cognitive and affective responses are stated in terms of proportion. Relative indices have been used in previous studies (see Chattopadhyay and Basu 1990).

25- One could argue that the valence of the affective reactions elicited during ad exposure may also have a halo effect on the valence of brand cognitive responses. For example, previous research indicates that cognitive responses

Therefore, the following hypotheses are formulated:

H1: Subjects exposed to an emotional ad produce a higher proportion of affective responses than those exposed to a neutral ad, regardless of the level of AMI.

H2: Subjects exposed to an emotional ad produce a higher proportion of positive affective responses than those exposed to a neutral ad, regardless of the level of AMI.

H3: Subjects exposed to an emotional ad produce a higher proportion of positive ad cognitive responses than those exposed to a neutral ad, regardless of the level of AMI.

H4: Subjects exposed to an emotional ad produce an equal proportion of positive brand cognitive responses than those exposed to a neutral ad, regardless of the level of AMI.

It is worth mentioning that neither a main effect of AMI nor an interaction involving ADTYPE and AMI is predicted in H1, H2, H3 or H4. This is because of our postulate about the role of AMI. As discussed in Chapter 3, AMI is

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generated under a positive (versus a neutral) mood are likely to be more positively valenced (Goldberg and Gorn 1987; Mathur and Chattopadhyay 1991). Similarly, the dual mediating hypothesis suggests that some of the effects of AAD on AB occur through the impact of AAD on brand cognitive responses (MacKenzie et al. 1986). We believe that if such effects occur, they are likely to be small. We come to this conclusion because most of the information on the brand is presented in the first third of the advertisement (i.e., before the positive emotional reactions are elicited). Therefore, the likelihood that brand cognitive responses will be influenced by affective reactions is reduced.

assumed to have an impact on the level of abstraction of the information that is encoded during ad exposure, but not on the nature (cognitive versus affective) or valence of the information. The next hypotheses deal with the impact of AMI.

According to the research on spontaneous inferences (Kardes 1988; Uleman 1989; Uleman et al. 1986; Winter and Uleman 1984, 1986) and dual modes processing (Chaiken 1980; Fiske and Neuberg 1990; Kruglanski and Freund 1983; Neuberg and Fiske 1987; Petty and Cacioppo 1981) reviewed in Chapter 3, when the level of AMI is low, individuals will encode abstract cognitive information as a result of a minimum processing of a few ad elements. In contrast, when the level of AMI is high, individuals will encode abstract cognitive information as a result of the careful processing of several ad elements. Consequently, specific cognitive information used as a basis for abstract cognitive information is likely to be processed more deeply when the level of AMI is high (versus low). If we consider that information processed in greater depth is more strongly encoded (Biehal and Chakravarti 1983; Craik and Lockhart 1972; Gardial and Biehal 1985), individuals should be more likely to report specific cognitive responses when the level of AMI is high (i.e., the proportion of specific cognitive responses should be higher under high versus low levels of AMI). ADTYPE is not expected to influence the level of abstraction of the cognitive information encoded. Thus, H5 can be stated as follows:

H5: Subjects under a high level of AMI produce a higher proportion of specific ad cognitive responses and brand cognitive responses than those under a low level of AMI, regardless of ADTYPE.

The rationale underlying the next hypothesis is very similar to the one which underlies H5. Cognitive theories of emotions (Arnold 1960; Lazarus 1984, 1991; Leventhal 1984; Leventhal and Scherer 1987; Ortony et al. 1990) suggest that emotional reactions can be the result of two different modes of processing: automatic or controlled. Cognitive theories also suggest that emotional reactions generated under automatic processes are abstract, while those generated under controlled processes are more differentiated (i.e., specific) (Lazarus 1991; Leventhal 1984). Taking into account that automatic processes are likely to be dominant when the level of AMI is low, and that controlled processes are likely to be dominant when the level of AMI is high (see Chapter 3), it can be predicted that a higher proportion of specific affective reactions will be experienced by the subjects under high versus low levels of AMI. However, this effect is only likely to occur if the ad has the potential to elicit specific affective reactions. The emotional ad has such potential, but not the neutral ad.

Therefore, the following hypothesis is proposed:

H6: Subjects under a high level of AMI produce a higher proportion of specific affective responses than those under a low level of AMI when

exposed to an emotional ad, but not when exposed to a neutral ad.

5.3 Hypotheses on AAD

Researchers generally assume that the effects of ads on AAD are mediated by the cognitive and affective responses generated during ad exposure (Chattopadhyay and Basu 1990; Lutz 1985; MacKenzie et al. 1986). If we take into consideration that subjects exposed to the emotional ad (compared to those exposed to the neutral ad) produce a greater amount of positive affective responses (H2) and positive ad cognitions (H3), then the following hypothesis can be stated about AAD:

> H7: Exposure to an emotional ad results in a more positive AAD than exposure to a neutral ad, regardless of the level of AMI.

It is worth noting that neither a main effect of AMI nor an interaction involving ADTYPE and AMI is predicted. This can be explained by the fact that AMI is not expected to influence the valence of the responses that are generated during ad exposure (see H2 and H3).

Furthermore, BRI and TPM will not influence AAD because their manipulation occurs after the measurement of AAD.

5.4 Hypotheses on AB, PI, and choice

Individuals exposed to the emotional ad (versus those exposed to a neutral ad) are likely to generate a greater amount of positive affective responses (H2) and positive ad cognitions (H3). Whether this will result in a more favorable brand attitude depends on individuals' state of mind during brand response occasion.

The following three-way interaction between ADTYPE, BRI, and TPM is proposed:[26]

> H8: In comparison with exposure to a neutral ad,
>
> a) when BRI is low, exposure to the emotional ad results in a more positive AB, regardless of AMI and TPM, and
>
> b) when BRI is high, exposure to the emotional ad results in a more positive AB when affective motives drive the purchase decision but not when cognitive motives drive the purchase decision, regardless of AMI.

The rationale underlying H8 has already been documented in Chapter 3. When the level of BRI is low, individuals will not put a lot of effort in judgment/choice (Baker and Lutz 1988; Sanbonmatsu and Fazio 1990). Their judgment is likely to be based on the valence of the most accessible information, regardless of the type of information (Kisielius and Sternthal 1984, 1986). If we consider that subjects exposed to the emotional (versus neutral) ad produce a higher proportion of

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26- The hypothesis is identical for AB, PI, and choice. Here, only the case of AB is presented.

positive responses (see H2 and H3), then at the time of judgment they will retrieve a higher proportion of positive responses. Consequently, they should report a more favorable AB.

Neither the level of AMI nor the TPM are expected to have an impact on this relationship. In fact, as suggested by H2 and H3, the level of AMI does not influence the valence of the information that will be encoded. In addition, individuals are not expected to take into account the type of motives driving their purchase decision when reporting their judgment, because they do not put much effort in judgment making.

When the level of BRI is high, individuals will put a lot of effort in judgment/choice (Baker and Lutz 1988; Sanbonmatsu and Fazio 1990). Only the information perceived as relevant is likely to be used as a basis for judgment (Baker and Lutz 1988; Feldman and Lynch 1988). As suggested by the research on the attitude-behavior relationship (Millar and Tesser 1986, 1989), the TPM has a major effect on the perceived relevance of cognitive and affective information. Thus, when cognitive motives guide the purchase decision, brand cognitive information is perceived as more relevant in judgment. However, when affective motives drive the purchase decision, affective information is perceived as more relevant in judgment.

This suggests that the superiority of the emotional ad over the neutral ad, which is mainly attributed to more positive affective responses (H2) and to more

positive ad cognitions (H3), should disappear when cognitive motives drive the purchase decision, because these responses will be disregarded. Therefore, subjects exposed to an emotional ad should report a more favorable AB than those exposed to the neutral ad when affective motives drive the purchase decision, but not when cognitive motives drive the purchase decision.

Again, the level of AMI should not influence these relationships.

5.5 Hypotheses on the mediating role of AAD

Recent studies indicate that in some situations, the effects of emotions generated during ad exposure on AB are not entirely mediated by AAD (Burke and Edell 1989; Stayman and Aaker 1988). The present framework suggests that BRI may be one of the variables that determines when AAD will mediate all the effect of emotions on AB. If we assume that our manipulation of ADTYPE constitutes a manipulation of emotions, then the role of BRI can be investigated by looking at the effect of the ADTYPE on AB. In particular, the following hypothesis is put forward:

> H9: After having controlled for the effects of AAD, brand cognitions, and ad cognitions on AB,
>
> a) when BRI is low, ADTYPE has no direct effect on AB, regardless of AMI and TPM, and
>
> b) when BRI is high, ADTYPE has a direct effect on AB only if affective motives drive the purchase decision and if the level of AMI is high.

Stated simply, this four-way interaction indicates that three conditions are required in order to observe a direct effect of emotions (i.e., ADTYPE) on AB after having controlled for the effects of AAD, brand cognitions, and ad cognitions. First, the level of BRI needs to be high. If the level of BRI is low, individuals' judgments are expected to be based on the most accessible information. Given that abstract information (i.e., AAD) is more accessible than specific information (i.e., emotions), AAD is more likely to be used in judgment. Therefore, all the effects of emotions (i.e., ADTYPE) on AB will be mediated by AAD.

Secondly, affective motives need to drive the purchase decision. In fact, the perceived relevance of information depends on the type of motives driving the purchase decision. If cognitive motives drive the purchase decision, affective information such as AAD and emotions will be disregarded during the judgment/choice. Therefore, neither AAD nor emotions (i.e., ADTYPE) should have an impact on AB.

Thirdly, in order to use specific information (i.e., emotions) during the judgment/choice, specific affective information should be encoded during ad exposure. As suggested by H6, individuals are likely to encode specific affective information when the level of AMI is high, but not when it is low.

All these hypotheses will be tested in the experiment described in Chapter 7.

However, before presenting the main study, in the next chapter the results of a set of pretests is presented.

CHAPTER 6

PRETESTS

This chapter presents nine pretests covering issues that need to be addressed before the main study can be conducted. The first two pretests have to do with the testing of the data collection procedure and the testing of the coding scheme that will be used to classify ad cognitions, brand cognitions, and affective responses according to their level of abstraction.

A second series of pretests relates to the creation of two ads necessary for the manipulation of the ADTYPE. It includes pretests on the choice of the product category (pretest #3), the choice of the brand name (pretest #4), and the choice of brand information to include in both ads (pretest #5).

The last series of pretests concerns the manipulation of the four independent variables (i.e., AMI, ADTYPE, BRI, and TPM). Pretest #6 evaluated the four manipulations simultaneously. Pretest #7 tested a modified version of the manipulation of TPM. Pretest #8 examined whether the emotional and neutral versions differ in terms of the perceived technical quality of the ad. Finally, pretest #9 was conducted to ensure that the manipulation of TPM did not influence subjects' mood.

6.1 Pretest #1

One objective of this pretest is to compare two different data collection procedures. Previous studies indicated that individuals do not report a great amount of affective responses (Batra 1984; Batra and Ray 1986). Therefore, it is necessary to find a procedure that will facilitate the reporting of affective reactions. Nevertheless, the procedure should neither overestimate the intensity of affective reactions generated during ad exposure, nor influence subsequent judgments.

A second objective is to verify the reliability and the validity of the coding scheme based on Chattopadhyay and Alba's (1988) scheme and on Storm and Storm's (1987) taxonomy. It is important to ensure that independent judges make similar coding decisions, and that the scheme permits one to classify most of the responses that are elicited during ad exposure. Although Chattopadhyay and Alba's classification was successfully used for brand cognitions, it is necessary to make sure that it can be extended to the coding of ad cognitions.

6.1.1 Subjects and design

Thirty-seven undergraduate students participated in this pretest on a voluntary basis. Participant were randomly assigned to the cells of a 2 x (one step procedure versus two step procedure) x 2 (rational versus emotional ad) between-subjects factorial design.

6.1.2 Stimuli

Two ads were selected for the purpose of this pretest; a Hallmark ad and an Allstate ad. A previous pretest on several ads indicated that these ads were very different in terms of their potential to elicit affective reactions; the Hallmark ad being more emotional than the Allstate ad. Using these two ads, it is possible to test whether the data collection procedure is sensitive to emotional differences among ads. If the data collection procedure is not sensitive to the ads' emotional differences, it could mean that it either overestimates or underestimates the intensity of affective reactions experienced by individuals.

6.1.3 Procedure

The study was run in a single class. Subjects were informed that the purpose of the study was to assess their reactions to advertisements, then they were asked to look at the two ads as they normally would at home. After the presentation of the two ads (the Hallmark and then the Allstate ad), a questionnaire was administered.

In the one step procedure group, subjects first were instructed to write down all the feelings (or emotions) they had experienced and all the thoughts they had had during the presentation of one of the two ads (either the Hallmark ad or the Allstate ad). As is typical, three minutes were allocated to perform

this task (Chattopadhyay and Nedungadi 1992; Wright 1980). Next, the subjects were asked to go back to their responses and code them as emotions, ad cognitions, brand cognitions or other thoughts, and to indicate their valence (i.e., whether they were positive, negative or neutral responses). Finally, for each ad, (1) the intensity of the affective reactions experienced during ad exposure, (2) the direction of the affective reactions experienced, and (3) the ad's perceived informativeness were measured on a single-item 5-point scale. The scale used to measure the intensity of the affective reactions experienced was anchored at one end by "many feelings and emotions," and at the other end by "no feelings or emotions". The scale used to measure the valence of affective reactions experienced was anchored at one end by "relatively positive feelings and emotions," and at the other end by "relatively negative feelings and emotions". The scale used to measure the ad's perceived informativeness was anchored at one end by "provides a lot of information about the company," and at the other end by "provides very little information about the company".

In the two step procedure group, subjects first were instructed to write down all the feelings or emotions they experienced during ad exposure. Three minutes were allocated for this task. Then, subjects were asked to report all the thoughts they had had during ad exposure. Again, three minutes were given for that task. Next, as with the previous group, subjects were told to go back to

their responses, to code them, and to indicate their valence. Finally, for each ad, the scales described previously were used to measure the intensity of the affective reactions, the valence of the affective reactions, and the ad's perceived informativeness (see questionnaire in Appendix 6.1).

6.1.4 Data analysis

6.1.4.1 The data collection procedure

The results comparing the two data collection procedures are reported in Tables 6.1.1, 6.1.2, and 6.1.3. Three points need to be outlined.

First, there is a significant main effect of data collection procedure on the total number of responses ($F(1,33)=13.06$, $p<0.01$). The means of total number of responses reported by the subjects having used the two step procedure are 8.0 (for the Hallmark ad) and 7.1 (for the Allstate ad). In comparison, when the one step procedure was used, these means drop to 4.7 and 5.3, respectively. This is not surprising if we take into account that subjects using the two step procedure had six minutes rather than three to report their thoughts and emotions.

Second, in order to verify that the two step procedure did not overestimate the intensity of affective reactions elicited during ad exposure, ANOVAs were performed on two indices: the total number of affective responses and the percentage of affective responses. As we can see in Table 6.1.3, a significant

Table 6.1.1

Average number of responses and average score on the three single-item scales according to the type of data collection procedure and ADTYPE

	Two step procedure		One step procedure	
	Allstate ad	Hallmark ad	Allstate ad	Hallmark ad
	(n=10)	(n=9)	(n=11)	(n=7)
Total number of responses	7.1	8.0	5.3	4.7
Total number of affective responses	1.8	4.2	2.0	2.0
Total number of ad cognitions	3.0	2.6	2.5	2.2
Total number of brand cognitions	1.1	0.0	0.5	0.1
Other thoughts	1.2	1.2	0.3	0.4
Percentage of affective responses[1]	0.40	0.66	0.43	0.56
Intensity of affective reactions experienced[2]	4.0	2.1	3.4	3.0
Valence of affective reactions experienced[3]	3.6	2.1	3.7	2.7
Perceived ad[4] informativeness	2.9	4.7	3.4	4.7

1- Nbs of affective responses / (nbs of affective responses + nbs of ad cognition + nbs of brand cognition).
2- Larger numbers indicate lower intensity.
3- Larger numbers indicate more negatively valenced affective reactions.
4- Larger numbers indicate less information about the company.

Table 6.1.2

Impact of ADTYPE and type of procedure on the intensity of affective reactions, the valence of affective reactions, and the ad's perceived informativeness

DEPENDENT VARIABLE	INDEPENDENT VARIABLE	F.	PROB.
Intensity of affective reactions experienced	ADTYPE[1]	10.62	0.01
	procedure[2]	0.13	0.72
	ADTYPE*procedure	4.87	0.04
Valence of affective reactions experienced	ADTYPE	11.35	0.01
	procedure	0.97	0.34
	ADTYPE*procedure	0.41	0.53
Perceived ad informativeness	ADTYPE	42.72	0.01
	procedure	1.15	0.30
	ADTYPE*procedure	0.76	0.39

1- ADTYPE effect (i.e., exposure to Allstate versus Hallmark).
2- Procedure effect (i.e., one step procedure versus two step procedure).

Table 6.1.3

Impact of the ADTYPE and type of procedure on total number of responses, the number of affective responses, the number of ad cognitions, the number of brand cognitions, and the percentage of affective responses

DEPENDENT VARIABLE	INDEPENDENT VARIABLE	F.	PROB.
Total number of responses	ADTYPE[1]	0.06	0.82
	procedure[2]	13.06	0.01
	ADTYPE*procedure	1.06	0.31
Total number of affective responses	ADTYPE	7.36	0.02
	procedure	5.13	0.03
	ADTYPE*procedure	7.36	0.02
Total number of ad cognitions	ADTYPE	0.25	0.63
	procedure	0.40	0.54
	ADTYPE*procedure	0.01	0.94
Total number of brand cognitions	ADTYPE	8.18	0.01
	procedure	0.61	0.44
	ADTYPE*procedure	1.76	0.20
Percentage of affective responses [3]	ADTYPE	3.67	0.07
	procedure	0.13	0.72
	ADTYPE*procedure	0.36	0.55

1- ADTYPE effect (i.e., exposure to Allstate versus Hallmark).
2- Procedure effect (i.e., one step procedure versus two step procedure).
3- Nbs of affective responses / (nbs of affective responses + nbs of ad cognition + nbs of brand cognition).

two-way interaction between the ADTYPE and the data collection procedure on the total number of affective responses ($F(1,33)=7.36$, $p<0.02$) is reported. ADTYPE had a significant effect when the two step procedure was used ($F(1,33)=15.50$, $p<0.01$; $\bar{X}=4.2$ versus 1.8), but not when the one step procedure was used ($F(1,33)<1$; $\bar{X}=2.0$ versus 2.0). In addition, ADTYPE also had a significant main effect on the percentage of affective responses ($F(1,33)=3.67$, $p<0.07$). Thus, the exposure to the Hallmark ad (versus the exposure to the Allstate ad) resulted in a greater proportion of affective reactions when the two step procedure was used ($\bar{X}=.66$ versus .40), as well as when the one step was used ($\bar{X}=.56$ versus .43).

These results confirm that the two step procedure does not overestimate the intensity of affective reactions experienced during ad exposure. As expected, when the two step procedure is used, a greater amount of affective responses and a higher proportion of affective responses are reported by subjects exposed to the Hallmark ad (versus the Allstate ad).

Findings regarding the one step procedure are mixed. On the one hand, results based on the number of affective responses indicate that the one step procedure is not sensitive to emotional differences between the Hallmark and the Allstate ads. On the other hand, results based on the percentage of affective reactions show that the one step procedure is sensitive to emotional differences among the two ads.

A third point to consider before recommending the use of the two step procedure, is the necessity of ensuring that the two step procedure does not influence subsequent judgments. This can be tested by estimating the effects of the data collection procedure on the three measures that were taken on 5-point scales after subjects reported their affective and cognitive responses: the intensity of affective reactions, the valence of affective reactions, and the perceived ad informativeness. As can be seen in Table 6.1.2, there is no consistent pattern regarding the effects of data collection procedure on these three measures.

On the one hand, a significant two-way interaction between ADTYPE and the data collection procedure on the measure of affective intensity ($F(1,33)=4.87$, $p<0.04$) was reported. A significant difference was reported between the Hallmark and the Allstate ads for subjects using the two step procedure ($F(1,33)=15.73$, $p<0.01$; $\bar{X}=2.1$ versus 4.0), but not for those using the one step procedure ($F(1,33)<1$; $\bar{X}=3.0$ versus 3.4). On the other hand, neither the main effect nor the interaction effect involving the data collection procedure was significant for the other two measures. For instance, subjects experienced more positively valenced emotions when exposed to the Hallmark ad than when exposed to the Allstate ad ($F(1,33)=11.35$, $p<0.01$), regardless of the data collection procedure ($\bar{X}=2.7$ versus 3.7 for those using the one step procedure and 2.1 versus 3.6 for those using the two step

procedure). Similarly, the Hallmark ad was perceived as less informative than the Allstate ad ($F(1,33)=42.72$, $p<0.01$), regardless of the data collection procedure ($\bar{X}=4.7$ versus 3.2 for those using the one step procedure and 4.7 versus 2.9 for those using the two step procedure).

Combined, these results indicate that the two step procedure is sensitive to emotional differences among ads. In addition, the two step procedure does not overestimate the intensity of affective reactions elicited during ad exposure, nor does it systematically influence subsequent judgments. Therefore, it will be used in the main study.

6.1.4.2 The coding scheme

For the purpose of this research, we need to develop a coding scheme that permits one to classify cognitive and affective responses generated during ad exposure according to their level of abstraction.

The scheme of Chattopadhyay and Alba (1988) will be used for the coding of brand cognitions and ad cognitions. Their scheme included 11 categories (see the full description given by Chattopadhyay (1986) in Appendix 6.2). Because some of these categories are not directly relevant for the purpose of this research (e.g., curiosity, intrusion, frequency statement), they will be gathered together within a single category labelled "other brand thoughts". Thus, five major categories of brand cognitions will be considered: brand recall, brand

single-fact interpretations, brand abstractions, brand evaluations, and other brand thoughts.

Based on the examination of a subset of 15 questionnaires, it appears that the five categories identified for brand cognitions could be extended to ad cognitions. Thus, the five categories of ad cognitions will consist of ad recall, ad single-fact interpretations, ad abstractions, ad evaluations, and other ad thoughts.

As suggested by Storm and Storm (1987), four major categories of affective responses were identified: general affective responses (i.e., upper-level), basic affective responses (i.e., intermediate-level), specific affective responses (i.e., bottom-level), and other affective responses. Coders will be asked to identify the level to which, according to Storm and Storm's (1987) taxonomy, each term (or group of terms) used by the subjects to express their emotions corresponds.

Thus, the complete scheme will include 15 categories: 5 brand cognitions categories, 5 ad cognitions categories, four affective responses categories, and one category for irrelevant thoughts. A description of these categories is presented in Appendix 6.3.

To ensure the reliability of the proposed coding scheme, two conditions are necessary; first, a high degree of intercoder agreement, and second, a random distribution of coding errors among the categories (see Chattopadhyay 1986).

Responses from the 37 questionnaires were coded by two judges (one was the author).[27] The intercoder reliability was 82%. This percentage is acceptable considering the larger number of categories and the indices reported in previous research (Batra and Ray 1986; Chattopadhyay and Alba 1988; Miniard et al. 1991).

The distribution of coding errors is presented in Table 6.1.4. Numbers in the diagonal represent the frequency of agreement among the two judges. Numbers in the off-diagonal represent the frequency of disagreement among judges. As we can see, coding errors are not systematically located around any particular category. Therefore, the reliability of the coding scheme is acceptable. However, given that the coding scheme was developed from a subset of the sample, it was necessary to verify if it performed as well with an independent sample (this is one of the reasons for conducting pretest #2).

A few points need to be mentioned regarding the distribution of these responses. The paucity of brand cognitions can easily be explained by the type of ads (neither contained much brand information) and by the instructions given to the subjects. Subjects were informed that the study concerned ad evaluation and, therefore, they may have emphasized this aspect during ad processing.

27- Subjects were told to code their responses as ad thoughts, brand thoughts, affective reactions or other thoughts. An examination of the questionnaires indicated that they misunderstood this task. Therefore, these codings were not considered by the two judges.

Table 6.1.4

Distribution of codes assigned by two judges
(Pretest #1)

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
brand recall (1)															
brand single-interpret. (2)		1													
brand abstraction (3)	1	2	6		1										
brand evaluation (4)			2	2											
other brand thoughts (5)				1	3										
ad recall (6)	1					2	1								
ad single-interpret. (7)			1		1		21	2							
ad abstraction (8)						1	4	39		2					1
ad evaluation (9)									7						
other ad thoughts (10)					1		2	2		7			1		
general affective react.(11)											3				
basic affective react. (12)											1	13			
specific affective react. (13)							1				1		66	5	3
other affective react. (14)													2	1	
irrelevant thoughts (15)								2							22

Concerning the distribution of affective reactions, it can be observed that only a few general affective responses were reported (i.e., about 4% of all affective responses corresponded to general affective reactions). One reason for this is that the more abstract a category, the lower the opportunity to mention its members as they are fewer in number. Another explanation is that individuals do not believe that these types of affective reactions are worth mentioning. Therefore, perhaps through minor modifications of the instructions we could encourage them to report such affective reactions.

One last point which was observed is that for the subjects using the two step procedure, about 21% of the responses reported in the first part of the procedure (i.e., the part where they were told to write down all the emotions and feelings they experienced) were ad or brand thoughts. These responses were re-coded by the two judges. However, it is believed that through minor modifications of the instructions, we could control this phenomenon.

6.2 Pretest #2

The objectives of the second pretest was twofold. First, it permited the validation of the coding scheme on an independent sample. Second, it allowed us to verify the impact of minor modifications in the wording of the instructions to see whether individuals would report a greater amount of general affective

reactions and whether they would report responses not corresponding to affective reactions in the first part of the data collection procedure.

6.2.1 Subjects

Sixteen undergraduate students participated in this pretest on a voluntary basis.

6.2.2 Stimuli

For the purpose of this pretest, two new ads were used as stimuli. They consisted of a preliminary version of the emotional and neutral ads developed for the purpose of this research. Subjects saw one of the two versions embedded within an eight minute program segment.

6.2.3 Procedure

The study was conducted in small groups of fewer than five subjects. The instructions were close to those in pretest #1. Subjects were informed that the study concerned their reactions to advertisements. They were asked to look at a segment of a program as they normally would at home. As they watched, they were not allowed to talk among themselves.

Right after the presentation of the target ad, subjects were told to write down all the feelings and emotions they had experienced during their exposure

to the target ad. Three minutes were given for this task. Afterwards, another three minutes were allocated to write down all the thoughts they had had during this exposure. Next, subjects completed a series of questions not directly related to the purpose of this pretest (they will not be discussed here). Finally, they were told to go back to their responses and code them according to their valence (they were not asked to classify them as brand cognitions, ad cognitions, emotions or other thoughts).

The wording of the instructions given to the subjects was quite similar to that of pretest #1, except for two minor aspects. First, subjects were explicitly told that some affective reactions are difficult to express and that they could use several words to express these vague affective reactions. Second, the following sentence was added at the top of the space reserved to write emotional reactions: "During ad exposure I felt:" (see questionnaire in Appendix 6.4).

6.2.4 Analysis

The same coders classified all the responses according to the proposed scheme. The intercoder agreement reached 88%, which is very satisfactory. As we can see in Table 6.2.1, the distribution of coding errors around the categories does not suggest any systematic bias.

We can also observed that the new instructions did not seem to have a major impact on the number of general affective reactions reported by the

Table 6.2.1

Distribution of codes assigned by two judges
(Pretest #2)

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
brand recall (1)															
brand single-interpret. (2)					1										
brand abstraction (3)			2												
brand evaluation (4)															
other brand thoughts (5)															
ad recall (6)						1									
ad single-interpret. (7)						1	28	2							
ad abstraction (8)							2	14		1					
ad evaluation (9)															
other ad thoughts (10)										13					1
general affective react.(11)											4				
basic affective react. (12)												8			
specific affective react. (13)											1	2	43	5	
other affective react. (14)															
irrelevant thoughts (15)															4

subjects. Only about 7% of all affective responses corresponded to general affective reactions. However, the addition of the sentence "During ad exposure I felt:" completely eliminated subjects' tendency to report ad and brand thoughts in the first part of the data collection procedure reserved for affective responses.

6.2.5. Major conclusions

Based on these two pretests, it can be concluded that the two step procedure is an adequate procedure to collect affective responses. In addition, the pretests indicated that the proposed scheme is sufficiently reliable, and can be used in this research.

6.3 Pretest #3

Three major criteria motivated the choice of the product category. First, the product category needed to be one for which product involvement was moderate. In fact, it was important that the product be neither a very low involving product (e.g., toilet paper) nor a highly involving product (e.g., car). For such extreme type of products, the manipulation of BRI would be very difficult. Second, cognitive and affective motives had to be associated with product consumption; otherwise, the manipulation of TPM would also be problematic. Finally, the two ads used in this research were built from an

existing ad. Therefore, it was important to ensure that the product category used in this research fit with the scenario of the selected ad (a complete description of the ad is presented in section 6.6).

Given that this task requires a lot of judgment, it was believed that a focus group would be a good way to determine the type of product fulfilling all the requirements.

A group of five undergraduate students participated in the focus group (3 women and 2 men). First, the ad was presented twice and participants were told to list all types of products for which such an ad would be adequate. Next, participants compared among them their list of products and discussed the extent to which each type of product met the three requirements.

Among the products that were listed, they agreed that cameras met all three requirements. In fact, the group believed that through minor modifications of the structure of the ad, a product such as a camera could fit well with the scenario of the ad. They also agreed that the camera is a moderately involving product and that its use can be associated with emotional events (e.g., when we take pictures of important moments, such as weddings, graduations), or with "neutral" events (e.g., when we take pictures of objects).

Discussions with colleagues also confirmed that this type of product was adequate for the purpose of this research.

6.4 Pretest #4

The brand name selected for the camera was TAF-1000. It was borrowed from an existing model of a not well-known brand. To ensure its unfamiliarity, a pretest was performed.

6.4.1 Subjects

A group of sixteen undergraduate students participated on a voluntary basis.

6.4.2 Procedure

Subjects were presented a list of 19 camera brand names and a list of 17 company names, TAF appearing on both lists. Subjects were asked to indicate if they had ever heard about a camera or a company with these names.

6.4.3 Analysis

None of the 16 subjects had heard about a camera or a company named TAF. Therefore, TAF-1000 was selected as the brand name, and TAF as the company name.

6.5 Pretest #5

Two considerations guided the selection of brand information to include in the ads. On one hand, it was important not to provide brand information which

was already at a high level of abstraction (e.g., high quality camera, sophisticated camera), but rather to provide very specific brand information (e.g., automatic rewinding, built-in flash) from which abstract information could be formed. Remember that one of the propositions of the framework suggests that during ad exposure subjects spontaneously encode abstract information. If brand information is already at a high level of abstraction, it will not be possible to verify this assertion.

On the other hand, it is important to make sure that the characteristics presented in the ad are meaningful to subjects. Indeed, the use of overly technical terms may prevent them from forming abstract information. For instance, information such as "shutter speed of 1/4th to 1/500th second" might be perceived as meaningless for many inexperienced users, thus reducing their ability to draw abstract information from it.

With this objective in mind, a list of specific information about cameras was culled from several specialized magazines and submitted to a group of subjects in order to determine the extent to which these characteristics were meaningful to them.

6.5.1 Subjects

A group of 12 undergraduate students participated in this study on a voluntary basis.

6.5.2 Procedure

Subjects were informed that people can make inferences from a single product characteristic. The following example was provided: "For example, knowing that a car can go from 0 to 60 km/h. in 7 seconds, a person will infer that this car has a good acceleration power or that it is a powerful car." Subjects were told to write down any abstract inferences they could make about a camera from each of the 16 features listed. Each of the features was presented separately. Although, individuals generally form abstract information by combining several features, it is not inappropriate to ask subjects to form abstract information from a single feature (see questionnaire in Appendix 6.5).

6.5.3 Analysis

The Table 6.5.1 reported the total number of brand single-fact interpretations, brand abstractions, and brand evaluations generated by the 12 subjects for each of the 16 characteristics listed. The following five features were selected to be included in the ad: rechargeable battery, built-in flash, 6 month guarantee,[28] auto film advance, and made in France.

28- Six month guarantee was used instead of three month guarantee as subjects' responses indicated that three months was obviously too short for a camera.

Table 6.5.1

Total number of brand single-fact interpretations, brand abstractions, and brand evaluations according to each feature (n=12)

Feature	Brand single-fact interpretations	Brand abstractions	Brand evaluations	Other responses
Weight of 447 grams	11	7	0	0
Auto-focus	4	10	1	3
Rechargeable battery	3	8	0	2
Built-in flash	4	9	0	2
4.5 cm. thick	9	2	0	1
3 month guarantee	7	5	1	1
Auto film advance	5	6	0	5
Back light correction	0	1	0	2
Auto film load	2	5	1	1
Continuous photograph	0	3	0	0
Auto film rewind	0	5	1	5
Made in France	0	6	0	3
Color viewfinder	0	2	0	1
Metal body cased with rubber	4	6	0	1
Shutter speed of 1/4th to 1/500th sec	3	1	0	0
Self-timer of 10 sec.	3	2	0	3

Two reasons justify these choices. First, as we can see in Table 6.5.1, these five characteristics were meaningful to subjects as they were able to generate single-fact interpretations and/or abstractions from them. Second, the set of characteristics selected allowed subjects to produce a range of abstract information. Thus, an examination of subjects' responses showed that single-fact interpretations and abstractions generated from these features referred to different product dimensions. For instance, economical was frequently associated with rechargeable battery, practical with built-in flash, unreliable with 3 month guarantee, rapid with automatic advance, and sophisticated with made in France.

6.6 Pretest #6

The objective of this pretest is to simultaneously evaluate within a single experiment the manipulations of ADTYPE, AMI, BRI, and TPM that have been developed for the purpose of this research.[29]

29- Several pilots were necessary in order to develop the manipulations that are tested in this major pretest. A description of these pilot studies would require considerable space. This is the reason for which they are not presented here.

6.6.1 Subjects and design

Sixty-one subjects participated on a voluntary basis in small groups of fewer than seven members.[30] Only male subjects were used because a previous pilot indicated that women reacted very differently from men to the ads used in this research. A discussion with a few women indicated that they had difficulties identifying with the context of the ad, because women were not included in the scenario.

Participants were assigned to the cells of a 2 (low versus high AMI) x 2 (neutral versus emotional ADTYPE) x 2 (low versus high BRI) x 2 (cognitive versus affective TPM) between-subjects fractional factorial design (see the design in Appendix 6.7).

6.6.2. Independent variables

6.6.2.1 Manipulation of AMI

The selection of the AMI manipulation procedure is based on two considerations. First, the procedure has to be consistent with the definition of AMI adopted in this research. As noted in Chapter 3, AMI is defined a motivational state of arousal that energizes and directs consumers' cognitive processes during ad exposure. In turn, AMI is assumed to influence the amount

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30- Four questionnaires were eliminated; one because it was incomplete and three because subjects expressed very little concern for the experiment.

of effort that individuals put into ad processing. Therefore, it is important to select a procedure that will have an impact on the intensity with which individuals process ad information.

Secondly, the manipulation procedure should not influence the direction of the processing. That is, any procedure that suggests to individuals under low and high levels of involvement to focus on information from different levels of abstraction or different nature (cognitive versus affective), will represent a serious threat to internal validity. Because of this, the procedure developed by Baker (1991) is not adequate for the purpose of this research as it explicitly asks subjects under a high level of involvement (but not those under a low level of involvement) to try to recall specific details about the ad. Similarly, a procedure such as the one used by Park and Young (1986) is not adequate, given that it explicitly informs subjects under high levels of involvement (but not those under low levels of involvement) to focus on product attributes during ad processing. Finally, procedures which manipulate the level of involvement by instructing subjects that a choice is to be made in the following part of the experiment is also inappropriate for the purpose of this research (Petty et al. 1983). Such a procedure may incite subjects under a high level of AMI (but not those under a low level of AMI) to form brand evaluations (i.e., to encode abstract information) during ad exposure.

Based on these considerations, this research will use a procedure comparable to the one proposed by Chattopadhyay and Nedungadi (1992). That is, subjects under high levels of AMI will explicitly be told to pay attention to the advertisements, but not those under low AMI.

More specifically, upon arrival, subjects will be told to read a letter from the person in charge of the project. In the first part of the letter, subjects will be informed of the following:

> "During the last few years, the public has formulated some criticism regarding the basic education of Quebec university students. Among other things, students are frequently charged with having limited knowledge about history, geography and arts. In its quest for excellence, the *Université de Sherbrooke* has chosen to adopt the means that could at least, partially, remedy this deficiency.
>
> Thus, the *Université de Sherbrooke* is currently studying the possibility of organising a competition between faculties in order to increase the general knowledge of students. This competition, which would be broadcasted on the Sherbrooke community channel, would be similar to the program '*Génies en herbe.*'"

Then, subjects under low and high AMI will read the following instructions, respectively:

> **Low-AMI**: "However, before going forward with this project, it is indispensable for us to know your interest for this type of competition, considering you are the first concerned by this initiative. This is therefore the main objective of the present study.
>
> In a few minutes, we will be presenting a short excerpt of the program "*Génies en herbe.*" Pay careful attention to this excerpt imagining that you, or one of your classmates, could participate in

this type of competition. Next, you will have to fill in a questionnaire concerning this program."

High-AMI: "During a first series of studies, we determined the main rules of the competition. The purpose of this study is essentially to find out about your reactions to advertisements that could be aired during this type of program.

In a few minutes, we will be presenting a short excerpt of the program "*Génies en herbe*" followed by few advertisements. We would like you to pay a lot of attention to these ads. You will receive an amount of $5 if you answer correctly to the questions regarding these ads."

6.6.2.2 Manipulation of ADTYPE

To manipulate ADTYPE one half of the subjects are presented with a neutral ad, and the other half with an emotional ad. TV ads were used because it was believed that it would be too difficult to obtain strong specific affective reactions with print or radio ads. However, the budget associated with this dissertation being relatively modest, it was not possible to produce new ads. Instead, the strategy consisted in finding an unfamiliar ad that could easily be transformed so that an emotional version, and a neutral version, could be produced at a low cost. A pool of several hundred ads was viewed with these criteria in mind. An English ad for a pharmaceutical company finally met all the requirements. Briefly, the ad portrayed the return of an authoritarian coach to his team after a serious illness. In the last part of the ad, there was a highly

emotional interaction between the coach and one of the players. The structure of the ad was such that the company name only appeared at the very beginning of the ad and at the end. Thus, with minor transformations, the ad could be adapted to a large array of products.

Based on the results obtained in pretests #3, #4 and #5, two ads were produced: a neutral ad (low cognitive--low affective) and an emotional ad (low cognitive--high affective). The version of the emotional ad used in this pretest consisted of five parts. The first sequence (about 6 seconds) displayed a desk on which there were several childrens' objects, the TAF-1000 camera, a picture of a coach, and a card signed "Cloutier" in which it was possible to read: "Get well soon coach". The second part (about 17 seconds) showed the return of the coach to his school and to his basketball team. In the third section (about 25 seconds), the audio track introduced the camera TAF-1000 and some of its features, meanwhile the video track portrayed the children doing some exercices with their coach. The next sequence (about 35 seconds) presented an emotional interaction between the coach and the young player named "Cloutier". Finally, in the last part of the ad (about 7 seconds), the camera was shown and a few additional features were mentioned .

The neutral ad was very similar to the emotional ad. Thus, the two versions were comparable in terms of (1) the structure of the scenario, (2) length (90 seconds), (3) brand information, and (4) the order in which brand

information was presented. Only three changes were made from the emotional to the neutral version in order to reduce the potential of the neutral ad to elicit affective reactions. First, a less emotional music was used. Second, the voice of the coach was softer, reducing the impression that he was an authoritarian coach. Finally, the interaction between the coach and "Cloutier" was lightly modified; the dialogue was changed, and part of the interaction was replaced by a segment where the children were doing additional exercices.

6.6.2.3 Manipulation of TPM

As noted in Chapter 4, three major variables are likely to determine the TPM that will guide individuals' choices: the product category, the type of individual, and the purchase situation. Of these three variables, purchase situation is the easiest one to manipulate. Therefore, two different purchase situations have been designed; in one case cognitive motives will be associated with the purchase decision, in the other case affective motives will be associated with the purchase decision.

As a means to simulate a purchase decision, subjects will be required to fill in a second questionnaire. In the first page, the subjects will be told that the Student Federation of the University would like to buy twenty cameras to offer to an Eastern townships association. More precisely, they will read the following information:

"A few years ago, in collaboration with the *Université de Sherbrooke*, the Student Federation of the University decided to support different associations in the Eastern townships. This year, the Federation plans of donating twenty cameras."

Then, subjects in the cognitive and affective motives conditions will be given one of the following messages:

Cognitive motivations: "The association to which the Federation is considering giving these cameras is the *Association des jeunes photographes amateurs de l'Estrie*. This association's goal is to initiate young people to photography. They learn techniques on how to take pictures of objects surrounding them such as buildings, houses, bridges, automobiles, still life, etc. Each year, the *Association des jeunes photographes amateurs de l'Estrie* organizes a competition between young photographers about a specific theme. For example, the last exhibit's theme was the public buildings of Sherbrooke."

Affective motivations: "The association to which the Federation is considering giving these cameras is *Enfant-Estrie* which every year organizes a summer camp for the under-privileged children of Sherbrooke. For many of these children, this represents their first experience in a summer camp. Their stay in the camp is an important moment in their life. Imagine! They could take pictures of activities to which they would participate such as archery, rifle shooting, camp-fires, evening plays, initiation rituals, nights under the stars, to name only a few. These are happy moments they would most likely enjoy sharing with their parents and friends."

6.6.2.4 Manipulation of BRI

As for the manipulation of AMI, it is important to use a procedure that is consistent with the definition of BRI. Remember that in this research, BRI is

defined as a motivational state of arousal that energizes and directs consumers' cognitive processes during judgment/choice making. In turn, BRI is believed to influence the amount of effort individuals put into choice. It is therefore important to use a procedure that will influence the effort subjects put into judgment/choice.

It is also important that the selected procedure does not suggest subjects under low and high levels of involvement to use information from different levels of abstraction or of a different nature. In that sense, procedures which indicate to subjects in the high-BRI condition (but not those in the low-BRI condition) that they will have to justify their choice (e.g., Alba et al. 1992; Gardial and Biehal 1985; Sanbonmatsu and Fazio 1990) may not be appropriate for the purpose of this research. It is possible that such instructions suggest to the subjects in the high-BRI condition to use a rational mode of processing (i.e., focus on product attributes).

In the procedure chosen for this experiment, subjects in the high-BRI condition will be asked to put a lot of effort into answering the questionnaire and informed that a monetary reward is attached to this task. Specifically, right after the instructions corresponding to the manipulation of TPM, subjects under low and high levels of BRI will read the following instructions, respectively:

Low-BRI: "Because these donations are done in your name, we would like to know your opinion about different kinds of cameras. Take a few minutes to answer this questionnaire. Your answers to the following questions will only be considered as being informative, and will constitute one opinion among many others."

High-BRI: "Because these donations are done in your name, we would like to know your opinion about different kinds of cameras. Your answers to the following questions are very important to us, and this is why we are asking you to take all the time you need to complete the questionnaire. Moreover, if you answer carefully, $5 will be given to you."

6.6.3 Procedure

Upon arrival, subjects were told to read a letter from the person in charge of the study. In the first part of the letter, the subjects were informed that their university was interested in knowing their opinion about a competition (quiz) that it would like to organize among students from different faculties. Next, subjects either read the low-AMI cover story or the high-AMI cover story. Then, all subjects viewed a 6 minute segment of a TV quiz followed by the target ad. Half of the subjects saw the emotional ad; the other half saw the neutral ad.

Afterwards, in the following order, subjects completed a first questionnaire including questions about their opinion on the quiz, their level of involvement during ad exposure, AAD, the intensity with which they experienced fourteen different emotional reactions, and the ad's informativeness.

Subjects were then asked to fill in another questionnaire. In the first part of the cover page, the president of the Student Federation of the "Université de Sherbrooke" informed them that the Federation would like to offer twenty cameras to a particular Eastern township association. Next, they either read the instructions corresponding to the cognitive-TPM or to the affective-TPM condition followed by the instructions corresponding to either the low or the high BRI condition. Then, subjects completed a second questionnaire including questions about AB, PI, choice, manipulation check for BRI, manipulation check for TPM, and the study purpose, in that order (see Appendix 6.6, for a copy of the questionnaire). Finally, subjects were debriefed and paid $5 for their participation.

6.6.4 Analysis

6.6.4.1 Manipulation check for AMI

The following three-item, nine-point semantic differential scale was used to measure the level of AMI: "not at all/highly attentive to ad", "not at all /highly motivated in listening to the ad", and "not at all/highly interested to listen to the ad."

To assess the convergent validity of the scale, principal components factorial analysis was performed using the three items. As expected, all three items load on a single factor accounting for 68% of the variance. Thus, the

analysis provided some evidence for the convergent validity of the measure. In addition, the Cronbach alpha (0.77) indicates that the measure is reliable. Therefore, the average of the three scores was used as a composite manipulation check measure for AMI.

A two-way ANOVA with the composite manipulation check measure for AMI as the dependent variable, and AMI and ADTYPE as the two independent variables was performed.[31] As expected, a significant main effect of AMI was found ($F(1,53)=3.21$, $p<0.08$; $\bar{X}=$ 6.6 and 5.8 for the high-AMI and the low-AMI conditions, respectively).[32] Neither the main effect of ADTYPE ($F(1,53)=2.34$, $p>0.14$), nor the AMI by ADTYPE interaction ($F(1,53)<1$) was significant.

Based on these results, it can be concluded that the AMI manipulation is adequate.

31- According to the experimental procedure, the manipulation check measures of AMI, and the measures of AAD, affective reactions, and ad informativeness were collected in the first questionnaire (i.e., before the manipulation of BRI and TPM). Therefore, for the analysis involving these variables, the effects of BRI and TPM are not considered.

32- Due to unequal cell sizes, all the statistics reported in pretest #6 are based on the sums of squares III provided as an option in the SAS's (SAS Institute Inc.) GLM procedure.

6.6.4.2 Manipulation check for the ADTYPE

Three questions need to be addressed regarding the manipulation of ADTYPE. First, the exposure to the emotional ad (versus neutral ad) should produce a more positive AAD. Second, in comparison with the neutral ad, the emotional ad should elicit more intense positive affective reactions and/or less intense negative reactions. Finally, both the emotional and the neutral ad should not differ in terms of ad informativeness.

To investigate the issue of AAD, we used four nine-point semantic differential scales: "like-dislike", "good-bad", "pleasant-unpleasant", and "interesting-boring". A principal components factorial analysis using the four items was performed to assess the convergent validity of this scale. As expected, all four items loaded on a single factor accounting for 86% of the variance. Thus, the analysis revealed some evidence for convergent validity. In addition, the Cronbach alpha (0.94) indicates that the four-item scale is highly reliable. Therefore, the average of the four scores was used as a composite measure of AAD.

A two-way ANOVA using the composite measure of AAD as the dependent variable, and AMI and ADTYPE as the two independent variables, was conducted. As anticipated, a significant main effect of ADTYPE was found ($F(1,53)= 15.87$, $p<0.01$; $\bar{X}=7.1$ and 5.0 for those exposed to the emotional and neutral ad, respectively). Neither the main effect of AMI ($F(1,53)<1$), nor

the interaction involving AMI and ADTYPE ($F(1,53)=1.35$, $p>0.25$) was significant (see Table 6.6.1). Thus, the analysis reveals that the two ads meet the first requirement.

The second question, about the intensity of emotional reactions experienced during ad exposure, was examined using seven-point likert scales. Subjects were requested to indicate whether they, not at all or very strongly, felt the following fourteen affective reactions: amused, moved, dynamic, happy, touched, energetic, sentimental, pleased, active, entertained, caring, irritated, indifferent, and impatient. In order to minimize the number of manipulation checks, all fourteen items were input into a factor analysis.

A two factor solution was retained. As we can see in Table 6.6.2, all the 11 positive affective reactions loaded on the first factor accounting for 46% of the variance. The three negative affective reactions loaded on the second factor accounting for 13% of the variance. The average score of the 11 positive emotions was used an a composite measure for positive affective reactions, and the average of the three negative emotions was used as a composite measure for negative affective reactions.

Two-way ANOVAs were performed with these two composite measures as the dependent variable, and AMI and ADTYPE as the two independent variables. As expected, for both measures, only the main effect of ADTYPE was significant (see Table 6.6.1). Specifically, subjects exposed to the

Table 6.6.1

Impact of AMI and ADTYPE on AAD, positive affective reactions, negative affective reactions, and ad informativeness

DEPENDENT VARIABLE	INDEPENDENT VARIABLE	F.	PROB.
AAD	AMI	0.00	0.96
	ADTYPE	15.87	0.01
	AMI*ADTYPE	1.35	0.25
Composite measure of positive affective reactions	AMI	1.34	0.26
	ADTYPE	7.89	0.01
	AMI*ADTYPE	1.87	0.18
Composite measure of negative affective reactions	AMI	1.35	0.25
	ADTYPE	2.81	0.10
	AMI*ADTYPE	0.01	0.92
Ad informativeness	AMI	3.88	0.06
	ADTYPE	0.00	0.96
	AMI*ADTYPE	2.63	0.12

Table 6.6.2

Factor analysis of 14 affective reactions

Items	Factor 1	Factor 2
Amused	0.671	
Moved	0.579	
Dynamic	0.859	
Happy	0.857	
Touched	0.671	
Energetic	0.831	
Sentimental	0.641	
Pleased	0.780	
Active	0.840	
Entertained	0.684	
Caring	0.715	
Irritated		0.723
Indifferent		0.550
Impatient		0.786
Variance explained	46%	13%

emotional ad, compared to those exposed to the neutral ad, reported having felt stronger positive affective reactions ($F(1,53)=7.80$, $p<0.01$, $\bar{X}=4.0$ versus 3.1) and weaker negative affective reactions ($F(1,53)=2.81$, $p<0.10$, $\bar{X} = 2.4$ versus 3.0). Combined, these results show that the two ads meet the second requirement.

Where the third question is concerned, a single item four-point scale anchored by "the ad presents a lot of information about the TAF-1000 camera" and "the ad presents very little information about the TAF-1000 camera" was used.

An ANOVA using this measure as the dependent variable, and AMI and ADTYPE as independent variables, was performed. As expected, neither the main effect of ADTYPE ($F(1,52)<1$) nor the ADTYPE by AMI interaction ($F(1,52)=2.63$, $p>0.11$) was significant, thus suggesting that the two ads did not differ in terms of ad informativeness. Only the main effect of AMI was significant ($F(1,52)=3.88$, $p<0.06$; $\bar{X}=1.8$ and 1.3 for subjects under high-AMI and subjects under low-AMI, respectively). This result is not surprising given that subjects under high level of AMI are more likely to focus on brand information, and therefore to perceive the ads as more informative. Therefore, the two ads also meet the third requirement.

6.6.4.3 Manipulation check for BRI

A three-item, nine-point semantic differential scale was used to measure the level of BRI. Items were anchored by "very little effort/a lot of effort", "not at all interested/very interested", and "not at all motivated/very motivated."

To assess the convergent validity of the rating scale measure, a principal components factorial analysis was performed using the three items. As expected, all three items loaded on a single factor accounting for 72% of the variance. Thus, the analysis provides some evidence for the convergent validity of the measure. In addition, the Cronbach alpha (0.78) indicates that the measure was reliable. Therefore, the average of the three scores was used as a composite measure for BRI.

A four-way ANOVA using the composite measure of BRI as the dependant variable and AMI, ADTYPE, BRI, and TPM as independent variables was performed.[33] As expected, a significant main effect of BRI was found ($F(1,45)=11.84$, $p<0.01$). Subjects in the high-BRI condition reported having been more involved than those in the low-BRI condition ($\bar{X}=6.7$ versus 5.3). In addition, the main effect of TPM was also significant ($F(1,45)=4.5$, $p<0.04$; $\bar{X}=6.5$ and 5.8 for the cognitively and affectively motivated subjects,

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33- The fractional design used in this pretest does not allow for the testing of interaction effects in the cases of the manipulation measures of BRI and TPM (see the explanation in Appendix 6.7).

respectively), but not the main effect of AMI ($F(1,45) < 1$) and the main effect of ADTYPE ($F(1,45) < 1$).

Based on these results, it was taken that BRI manipulation was successful.

6.6.4.4 Manipulation check for TPM

Because this research views cognitive and affective motives as two independent dimensions (see Chapter 4), different scales will be used as manipulation checks. Thus, a two-items, nine-point semantic differential scale was used to measure the extent to which cognitive motivations drive the purchase decision. More specifically, subjects in the cognitive-TPM condition were placed in a situation. If they had to choose a camera to offer a young person who is a member of the *"Association des jeunes photographes amateur de l'Estrie,"* would they consider the technical characteristics of the camera (not at all or very much), and would their decision be rational (not at all or very much). Subjects in the affective-TPM condition were asked the same two questions, but the wording was adapted in such a way that the questions could apply to the case of a child who would participate in the camp organized by *"Enfant-Estrie"*.

Similarly, a two-item, nine-point semantic differential scale was used to measure the extent to which affective motives drive the purchase decision. Again, subjects in the cognitive-TPM condition were placed in a situation. If

they had to choose a camera to offer a young person who is a member of the *"Association des jeunes photographes amateur de l'Estrie,"* would their decision be based on the feelings they have for the brand (not at all or very much), and would their decisions be emotional (not at all or very much). Again, for the subjects in the affective-TPM condition, the wording of the questions was adapted in such a way that it could apply to the case of a child who would participate in the camp organized by *"Enfant-Estrie."*

A principal components factor analysis was performed using the four variables. A two-factor solution was found. The two items assessing the affective purchase dimension loaded on the first factor (accounting for 44% of the variance). The two items evaluating the cognitive purchase dimension loaded on the second factor (accounting for 32% of the variance). Therefore, for the purpose of manipulation check analysis, the two items assessing affective purchase motivations were combined to form a composite affective-motivation measure, and the two items assessing cognitive purchase motivations were combined to form a composite cognitive-motivation measure.

For each of the two composite measures, a four-way ANOVA with the composite measure as the dependant variable and ADTYPE, AMI, BRI, and TPM as independent variables was performed. When choosing a camera, subjects in the cognitive-purchase-motives conditions, compared to those in the affective-TPM, reported being more cognitively motivated ($F(1,46)=8.70$,

$p<0.01$; $\bar{X}=7.7$ versus 6.8). None of the other three independent variables had a significant main effect on the cognitive composite measure ($Fs<1$). However, contrary to expectations, subjects in the affective-TPM condition, compared to those in the cognitive-TPM, were not more affectively motivated ($F(1,46)=2.0$, $p>0.16$).

Two reasons could explain these results. First, the manipulation of TPM is not strong enough; second, the measure used to assess affective motivations was not appropriate. We suspected that both reasons were plausible. Therefore, another pretest was conducted to improve the manipulation of TPM, as well as the measurement of affective motivations.

6.7. Pretest #7

The objective of this pretest is to evaluate a slightly modified version of the TPM manipulation using new scales for the measurement of affective motivations.

6.7.1 Subjects and design

Twenty-six male subjects from two different classes participated in this study on a voluntary basis. Within each class, participants were randomly assigned to the cognitive or to the affective motivation conditions.

6.7.2 Procedure

The experimental procedure was identical to the one used in the second part of the pretest #6 procedure. Briefly, subjects were asked to fill in a questionnaire from the student Federation. In the first part of the cover page, the president of the Student Federation of the "*Université de Sherbrooke*" informed them that the Federation would like to offer twenty cameras to a particular Eastern township association. Next, subjects under the cognitive-TPM condition were told that the association to which these camera would be given is the "*Association des jeunes photographes amateurs de l'Estrie*", and a description of the cameras' usage by the members of this association was provided. Subjects under the affective-TPM condition were told that the association to which these cameras would be given is "*Enfant-Estrie*", and a description of the cameras' usage by the members of this association was also provided. The usage descriptions were identical to those used in Pretest #6. Finally, subjects were informed that before buying these cameras, the Federation would like to know the way they buy cameras, and therefore required them to answer a few questions.

Cognitive and affective motivations were evaluated using four nine-point scales. The wording of the scales differed according to the TPM condition. More specifically, subjects in the cognitive-TPM condition were placed in two situations. First, if they had to choose a camera to offer to the *"Association des*

jeunes photographes amateur de l'Estrie," would they consider the technical characteristics of the camera (not at all or very much), and would their decision be rational (not at all or very much). Second, if they had to offer a camera to the *"Association des jeunes photographes amateur de l'Estrie,"* would they get personal pleasure from it (little or a lot), and would this gesture be associated with emotions (little or a lot). Subjects in the affective-TPM condition were asked the same four questions, but the wording was adapted in such way that the questions could apply to the case of a child who would participate in the camp organized by "Enfant-Estrie" (see a copy of the questionnaire in Appendix 6.8).

It is worth noting that in the case of cognitive-TPM condition, the questions' focus was the organization to which the camera would be offered, whereas in the case of affective-TPM condition, the questions' focus was the child who was a member of the association. We believed that by focussing on the child, the purchase decision would be more affectively driven.

6.7.3 Analysis

For the purpose of the analysis, the two scales assessing cognitive motivations, as well as the two scales assessing affective motivations, were combined. One-way ANOVAs with the two composite measures as the dependent variables and the TPM as the independent variable were performed.

As expected, subjects in the affective-TPM condition, compared to those in the cognitive-TPM condition reported being more affectively driven ($F(1,24)=16.28$, $p<0.01$; $\bar{X}=6.9$ versus 4.7) and less cognitively driven ($F(1,24)=3.03$, $p.< 0.10$; $\bar{X}=6.1$ versus 6.9).

Based on these results, it was taken that the new manipulation of TPM was adequate.

6.8. Pretest #8

The objective of this last pretest is to verify if the neutral and emotional ads differ in terms of perceived technical quality.

6.8.1 Subjects

Fifty-three subjects from two different classes participated in this study on a voluntary basis.

6.8.2 Procedure

Each class was divided into two groups. Each group saw five different ads and were requested to evaluate their technical quality, one by one. For one group, the fourth ad was the neutral ad; for the other, the fourth ad was the emotional ad.

6.8.3 Analysis

A single item four-point scale anchored by "of better technical quality than most ads presented on television" and "of a lesser technical quality than most ads presented on television" was used as a measure for the ads' perceived technical quality.

A two-way ANOVA with the measure of perceived technical quality as the dependent variable and ADTYPE and sex as independent variables was performed. As expected, neither the main effect of ADTYPE ($F(1,49)<1$; $\bar{X}=1.5$ and 1.8 for the neutral and emotional ads, respectively), nor the interaction of ADTYPE and sex ($F(1,49)<1$) were significant.

Based on these results, it was concluded that the two ads do not differ in terms of technical quality.

6.9. Pretest #9

The objective of this last pretest is to verify if the manipulation of TPM also influences the subjects' mood.

6.9.1 Subjects

Forty-three subjects participated in this study on a voluntary basis. Subjects were randomly assigned to the cognitive or the affective TPM conditions.

6.8.2 Procedure

The study was run in class. Subjects were requested to fill-in a questionnaire from their student association. In the first part of the cover page, subjects were informed that the Student Federation would like to buy twenty cameras to offer to an Eastern township association. Then, subjects either read the information corresponding to the affective-TPM conditions or to the cognitive-TPM conditions (see the descriptions of these two experimental conditions in section 6.6.2.3). Afterwards, subjects were told that their answers were important to us and that they could take all the time they needed to fill-in the questionnaire. Finally, subjects completed the questionnaire including questions about their mood and manipulation checks for TPM.

6.9.3 Analysis

A four item, five-point Likert scale adapted from Peterson and Sauber (1983) was used as a measure for mood. Subjects indicated the extent to which they totally agreed or did not at all agree with the following four statements: "Presently, I am in a good mood"; "When reading the first page of this questionnaire, I was in a very good mood"; "For some reason, I am not very comfortable right now"; "At this moment, I feel "edgy" or irritated."

To assess the convergent validity of the scale, principal components factorial analysis was performed using the four items. As expected, all four

items loaded on a single factor accounting for 63% of the variance. Thus, the analysis provided some evidence for the convergent validity of the measure. In addition, the Cronback alpha (0.80) indicates that the measure is reliable. Therefore, the average of the four scores was used as a composite measure of mood.

A two-way ANOVA with the composite measure of mood as the dependent variable and TPM and sex as independent variables was performed. As expected, neither the main effect of TPM ($F(1,39)=1.37$, $p>0.24$; $\bar{X}=1.9$ and 2.3 for the cognitive and affective TPM conditions, respectively), nor the interaction of TPM and sex ($F(1,39)<1$) were significant.

An analysis was also performed to ensure that the manipulation of TPM was successful. The manipulation check for TPM was assessed with the four items used in Pretest #7. A principal components factorial analysis was performed on these four items. A two factor solution was found where the two items assessing affective motivations loaded on the first factor, and the two items assessing cognitive motivations loaded on the second factor. Therefore, scores on the two items measuring affective motivations, as well as the scores on the two items measuring cognitive motivations, were combined to form a composite measure of affective and cognitive motivations, respectively.

A two-way ANOVA using the composite measure of affective motivations as the dependent variable and TPM and sex as independent variables was

performed. As expected, only the main effect of TPM was significant ($F(1,39)=10.97$, $p<0.01$; $\bar{X}=4.4$ and 6.5 for the cognitive and affective TPM conditions, respectively). A second two-way ANOVA using the composite measure of cognitive motivations as the dependent variable and TPM and sex as independent variables was also performed. Results showed that neither the main effect of the TPM ($F(1,39)=3.4$, $p>0.07$), nor the interaction between TPM and sex ($F(1,39)<1$) were significant.

Based on these findings, it was concluded that the manipulation of TPM does not significantly influence the subjects' mood.

To summarize, this chapter presented nine pretest. Based on the results of these pretests, the main study was elaborated. It is presented in the following chapter.

CHAPTER 7

RESEARCH DESIGN

Based on the pretests presented in Chapter 6, this chapter describes the research design proposed to test the hypotheses formulated in Chapter 5 and the type of analysis performed.

7.1 Experimental design

7.1.1 Subjects and design

A 2 (low versus high AMI) x 2 (neutral versus emotional ad) x 2 (cognitive versus affective TPM) x 2 (low versus high BRI) between-subjects factorial design was used. 372 male students participated in this study (about 23 subjects per cell) in small groups of fewer than seven members. Groups were randomly assigned to the 16 experimental conditions. The responses of 13 subjects were discarded because they (1) had participated in a previous pretest (1 subject), (2) did not follow the instructions (7 subjects), (3) left during the experiment (1 subject), and (4) spoke to another subject during the experiment (4 subjects).

7.1.2 Independent variables

7.1.2.1 Manipulation of AMI

The instructions for the AMI manipulation were similar to those evaluated in Pretest #6 (see section 6.6.2.1), except for a few minor details. Subjects under the low-AMI condition were told that the purpose of the study was to assess their opinion about a competition among students that their university would like to broadcast. They were told to watch an excerpt of a program presenting a similar competition and that they would have to answer questions regarding the program. Those in the high-AMI condition were informed that the main purpose of the study was to assess their reactions to advertising which would be presented during the program. They were explicitly asked to pay careful attention to the advertisements presented in the excerpt and were informed that monetary incentive ($2) was attached to this task. For the exact wording see the questionnaire in Appendix 7.2.

As the manipulation check measure for AMI, the following three item, nine-point semantic differential scale was used : "not at all/highly attentive to the ad", "not at all/highly motivated in listening to the ad", and "not at all/highly interested to listen to the ad". Evidence for the convergent validity and the reliability of this measure has been reported in Pretest #6.

7.1.2.2 Manipulation of ADTYPE

The two versions of the ad used for the manipulation of ADTYPE were identical to those tested in Pretest #6. Briefly, the neutral ad portrays the return of an authoritarian coach to his high school team after a serious illness. In the last part of the ad, there is an interaction between the coach and one of the young players. Three changes were made to the neutral ad in order to produce the emotional ad: a more emotional music was used; the voice of the coach was more authoritarian; the interaction between the coach and the young player (in the last part of the ad) was more emotional. For a detailed description see section 6.6.2.2.

The manipulation check measure for ADTYPE consisted of ten, five-point likert scales assessing the intensity of positive and negative affective reactions elicited during ad exposure: amused, moved, happy, sentimental, pleased, active, entertained, caring, indifferent, and impatient. These scales were selected from the 14 positive and negative emotions used in pretest #6, because they discriminated between the two ads.

7.1.2.3 Manipulation of TPM

The instructions for the manipulation of the TPM are the same as those used in Pretest #7. In brief, two different purchase situations were employed. In the cognitive-TPM condition, subjects were informed that the Student

Federation was planning to offer twenty cameras to an association of young photographers. In addition, in order to stress that the cameras would be used in a rational context, they were informed that the young photographers would use these cameras to take pictures of buildings, houses, bridges, automobiles, still life, etc.

In the affective-TPM condition, subjects were informed that the Student Federation was considering offering twenty cameras to an association which organises a summer camp for under-privileged children. In order to stress that the cameras would be used in an emotional context, they were informed that the children would use these cameras to take pictures of activities in which they would participate such as archery, rifle shooting, camp-fires, evening plays, initiation rituals, and nights under the stars. For the exact wording see Appendix 7.3.

Four scales were used as a manipulation check for TPM. Subjects in the cognitive-TPM condition were asked if they had to choose a camera to offer to the "Association des jeunes photographes amateurs de l'Estrie," would (1) they consider the technical characteristics of the camera (not at all or very much), (2) their decision be rational (not at all or very much), (3) they get personal pleasure from it (little or a lot), and (4) this gesture be associated with emotions (little or a lot). Scales 1 and 2 measure cognitive motivations associated with the purchase decision, whereas scales 3 and 4 measure affective motivations.

Subjects in the affective-TPM condition were asked the same four questions, but the wording was modified in such a way that the questions could apply to the case of a child who would participate in the camp organized by "Enfant-Estrie". The same set of items were administered with success in Pretest #7 (see section 6.7.2).

7.1.2.4 Manipulation of BRI

The instructions used for the manipulation of BRI correspond to those tested in Pretest #6, except for a few minor details. In short, those in the low-BRI condition were told that their answers would only be considered as being informative, and would constitute one opinion among many others. They were explicitly told not to take too much time in answering the questionnaire. In contrast, those in the high-BRI condition were informed that their answers were very important to us. They were explicitly told to take all the time they needed to complete the questionnaire and were informed that a monetary incentive ($2) was attached to this task. The exact wording is presented in Appendix 7.3.

A three item, nine-point semantic differential scale was used as the manipulation check for BRI. The items, which evaluated the amount of effort subjects gave in answering the questions about the TAF-1000 were anchored by: "very little effort/ a lot of effort", "not at all interested/very interested",

and "not at all motivated/very motivated". Evidence for its convergent validity and reliability is provided in pretest #6.

7.1.3 Dependent variables

7.1.3.1 Affective and cognitive responses

Affective and cognitive responses generated during ad exposure were collected using the two step procedure tested in pretest #1. Subjects had two and a half minutes to report the feelings and emotions they experienced, and another two and a half minutes to report the thoughts they had during ad exposure. These responses were coded by two judges according to the scheme developed in pretests #1 and #2. Fifteen categories were considered: brand recall, single-fact interpretations, brand abstractions, brand evaluations, other brand thoughts, ad recall, ad single-fact interpretations, ad abstractions, ad evaluations, other ad thoughts, specific affective reactions, basic affective reactions, general affective reactions, other affective reactions, and irrelevant thoughts.

7.1.3.2 Attitude toward the advertisement

AAD was measured on four, nine-point semantic differential scales: "like-dislike", "good-bad", "pleasant-unpleasant", and "interesting-boring". These four items are frequently used in previous studies (see Appendix 7.1). In

addition, support for the convergent validity and reliability of the measure was found in Pretest #6.

7.1.3.3 Attitude toward the brand

AB was measured with the following three item, nine-point semantic differential scale: "favorable-unfavorable", "good-bad", "like-dislike". These items have been used frequently in previous studies (see Appendix 7.2). In addition, analysis conducted with data obtained from Pretest #6 confirmed the convergent validity and reliability of this measure.

7.1.3.4 Purchase intention

Purchase intentions was estimated with a three item, nine-point semantic differential scale: "unlikely-very likely", "impossible-possible", "improbable-probable". These three items were borrowed from McKenzie et al. (1986). Analysis performed with data obtained in Pretest #6 support the convergent validity and reliability of this measure.

7.1.3.5 Choice

For the choice measure, subjects had to select a camera among the following three hypothetical brands: TAF-1000 from TAF, DL-900 from Zellers, and R-70 from Wise. In the cases of the DL-900 and the R-70, subjects

had to assume the cameras were of a quality similar to that of products generally sold by these two discount stores.

A frequency analysis, with the data obtained in Pretest #6, indicated that there is no ceiling or floor effect associated with this measure. Sixty-six percent (35/46) selected the TAF-1000 camera.

7.1.4 Procedure

The experimental procedure was similar to the one used in Pretest #6. Upon arrival subjects were asked to sign an informed consent and to read a letter from the person in charge of the study. The letter informed them that the University was interested in knowing their opinion about a competition that it would like to organize among students from different faculties. Next, subjects either read the instructions corresponding to the low-AMI condition or the high-AMI condition. Afterwards, all subjects viewed a 6 minute segment of a TV quiz followed by the target ad. Half of the subjects watched the emotional ad; the other half, the neutral ad.

Next, in the following order, subjects completed a first questionnaire including questions about their opinion on the quiz, their level of involvement during ad exposure, their affective responses, their cognitive responses, their AAD, and the intensity with which they experienced different emotional

reactions. Finally, they were required to rate their affective and cognitive responses, and to complete two filler tasks lasting about five minutes each.

In the first filler task, subjects were given five strings of letters and asked to create the longest word with each of them. Five minutes were allocated for this task. In the second task, subjects were given two sets of numbers. They were required to find which mathematical operations performed on these numbers would allow them to obtain the result appearing in parentheses. Five minutes were also allocated for this task. These two tasks were selected because they are related to the type of competition the University would like to organize among the students. Once the filler tasks were completed, subjects were asked to fill out another questionnaire.

In the first part of the cover page of the second questionnaire, the president of the Student Federation of Sherbrooke University informed the subjects that the Federation would like to offer twenty cameras to a particular association of the Eastern townships region. In the second part of the cover page, they either read the instructions associated with the cognitive-TPM condition or with the affective-TPM condition. In the last part of the cover page, subjects either read the instructions corresponding to the low-BRI group or to the high-BRI group.

Finally, in the following order, subjects completed the questionnaire including questions about AB, PI, choice, manipulation check for BRI, manipulation check for TPM, and the study's purpose. Subjects were debriefed

and payed $ 9 for their participation. A copy of the questionnaire used in the first and second parts of the study is reproduced in appendices # 7.2 and 7.3, respectively.

7.2 Analysis

Two judges (one was the author) blind to the experimental conditions classified affective and cognitive responses according to the proposed scheme.

The hypotheses were tested through analysis of variance, regression analysis, and logistic regression (in the case of choice measure). The results of the analyses are reported in the next chapter.

CHAPTER 8

ANALYSIS

This chapter presents the results of the experiment described in Chapter 7. It includes six sections. In the first section, preliminary analyses are discussed. The next four sections test the hypotheses regarding (1) the type of information encoded during ad exposure, (2) AAD, (3) AB, PI, and choice, and (4) the mediating role of AAD. The last section addresses demand artifacts.

8.1 Preliminary analysis

8.1.1 Dependent variables

The validity and reliability of the scales for AAD, AB, and PI were assessed. Three factor analyses with varimax rotation were conducted using the items corresponding to each scale. As can be seen in Tables 8.1.1, 8.1.2, and 8.1.3, a one-factor solution was found for all three scales. Therefore, the data support the convergent validity of the three scales.

Next, a reliability analysis was conducted for each scale. As indicated by the Cronbach alphas (.83 or greater) reported at the bottom of Tables 8.1.1, 8.1.2, and 8.1.3, all three scales are highly reliable.

Table 8.1.1

Factor analysis of the four items assessing AAD

Items[1]	Factor loadings
#1	0.934
#2	0.841
#3	0.912
#4	0.899
Variance	80%
Cronbach alpha	0.92

1- Items 1 through 4 are bipolar scale labeled at the endpoints with like-dislike, good-bad, pleasant-unpleasant, and interesting-boring.

Table 8.1.2

Factor analysis of the three items assessing AB

Items[1]	Factor loadings
#1	0.872
#2	0.852
#3	0.870
Variance	75%
Cronbach alpha	0.83

1- Items 1 through 3 are bipolar scale labeled at the endpoints with favorable-unfavorable, good-bad, and like-dislike.

Table 8.1.3

Factor analysis of the three items assessing PI

Items[1]	Factor loadings
#1	0.930
#2	0.900
#3	0.956
Variance	86%
Cronbach alpha	0.92

1- Items 1 through 3 are bipolar scale labeled at the endpoints with umprobable-probable, impossible-possible, and unlikely-likely.

Consequently, for all further analyses involving these constructs, the average of the items corresponding to each scale will be used as the operational measure.

8.1.2 Independent variables

Two issues were investigated regarding independent variables: the convergent validity and reliability of the manipulation check measures, and the effectiveness of the four manipulations.

To examine the first issue, and to ensure that there is no overlap among the manipulation check measures, a factor analysis with varimax rotation was conducted using all items corresponding to the manipulation check measures of the four independent variables. A six factor solution that accounted for 69% of the variance was obtained (see Table 8.1.4).

The factor structure, reported in Table 8.1.4, is in line with our expectations. Five of the ten items assessing emotional reactions loaded on the first factor (i.e, moved, happy, sentimental, pleased, and caring) and the other five loaded on the second factor (i.e., amused, active, entertained, indifferent, and impatient). Consistent with findings from Burke and Edell (1989), the first factor seems to represent a warm dimension and the second factor an upbeat dimension. The three items measuring the level of BRI loaded on the third factor; the three items evaluating the level of AMI loaded on the fourth factor;

Table 8.1.4

Factor analysis of all the items used for the manipulation check measures

Items[2]	Factor loadings[1] F1	F2	F3	F4	F5	F6
#1	0.809					
#2	0.745					
#3	0.816					
#4	0.763					
#5	0.526					
#6		0.805				
#7		0.465				
#8		0.776				
#9		-0.522				
#10		-0.595				
#11			0.715			
#12			0.892			
#13			0.881			
#14				0.808		
#15				0.768		
#16				0.807		
#17					0.872	
#18					0.867	
#19						0.799
#20						0.840
Cronbach alpha	0.86	0.77	0.80	0.84	0.71	0.62

1- Only the highest loadings are reported.

2- Items 1 through 10 are 7 point scales assessing the following ten emotional reactions: moved, happy, sentimental, pleased, caring, amused, active, entertained, indifferent, and impatient. Items 11 through 13 are bipolar scales measuring BRI. They are labelled at endpoints with very little effort-a lot of effort, not at all interested-very interested, and not at all motivated-very motivated. Items 14 through 17 are bipolar scales assessing AMI. They are labelled at endpoints with not at all attentive-highly attentive, not at all motivated-highly motivated, and not at all interested-highly interested. Items 17 and 18 are bipolar scales assessing affective motivations involved in the

Table 8.1.4 continued

purchase decision. They are labelled at the endpoints with little personal pleasure-a lot of personal pleasure, and little emotions-a lot of emotions. Items 19 and 20 are bipolar scales evaluating cognitive motivations involved in the purchase decision. They are labelled at the endpoints with not at all-very much consider the technical characteristics of the camera, and a decision little-very rational.

the two items assessing affective purchase motivations loaded on the fifth factor; and the two items assessing cognitive purchase motivations loaded on the last factor.

Therefore, the factor analysis confirms the convergent validity of the six manipulation check scales.

Next, a reliability analysis was performed for each manipulation check scale. As indicated by the Cronbach alphas (.62 or greater) at the bottom of Table 8.1.4, the reliability of the six scales is satisfactory (Malhotra 1993).

Based on these results, it was decided to use the mean score of the items corresponding to each scale as manipulation check measures.

In order to address the second issue, a series of two-way[34] and four-way ANOVAs was performed. The purpose of these analyses is to ensure that the four manipulations are strong and uncorrelated. The results are presented in Tables 8.1.5 through 8.1.10.

The manipulation of AMI was analysed through a two-way ANOVA where the manipulation check measure of AMI was used as the dependent variable and AMI, ADTYPE, and the interaction as independent variables. Consistent with our expectations, the main effect of AMI was significant ($F(1,355)=40.62$,

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34- TPM and BRI were not considered in ANOVAs conducted for testing the manipulations of AMI and ADTYPE, because the manipulation of these two variables occured after the manipulation check measures of AMI and ADTYPE were collected (see the description of the experimental procedure in Chapter 7).

$p<0.01$, $\omega^2=0.10$; see Table 8.1.5) and the means were in the right direction. Subjects in the high-AMI condition reported being more attentive to the ad ($\bar{X}=6.3$) than those in the low-AMI condition ($\bar{X}=5.1$). The results also revealed that the main effect of ADTYPE was significant ($F(1,355)=7.59$, $p<0.01$, $\omega^2=0.02$; $\bar{X}=6.0$ and 5.4, for those exposed to the emotional and neutral ad, respectively), but not the interaction ($F<1$). The effect of ADTYPE on AMI can be attributed to the properties of emotions. According to many authors (Cohen and Areni 1991; Gardner 1985; Schwarz 1990), emotions differ from other affective reactions in that they direct individuals' attention toward the instigating stimuli, in this case, the ad.

To assess the manipulation of ADTYPE, two-way ANOVAs using the warm and upbeat emotional dimensions as the dependent variables and AMI, ADTYPE, and the interaction as independent variables were conducted (see the results in Tables 8.1.6 and 8.1.7). As expected, in both ANOVAs, only the main effects of ADTYPE were significant ($F(1,355)= 14.38$, $p<0.01$, $\omega^2=0.04$ and $F(1,355)=16.97$, $p<0.01$, $\omega^2=0.04$ for the warm and upbeat dimensions, respectively). In accordance with the purpose of the manipulation, subjects exposed to the emotional ad experienced stronger positive affective reactions. For instance, for the warm dimension, the means are $\bar{X}=3.5$ and 2.9 for the emotional ad and neutral ad conditions, respectively; for the upbeat dimension, the means are $\bar{X}=4.0$ and 3.4, respectively.

Table 8.1.5

Impact of AMI and ADTYPE on the manipulation check measure of AMI

Source	DF	Type III SS	F value	Pr > F
ami	1	138.926	40.62	0.01
adtype	1	25.948	7.59	0.01
ami*adtype	1	3.322	0.97	0.33
Error	355	1214.220	MSE=3.420	
Corrected Total	358	1381.147		

Table 8.1.6

Impact of AMI and ADTYPE on the warm emotional dimension

Source	DF	Type III SS	F value	Pr > F
ami	1	7.542	3.32	0.07
adtype	1	32.648	14.38	0.01
ami*adtype	1	0.006	0.00	0.96
Error	355	805.879	MSE=2.270	
Corrected Total	358	845.825		

Table 8.1.7

Impact of AMI and ADTYPE on the upbeat emotional dimension

Source	DF	Type III SS	F value	Pr > F
ami	1	2.878	1.50	0.22
adtype	1	32.553	16.97	0.01
ami*adtype	1	0.068	0.04	0.85
Error	355	681.158	MSE=1.918	
Corrected Total	358	716.526		

The manipulation of BRI was analysed through a four-way ANOVA with the manipulation check measure of BRI as the dependent variable and AMI, ADTYPE, BRI, TPM, and all interactions as independent variables. The results, presented in Table 8.1.8, showed that the main effect of BRI ($F(1,343)=26.78$, $p<0.00$, $\omega^2=0.07$) was significant. In line with our expectations, subjects in the high-BRI condition put more effort in judgment/choice ($\bar{X}=6.4$) than those in the low-BRI condition ($\bar{X}=5.5$). A significant main effect of TPM was also observed in Table 8.1.8 ($F(1,343)=5.78$, $p<0.02$, $\omega^2=0.02$; $\bar{X}=6.1$ and 5.7 for those in the affective-motivation and cognitive-motivation condition, respectively).

Finally, the manipulation of TPM was evaluated using four-way ANOVAs, where the manipulation check measures for cognitive and affective purchase motivations were used as dependent variables, and AMI, ADTYPE, BRI, TPM, and all interactions as independent variables. As can be observed in Tables 8.1.9 and 8.1.10, only the main effects of TPM were significant. Consistent with our expectations, subjects in the cognitive-motivation condition, in comparison to those in the affective-motivation condition, reported being more cognitively motivated ($F(1,343)=47.19$, $p<0.01$, $\omega^2=0.12$; $\bar{X}=7.8$ and 6.8, respectively) and less affectively motivated ($F(1,343)=20.28$, $p<0.01$, $\omega^2=0.05$; $\bar{X}=5.7$ and 6.5, respectively).

Table 8.1.8

Impact of AMI, ADTYPE, TPM, and BRI on the manipulation check measure of BRI

Source	DF	Type III SS	F value	Pr> F
ami	1	2.155	0.75	0.39
adtype	1	0.029	0.01	0.92
tpm	1	16.580	5.78	0.02
bri	1	76.875	26.78	0.01
ami*adtype	1	0.207	0.07	0.79
ami*tpm	1	3.596	1.25	0.26
ami*bri	1	0.595	0.21	0.65
adtype*tpm	1	0.161	0.06	0.81
adtype*bri	1	0.151	0.05	0.82
tpm*bri	1	0.267	0.09	0.76
ami*adtype*tpm	1	1.681	0.59	0.44
ami*adtype*bri	1	8.910	3.10	0.08
ami*tpm*bri	1	9.305	3.24	0.08
adtype*tpm*bri	1	3.297	1.15	0.28
ami*adtype*tpm*bri	1	9.355	3.26	0.07
Error	343	984.456	MSE=2.870	
Corrected Total	358	1119.993		

Table 8.1.9

Impact of AMI, ADTYPE, TPM, and BRI on the manipulation check measure for cognitive purchase motivations

Source	DF	Type III SS	F value	Pr > F
ami	1	0.011	0.01	0.94
adtype	1	0.384	0.21	0.65
tpm	1	87.542	47.19	0.01
bri	1	2.966	1.60	0.21
ami*adtype	1	2.254	1.22	0.27
ami*tpm	1	0.262	0.14	0.71
ami*bri	1	0.119	0.06	0.80
adtype*tpm	1	1.400	0.75	0.39
adtype*bri	1	0.410	0.22	0.64
tpm*bri	1	0.007	0.00	0.95
ami*adtype*tpm	1	0.000	0.00	0.99
ami*adtype*bri	1	0.384	0.21	0.65
ami*tpm*bri	1	0.013	0.01	0.93
adtype*tpm*bri	1	0.007	0.00	0.95
ami*adtype*tpm*bri	1	6.666	3.59	0.06
Error	343.	636.246	MSE=1.855	
Corrected Total	358	740.054		

Table 8.1.10

Impact of AMI, ADTYPE, TPM, and BRI on the manipulation check measure for affective purchase motivations

Source	DF	Type III SS	F value	Pr > F
ami	1	8.243	2.89	0.09
adtype	1	0.611	0.21	0.64
tpm	1	57.805	20.28	0.01
bri	1	0.377	0.13	0.72
ami*adtype	1	2.407	0.84	0.36
ami*tpm	1	0.058	0.02	0.89
ami*bri	1	0.661	0.23	0.63
adtype*tpm	1	0.868	0.30	0.58
adtype*bri	1	0.563	0.20	0.66
tpm*bri	1	5.420	1.90	0.17
ami*adtype*tpm	1	0.010	0.00	0.95
ami*adtype*bri	1	0.912	0.32	0.57
ami*tpm*bri	1	6.151	2.16	0.14
adtype*tpm*bri	1	3.978	1.40	0.24
ami*adtype*tpm*bri	1	1.146	0.40	0.53
Error	343	977.687	MSE=2.850	
Corrected Total	358	1068.082		

Taken together, the results presented above suggest that the four manipulations were successful.

8.1.3 The coding scheme

Cognitive and affective responses were coded by two judges (one was the author) blind to the experimental conditions, according to the scheme developed in Pretest #1. The percentage of agreement between the two judges was 77%. As indicated by the reliability index (Ir=0.87) developed by Perreault and Leigh (1989), this level is acceptable given the large number of categories. Conflicts resulting from different coding categorizations were analysed by a third judge. For 2.4% of the responses, the third judge could not agree with the first or second judge. Therefore, these responses were discarded.

Several points about the distribution of the responses reported by the subjects are worth mentioning (see Table 8.1.11). First, the average number of brand cognitive responses was low ($\bar{X}$=0.36). This could perhaps be explained by the fact that the emotional and neutral ads did not present a lot of information about the brand, and that instructions given to the subjects may not have made them focus on brand information during ad processing.

Second, a very large number of affective responses corresponded to specific emotions. This phenomenon was also observed in pretests #1 and #2. Whether

Table 8.1.11

Average number of responses according to the coding scheme[1]

Type of responses	Average number
Brand recall	0.02
Brand single-fact interpretation	0.04
Brand abstraction	0.01
Brand evaluation	0.08
Other brand thought	0.21
Ad recall	0.39
Ad single-fact interpretation	0.55
Ad abstraction	0.97
Ad evaluation	0.21
Other ad thought	0.83
General affective reaction	0.29
Basic affective reaction	0.37
Specific affective reaction	1.87
Other affective reaction	0.13
Irrelevant thought	0.98
Total	6.94

1- 2.4% of the responses were not classified because a minimum of two judges out of three could not agree on the coding.

subjects did not experience more general affective reactions or whether they simply did not report them is not clear.

A last point concerns the responses that were misreported. For instance, 5.5% of the responses were cognitive responses that subjects reported in the space reserved for affective responses, and 1.7% of the responses were affective responses that subjects reported in the space reserved for cognitive responses. In addition, in 4.1% of the cases, the valence of the responses was not mentioned. These responses were re-coded by the two judges. Any disagreement was resolved by the third judge.

8.2. The type of information encoded during ad exposure

Six hypotheses were formulated concerning the type of information encoded during ad exposure. Each of them are discussed below.

8.2.1. Hypothesis 1

According to H1, subjects exposed to an emotional ad should produce a higher proportion of affective responses than those exposed to a neutral ad, regardless of the level of AMI.

To test this hypothesis, an index of affective responses using the total number of affective responses as the numerator and the total number of brand cognitions, ad cognitions, and affective responses as the denominator was

computed for each subject. Next, a two-way ANOVA using this index as the dependent variable, and AMI, ADTYPE, and the interaction as independent variables was conducted.

As revealed in Table 8.2.1, the main effect of ADTYPE was significant ($F(1,354)=7.51$, $p<0.01$, $\omega^2=0.02$), but neither the main effect of AMI nor the interaction were significant ($Fs<1$). In line with H1 (see Table 8.2.2), subjects exposed to the emotional ad elicited a greater proportion of affective responses ($\bar{X}=0.50$) than those exposed to the neutral ad ($\bar{X}=0.43$). Therefore, H1 is supported.

8.2.2. Hypothesis 2

This hypothesis posits that subjects exposed to an emotional ad should produce a higher proportion of positive affective responses than those exposed to the neutral ad, regardless of the level of AMI. The rationale underlying this hypothesis is that the emotional (in comparison to the neutral) ad was specifically designed in such a way as to elicit more intense positive affective reactions.

To verify this hypothesis, for each subject, an index of positive affective responses was computed using the total number of positive affective responses as the numerator and the total number of positive and negative affective responses as the denominator. Then, a two-way ANOVA was computed using

Table 8.2.1

Impact of AMI and ADTYPE on the percentage of affective responses encoded during ad exposure[1]

Source	DF	Type III SS	F value	Pr > F
ami	1	0.003	0.01	0.93
adtype	1	3.432	7.51	0.01
ami*adtype	1	0.152	0.33	0.56
Error	354	161.832	MSE=0.457	
Corrected Total	357	165.428		

1- For this analysis, the arc sine transformation was performed on the dependent variable.

Table 8.2.2

% of affective responses by AMI and ADTYPE[1]

Dependent variable	Low-ami	High-ami	Mean
Neutral ad	0.43	0.44	0.43
Emotional ad	0.52	0.48	0.50
Mean	0.47	0.46	

1- % affective response= number of affective responses/number of brand cognitions, ad cognitive, and affective responses.

this index as the dependent variable and AMI, ADTYPE, and the interaction as independent variables.

As indicated by the results reported in Tables 8.2.3 and 8.2.4, H2 is supported. In accordance with the hypothesis, subjects exposed to the emotional ad, in comparison to those exposed to the neutral ad, produced a greater proportion of positive affective responses ($F(1,318)=10.10$, $p<0.01$, $\omega^2=0.03$; $\bar{X}$ =0.70 and 0.56 for those exposed to the emotional and neutral ad, respectively). Neither the main effect of AMI, nor the interaction were significant ($Fs<1$).

8.2.3. Hypothesis 3

Remember that the manipulation of ADTYPE was obtained modifying three elements of the ad. That is, in the emotional (versus neutral) version, a more appealing music was used, the coach's voice was more authoritarian, and the interaction between the coach and one of the kids was more emotional. As a result, it was predicted in H3 that subjects exposed to the emotional ad would produce a higher proportion of positive ad cognitive responses than those exposed to a neutral ad, regardless of the level of AMI.

In order to evaluate this hypothesis, an index of positive ad cognitive responses using the number of positive ad cognitive responses as the numerator and the total number of positive and negative ad cognitive responses as the

Table 8.2.3

Impact of AMI and ADTYPE on the percentage of positive affective responses encoded during ad exposure[1]

Source	DF	Type III SS	F value	Pr > F
ami	1	0.433	0.29	0.59
adtype	1	14.855	10.10	0.01
ami*adtype	1	0.118	0.08	0.78
Error	318	467.776	MSE=1.471	
Corrected Total	321	483.227		

1- For this analysis, the arc sine transformation was performed on the dependent variable.

Table 8.2.4

% of positive affective responses by AMI and ADTYPE[1]

Dependent variable	Low-ami	High-ami	Mean
Neutral ad	0.57	0.56	0.56
Emotional ad	0.72	0.68	0.70
Mean	0.65	0.62	

1- % of positive affective responses= number of positive affective responses/number of positive and negative affective responses.

denominator was computed. Afterwards, a two-way ANOVA using this index as the dependent variable and AMI, ADTYPE, and the interaction as independent variables was realized. The results are presented in Tables 8.2.5 and 8.2.6.

Contrary to expectations, the main effect of ADTYPE was not significant ($F(1,307)=1.02$, $p>0.3$), although the means were in the expected direction ($\bar{X}$ =0.36 and 0.32 for those exposed to the emotional and neutral ad, respectively). In addition, neither the main effect of AMI, nor the interaction ($Fs<1$) were significant. Based on these results, H3 is rejected.

8.2.4. Hypothesis 4

It was stated in H4 that subjects exposed to the emotional ad should produce an equal proportion of positive brand cognitive responses as those exposed to a neutral ad, regardless of the level of AMI. This was justified because the two ads used in this research were designed in such a way as to provide the same brand information.

An index of positive brand cognitive responses was used to test this hypothesis. Thus, for each subject, the number of positive brand cognitive responses was divided by the total number of positive and negative brand cognitive responses. Next, a two-way ANOVA using this index as the

Table 8.2.5

Impact of AMI and ADTYPE on the percentage of positive ad cognitive responses encoded during ad exposure[1]

Source	DF	Type III SS	F value	Pr > F
ami	1	1.463	0.93	0.33
adtype	1	1.615	1.02	0.31
ami*adtype	1	0.164	0.10	0.75
Error	307	485.215	MSE=1.581	
Corrected Total	310	488.519		

1- For this analysis, the arc sine transformation was performed on the dependent variable.

Table 8.2.6

% of positive ad cognitive responses by AMI and ADTYPE[1]

Dependent variable	Low-ami	High-ami	Mean
Neutral ad	0.35	0.29	0.32
Emotional ad	0.38	0.35	0.36
Mean	0.36	0.31	

1- % of positive ad cognitive responses=number of positive ad cognitions/number of positive and negative ad cognitions.

dependent variable and AMI, ADTYPE, and the interaction as independent variables was conducted.[35]

As expected, the effects of ADTYPE, AMI, and of the interaction were not significant ($Fs < 1$) (see Tables 8.2.7 and 8.2.8). This demonstrates that the valence of brand information encoded during ad exposure was not influenced by the type of ad used in this research and, therefore, H4 is supported.

8.2.5. Hypothesis 5

According to the framework proposed in this research, AMI determines the level of abstraction of the information that will be encoded during ad exposure. Based on this framework, H5 postulates that subjects under a high level of AMI should produce a higher proportion of specific ad cognitive responses and brand cognitive responses than those under a low level of AMI, regardless of ADTYPE.

The following procedure was used to analyse this hypothesis. First, brand cognitive responses and ad cognitive responses were combined, because only 37 out of the 359 subjects reported cognitive responses classified as brand recall, brand single-fact interpretation, brand abstraction, or brand evaluation.

35- Only 71 subjects were considered in this analysis because the other subjects did not report any brand cognitions.

Table 8.2.7

Impact of AMI and ADTYPE on the percentage of positive brand cognitive responses encoded during ad exposure[1]

Source	DF	Type III SS	F value	Pr > F
ami	1	0.198	0.10	0.75
adtype	1	0.987	0.50	0.48
ami*adtype	1	1.835	0.93	0.34
Error	67	131.551	MSE=1.963	
Corrected Total	70	134.838		

1- For this analysis, the arc sine transformation was performed on the dependent variable.

Table 8.2.8

% of positive brand cognition by AMI and ADTYPE[1]

Dependent variable	Low-ami	High-ami	Mean
Neutral ad	0.29	0.23	0.26
Emotional ad	0.27	0.39	0.34
Mean	0.28	0.31	

1- % of positive brand cognition=number of positive brand cognition/number of positive and negative brand cognitions.

Next, four indices were computed representing respectively the percentage of recall (i.e, number of brand and ad recall/number of brand and ad cognitive responses)[36], the percentage of single-fact interpretations (i.e, number of brand and ad single fact-interpretations/number of brand and ad cognitive responses), the percentage of abstractions (i.e, number of brand and ad abstractions/number of brand and ad cognitive responses), and the percentage of evaluations (i.e, number of brand and ad evaluations/number of brand and ad cognitive responses). As can be seen in Table 8.2.9, the average percentages are in the expected direction. Specifically, the percentage of recall increases with the level of AMI, whereas the percentage of abstractions decreases.

In order to verify if these differences were significant, a two-way ANOVA was conducted using AMI, ADTYPE, and the interaction as predictor variables and an index of the percentage of specific cognitive responses as the criterion variable. This index was obtained by combining the percentage of recall and the percentage of single-fact interpretations.

An examination of this analysis showed that AMI has a significant effect on the level of abstraction of the cognitive information encoded during ad exposure

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36- For all four indices, the number of brand and ad cognitive responses included brand and ad recall, single-fact interpretations, abstractions, evaluations, but excluded other brand and ad responses. Other brand and ad responses were not considered because their level of abstraction could not be determined.

Table 8.2.9

% of recall, % of single fact-interpretations, % of abstractions, and % of evaluation by AMI and ADTYPE

Dependent variable	Low-ami		High-ami	
	Neutral ad	Emotional ad	Neutral ad	Emotional ad
% of recall[1]	0.09	0.12	0.22	0.20
% of single-fact interpretations[2]	0.24	0.23	0.24	0.24
% of abstractions[3]	0.51	0.54	0.44	0.47
% of evaluations[4]	0.17	0.11	0.10	0.10

1- % of recall= number of brand and ad recall/number of brand and ad recall, single-fact interpretations, abstractions, and evaluations.

2- % of single-fact interpretation= number of brand and ad single fact-interpretations/number of brand and ad recall, single-fact interpretations, abstractions, and evaluations.

3- % of abstractions= number of brand and ad abstractions/number of brand and ad recall, single-fact interpretations, abstractions, and evaluations.

4- % of evaluations= number of brand and ad evaluations/number of brand and ad recall, single-fact interpretations, abstractions, and evaluations.

(see Table 8.2.10). In line with the hypothesis, subjects in the high-AMI condition, in comparison to those in the low-AMI condition, encoded a greater proportion of specific cognitive responses ($F(1,292)=7.18$, $p<0.01$, $\omega^2=0.2$; $\bar{X}=0.45$ and 0.33, respectively).[37]

It can also be noticed that neither ADTYPE, nor the interaction had a significant effect on the level of abstraction of cognitive information encoded during ad exposure ($Fs<1$).

Combined, these results suggest that AMI influences the level of abstraction of cognitive information encoded during ad exposure and, consequently, H5 is supported.

8.2.6. Hypothesis 6

H6 stated that subjects under a high level of AMI produce a higher proportion of specific affective responses than those under a low level of AMI when exposed to an emotional ad, but not when exposed to a neutral ad.

Three indices were computed as a means to investigate this hypothesis: the percentage of general affective reactions (i.e., the number of general affective

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37- Follow-up analyses indicated that the significant effects on the specific cognitive responses index was mainly attributed to the main effect of AMI on the percentage of recall ($F(1,292)=12.19$, $p < 0.01$, $\omega^2=0.04$). The main effects of AMI on the percentage of abstractions ($F(1,292)=2.45$, $p>0.1$), the percentage of single-fact interpretations ($F<1$), and the percentage of evaluations ($F(1,292)=2.52$, $p>0.1$) were not significant.

Table 8.2.10

Impact of AMI and ADTYPE on the percentage of specific cognitive responses encoded during ad exposure[1]

Source	DF	Type III SS	F value	Pr > F
ami	1	9.697	7.18	0.01
adtype	1	0.037	0.03	0.87
ami*adtype	1	0.373	0.28	0.60
Error	292	394.459	MSE=1.351	
Corrected Total	295	404.710		

1- For this analysis, the arc sine transformation was performed on the dependent variable.

reactions/number of affective reactions),[38] the percentage of basic affective reactions (i.e., the number of basic affective reactions/number of affective reactions), and the percentage of specific affective reactions (i.e., the number of specific affective reactions/number of affective reactions). Contrary to our expectations, affective reactions do not become more specific as the level of AMI increases (see the average percentages reported in Table 8.2.11). To the contrary, there seems to be a decline in the percentage of specific affective responses as the level of AMI increases.

In order to verify if this pattern was significant, a two-way ANOVA was conducted using the percentage of specific affective responses as the dependent variable and AMI, ADTYPE, and the interaction as independent variables.

The results reported in Table 8.2.12 reveal that the interaction between ADTYPE and AMI on the level of abstraction of affective reactions experienced during ad exposure was not significant ($F < 1$). It can also be observed that the main effect of AMI ($F(1,330)=2.09$, $p>0.15$) and the main effect of ADTYPE ($F(1,330)=1.98$, $p>0.15$) were not significant.

Based on these findings, H6 is rejected.

38- For the three indices, the number of affective reactions included general affective reactions, basic affective reactions, specific affective reactions, but excluded other affective reactions. Other affective responses were not considered because their level of abstraction could not be determined.

Table 8.2.11

% of general affective responses, % of basic affective responses, and % specific affective responses by AMI and ADTYPE

Dependent variable	Low-ami		High-ami	
	Neutral ad	Emotional ad	Neutral ad	Emotional ad
% of general affective responses[1]	0.07	0.15	0.15	0.16
% of basic affective responses[2]	0.14	0.11	0.12	0.14
% of specific affective responses[3]	0.80	0.74	0.73	0.71

1- % of general affective responses=number of general affective responses/number of general, basic, and specific affective responses.

2- % of basic affective responses=number of basic affective responses/number of general, basic, and specific affective responses.

3- % of specific affective responses=number of specific affective responses/number of general, basic, and specific affective responses.

Table 8.2.12

Impact of AMI and ADTYPE on the percentage of specific affective responses encoded during ad exposure[1]

Source	DF	Type III SS	F value	Pr > F
ami	1	1.942	2.09	0.15
adtype	1	1.846	1.98	0.16
ami*adtype	1	0.332	0.36	0.55
Error	330	307.080	MSE=0.931	
Corrected Total	333	311.116		

1- For this analysis, the arc sine transformation was performed on the dependent variable.

8.3 Hypothesis about AAD

The results concerning H2 confirmed that the emotional ad elicits more positive affective reactions than the neutral ad. If we consider that affective reactions experienced during ad exposure are antecedents of AAD, then, as stated in H7, exposure to the emotional (versus neutral) ad should result in a more positive AAD, regardless of the level of AMI.

This hypothesis was tested using a two-way ANOVA where the measure of AAD was used as the criterion variable and AMI, ADTYPE, and the interaction as predictor variables.

The results reported in Table 8.3.1 reveal that only the main effect of ADTYPE was significant ($F(1,355)=26.28$, $p<0.01$, $\omega^2=0.07$). In line with H7 (see Table 8.3.2), subjects exposed to the emotional ad developed a more positive AAD ($\bar{X}=0.93$) than those exposed to the neutral ad ($\bar{X}=-0.27$).

In conclusion, the findings support H7.

8.4 Hypothesis about AB, PI, and choice

In H8, a three-way interaction was postulated regarding the impact of AMI, ADTYPE, TPM, and BRI on AB, PI, and choice. More specifically, it was postulated that:

Table 8.3.1

Impact of AMI and ADTYPE on AAD

Source	DF	Type III SS	F value	Pr > F
ami	1	1.814	0.37	0.54
adtype	1	128.421	26.28	0.01
ami*adtype	1	0.673	0.14	0.71
Error	355	1734.887	MSE=4.887	
Corrected Total	358	1866.219		

Table 8.3.2

Average AAD by AMI and ADTYPE

Dependent variable	Low-ami	High-ami	Mean
Neutral ad	-0.24	-0.30	-0.27
Emotional ad	1.04	0.81	0.93
Mean	0.40	0.25	

in comparison with exposure to a neutral ad,
a) when BRI is low, exposure to the emotional ad results in a more positive AB, PI, as well as an increased likelihood of choosing the TAF-1000 brand, regardless of the AMI and TPM, and

b) when BRI is high, exposure to the emotional ad results in a more positive AB, PI, as well as an increased likelihood of choosing the TAF-1000 brand, when affective motives drive the purchase decision, but not when cognitive motives drive the purchase decision, regardless of AMI.

This hypothesis was tested separately for AB, PI, and choice.

8.4.1 Analysis concerning AB

To test this hypothesis for AB, a four-way ANCOVA using AB as the dependent variable, the design factors AMI, ADTYPE, TPM, BRI, and all interactions as well as the covariate, familiarity with cameras, as the independent variables, was conducted. Familiarity was included as a covariate, because it was believed that this variable was likely to influence the subjects' evaluation of the brand.[39] The results are reported in Table 8.4.1, and the means of the 16 experimental conditions are presented in Table 8.4.2.

Contrary to our expectations, the three-way interaction between ADTYPE, TPM, and BRI was not significant ($F<1$). However, two other effects were significant: the main effect of BRI ($F(1,341)=3.92$, $p<0.05$), and the three-

39- Familiarity was assessed using a 4 point scale.

Table 8.4.1

Impact of AMI, ADTYPE, TPM, and BRI on AB

Source	DF	Type III SS	F value	Pr > F
Familiarity	1	3.773	2.11	0.15
ami	1	0.099	0.06	0.81
adtype	1	0.796	0.44	0.51
tpm	1	4.437	2.48	0.12
bri	1	7.020	3.92	0.05
ami*adtype	1	1.853	1.03	0.31
ami*tpm	1	3.524	1.97	0.16
ami*bri	1	1.481	0.83	0.36
adtype*tpm	1	4.739	2.64	0.10
adtype*bri	1	1.016	0.57	0.45
tpm*bri	1	1.443	0.81	0.37
ami*adtype*tpm	1	0.124	0.07	0.79
ami*adtype*bri	1	4.649	2.60	0.11
ami*tpm*bri	1	6.998	3.91	0.05
adtype*tpm*bri	1	0.136	0.08	0.78
ami*adtype*tpm*bri	1	3.953	2.21	0.14
Error	341	610.935	MSE=1.792	
Corrected Total	357	657.134		

Table 8.4.2

Average AB as a function of ADTYPE, AMI, TPM, and BRI

		TPM			
		Cognitive		Affective	
		BRI		BRI	
		Low	High	Low	High
Neutral-ad	Ami-low	-1.00	0.17	0.36	0.21
	Ami-high	-0.30	-0.36	-0.41	0.17
Emotional-ad	Low-Ami	-0.14	-0.20	0.12	-0.20
	High-Ami	-0.15	0.38	-0.33	0.17

way interaction involving AMI, TPM, and BRI ($F(1,341)=3.91$, $p<0.05$, $\omega^2=0.01$; see Figure 8.4.1).

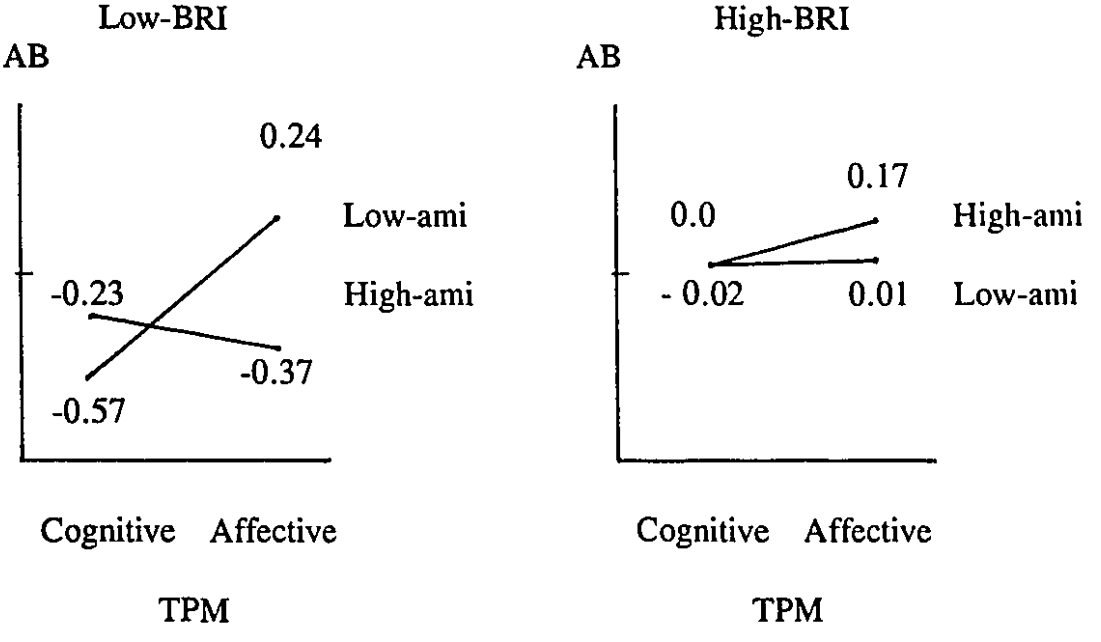
According to the main effect of BRI, subjects under high-BRI ($\bar{X}=0.04$) reported a more positive AB than those under low-BRI ($\bar{X}=-0.23$). A possible explanation is that subjects under the low-BRI condition reacted negatively to the instructions corresponding to the manipulation of BRI. They were told that their answers will only be considered as informative.

To understand the nature of the three-way interaction, separate two-way analyses of variance were conducted for each level of BRI. It was found that the interaction between TPM and AMI was significant under the low-BRI condition ($F(1,341)=5.49$, $p<0.02$), but not under a high-BRI condition ($F<1$). Follow-up analyses of the simple effect of TPM were performed at each level of AMI for subjects in the low-BRI condition. These analyses revealed that when the level of AMI was low, subjects in the affective-TPM condition reported a more positive AB than those in the cognitive-TPM condition ($F(1,343)=7.99$, $p<0.01$; $\bar{X}=0.24$ and -0.57, respectively; see Figure 8.4.1). In contrast, when the level of AMI was high, no significant differences were found between subjects in the affective-TPM condition and those in the cognitive-TPM condition ($F<1$; $\bar{X}=-0.37$ and -0.23, respectively).

Possible explanations for this unexpected interaction will be discussed in Chapter 9.

Figure 8.4.1

Average AB as a function of AMI, TPM and BRI



8.4.2 Analysis concerning PI

The hypothesis for PI was also tested through a four-way ANCOVA where PI was used as the dependent variable, familiarity as a covariate, and AMI, ADTYPE, TPM, BRI, and all interactions as independent variables. Table 8.4.3 presents the results of this analysis, and Table 8.4.4 the means corresponding to the experimental conditions.

Contrary to H8, the three-way interaction between ADTYPE, TPM, and BRI was not significant ($F < 1$). In fact, none of the effects were significant.

8.4.3 Results concerning choice

The three-way interaction predicted between ADTYPE, TPM, and BRI for choice was tested through logistic regression. Choice was used as the dependent variable, familiarity as a covariate, and AMI, ADTYPE, TPM, BRI, and all interactions as independent variables. For the purpose of this analysis, choice was coded as 1 if the subject selected the brand TAF-1000 and 0 if not. Independent variables were coded using a 1 and -1. Low-AMI, neutral-ADTYPE, low-BRI, and cognitive-TPM were coded as 1; high-AMI, emotional-ADTYPE, high-BRI, and affective-TPM were coded as -1. The results of this analysis are presented in Table 8.4.5. The percentages obtained for each experimental condition are reported in Table 8.4.6.

Table 8.4.3

Impact of AMI, ADTYPE, TPM, and BRI on PI

Source	DF	Type III SS	F value	Pr > F
Familiarity	1	9.784	2.53	0.11
ami	1	1.523	0.40	0.53
adtype	1	3.191	0.83	0.36
tpm	1	0.064	0.17	0.69
bri	1	1.135	0.29	0.59
ami*adtype	1	12.672	3.28	0.07
ami*tpm	1	1.253	0.32	0.57
ami*bri	1	0.565	0.15	0.70
adtype*tpm	1	14.321	3.70	0.06
adtype*bri	1	0.071	0.02	0.89
tpm*bri	1	0.851	0.22	0.64
ami*adtype*tpm	1	1.279	0.33	0.57
ami*adtype*bri	1	12.654	3.27	0.07
ami*tpm*bri	1	0.388	0.10	0.75
adtype*tpm*bri	1	2.677	0.69	0.41
ami*adtype*tpm*bri	1	5.701	1.47	0.23
Error	341	1318.807	MSE=3.867	
Corrected Total	357	1391.011		

Table 8.4.4

Average PI as a function of ADTYPE, AMI, TPM, and BRI

		TPM			
		Cognitive		Affective	
		BRI		BRI	
		Low	High	Low	High
Neutral-ad	Ami-low	-1.78	-0.76	-0.65	-0.77
	Ami-high	-1.14	-1.38	-1.11	-1.26
Emotional-ad	Low-Ami	-0.56	-1.26	-1.41	-1.47
	High-Ami	-0.70	-0.08	-1.12	-0.71

Table 8.4.5

Impact of AMI, ADTYPE, TPM, and BRI on choice

Variable	DF	Parameter estimate	Wald Chi-Square	Pr > Chi-Square
Intercept	1	-0.294	0.47	0.49
Familiarity	1	-0.163	1.11	0.29
ami	1	-0.039	0.11	0.74
adtype	1	0.278	5.53	0.02
bri	1	0.145	1.50	0.22
tpm	1	-0.047	0.16	0.69
ami*adtype	1	0.039	0.11	0.74
ami*tpm	1	-0.141	1.43	0.23
ami*bri	1	-0.040	0.11	0.74
adtype*tpm	1	0.199	2.83	0.09
adtype*bri	1	0.149	1.59	0.21
tpm*bri	1	0.053	0.20	0.66
ami*adtype*tpm	1	0.055	0.21	0.64
ami*adtype*bri	1	0.141	1.41	0.23
ami*tpm*bri	1	-0.108	0.84	0.36
adtype*tpm*bri	1	-0.037	0.10	0.76
ami*adtype*tpm*bri	1	0.082	0.45	0.49

Table 8.4.6

Percentage of subjects who selected the TAF-1000 as a function of ADTYPE, AMI, TPM, and BRI

		TPM			
		Cognitive		Affective	
		BRI		BRI	
		Low	High	Low	High
Neutral-ad	Ami-low	50	68	52	71
	Ami-high	50	61	64	70
Emotional-ad	Low-Ami	86	77	67	64
	High-Ami	64	81	73	68

Again, the predicted three-way interaction was not significant ($\chi^2 < 1$). Nevertheless, the main effect of ADTYPE was significant ($\chi^2 = 5.53$, $p < 0.02$). Subjects exposed to the emotional ad were more likely to choose the advertised brand than those exposed to the neutral ad (choice probability = 0.72 and 0.61, respectively). A possible explanation for this unexpected effect will be discussed in Chapter 9.

In conclusion, the results on AB, PI, and choice do not support H8. However, other effects turned out to be significant. The implications of these unexpected effects are taken up in detail in the next chapter.

8.5 Hypothesis about the mediating role of AAD

The last hypothesis formulated in this research (H9) posits that after having controlled for the effects of AAD, brand cognitions, and ad cognitions, a significant effect of emotions on AB will be observed under the following experimental condition: high-AMI, high-BRI, and affective-TPM.

The general approach used to test this hypothesis consisted in evaluating, for this specific experimental condition, if emotions accounted for a significant portion of the residual variance of AB after the effect of AAD had been partialled out.[40] More precisely, three conditions had to be met to confirm this

40- The effects of brand cognitions and ad cognitions were not partialled out in order to keep the number of degree of freedom as high as possible.

hypothesis: (1) the independent variable (emotions) had to account for a significant portion of the variance of the mediator variable (AAD), (2) the independent variable had to account for a significant portion of the dependent variable (AB), and (3) when the effect of the mediator variable on the dependent variable was partialled out, the relationship between the independent and the dependent variable should continue to be significant, although it could be attenuated (see Baron and Kenny 1986).

In order to verify whether these conditions were met, we first adopted operational measures for the variables involved in this analysis (i.e., AB, AAD, and emotions). Next, the three conditions were tested sequentially.

For the purpose of this analysis, operational measures of AB and AAD were the same as those previously used. In the case of emotions, two different operationalisations were considered. The first operationalisation consisted in using POSIAF (the number of positive affective responses minus the number of negative affective responses) as a surrogate for emotions. As a second operational measure for emotions, we used subjects' scores in the two emotional dimensions: warm and upbeat.

In order to verify if the first condition was met, three regression models were computed using AAD as the dependent variable and measures of emotions as independent variable. Because the number of degrees of freedom was

relatively low, separate regression models were conducted for each measure of emotions. The results of the three regressions are reported in Table 8.5.1.

As can be seen in the Table, the first condition was met. All the relationships between emotions and AAD were significant.

A similar procedure was used to verify if the second condition was met. This time, AB was used as the dependent variable in the regression models. The results of the three regressions are reported in Table 8.5.2.

As reported in the Table, all three regressions were significant. Therefore, the second condition was met.

To examine the third condition, a series of regressions were estimated using the GLM procedure of SAS. For the purpose of this analysis, AB was used as the dependent variable, and AAD and the measure of emotions as the dependent variables. The type III sums-of-squares computed by this procedure was used to verify if the effect of emotions continues to be significant, given that the effect of AAD has been partialled out. The results of the regressions are reported in Table 8.5.3.

As can be observed, in all three cases, when the effect of AAD is partialled

Table 8.5.1

Coefficients of regression (p value) of the three measure of emotions on AAD

Dependent variable	Independent variables		
	POSIAF[1]	D1[2]	D2[3]
AAD =	0.64 (0.01)		
AAD =		1.05 (0.01)	
AAD =			1.20 (0.01)

1- POSIAF= number of positive affective respones minus number of negative affective responses.
2- D1= warm dimension.
3- D2= upbeat dimension.

Table 8.5.2

Coefficients of regression (p value) of the three measure of emotions on AB

Dependent variable	Independent variables		
	POSIAF[1]	D1[2]	D2[3]
AB =	0.21 (0.05)		
AB =		0.52 (0.01)	
AB =			0.49 (0.01)

1- POSIAF= number of positive affective respones minus number of negative affective responses.
2- D1= warm dimension.
3- D2= upbeat dimension.

Table 8.5.3

Coefficients of regression (p value) of AAD and the three measure of emotions on AB

Dependent variable	Independent variables			
	AAD	POSIAF[1]	D1[2]	D2[3]
AB =	0.31 (0.01)	0.01 (0.91)		
AB =	0.20 (0.05)		0.30 (0.08)	
AB =	0.19 (0.14)			0.26 (0.18)

1- POSIAF= number of positive affective respones minus number of negative affective responses.
2- D1= warm dimension.
3- D2= upbeat dimension.

out, the relationship between emotions and AB does not remain significant.[41] Therefore, these results do not support H9.

8.6 Demand artifacts

Three questions were used to assess demand artifacts. Given the type of research design used (i.e., 2x2x2x2 between subjects), it is not surprising that none of the subjects were aware of the research hypotheses. However, some subjects might have been vaguely aware of the purpose of the research. For instance, 28 subjects mentioned that the purpose of the research was to assess the impact of emotions on judgment or choice.

Consistent with the recommendation of Shimp (1992), all hypotheses were tested without these subjects. The results were the same for all hypothesis, except for H8. A significant interaction between ADTYPE and TPM was observed when PI was the dependent variable. Given that this was the only effect that differed in the two groups, and that the 28 subjects were equally distributed across experimental conditions, it was concluded that demand

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41- Similar results were obtained when ADTYPE and subjects' score on the ten 7-point scales assessing emotional reactions (moved, happy, sentimental, pleased, caring, amused, active, entertained, indifferent, and impatient) were used as operational measures of emotions.

artifacts did not constitute a problem in this research. Therefore, all subjects were included in the analysis.

CHAPTER 9

DISCUSSION

As mentioned in the introduction, most of the research on advertising has focused on the impact of advertising occurring during ad exposure, or immediately after. By doing so, researchers are assuming that the impact of advertising observed during ad exposure (or immediately after) will also be observed later, at the time of brand choice. However, as noted by many researchers, this might not be the case. First, the information individuals recall immediately after exposure is not the same as that recalled later on (Alba et al. 1992; Chattopadhyay and Nedungadi 1992). Second, the relevance or importance of the recalled information for making a judgment may also vary at different points in time (Baker and Lutz 1988).

The aim of this research was therefore to examine the extent to which ADTYPE, AMI, TPM, and BRI determine whether cognitive or affective, and whether abstract or specific information will be encoded during ad exposure, or used for making a judgment/choice.

Based on past research, it was proposed that ADTYPE and AMI are major determinants of the type of information encoded during ad exposure. More specifically, it was argued that ADTYPE would determine the nature (i.e.,

cognitive versus affective) of the information that is encoded during ad exposure, whereas AMI would determine its level of abstraction. It was also suggested that TPM and BRI are major determinants of the type of information that would be used when making a judgment/choice. In particular, it was argued that the TPM would determine whether cognitive or affective information is used for making a judgment/choice, and BRI would determine whether abstract of specific information will be used.

In order to test this framework, an experiment was designed to examine the impact of ADTYPE, AMI, TPM, and BRI on the type of information that is encoded during ad exposure and used when making a judgment/choice. However, a complete testing of the framework was not possible, because the manipulation of ADTYPE was limited to the affective dimension (see Chapter 7).

The implications of the results presented in Chapter 8 are discussed in the present chapter. The discussion is divided into four sections. The first section examines the type of information encoded during ad exposure. In the second section, the type of information used for making a judgment/choice is discussed. In the third section, limitations of the study are identified. In the last section, the managerial implications are presented.

9.1. The type of information encoded during ad exposure

An important objective of this research was to examine the effect of ADTYPE and AMI on the (1) nature, (2) valence, and (3) level of abstraction of the information encoded upon exposure to ads. In order to test the propositions put forward in the framework, cognitive and affective responses reported by the subjects were partitioned according to their level of abstraction. Based on a literature review from marketing, consumer behavior, and psychology, four levels of abstractions were identified for cognitive information (i.e., recall, single-fact interpretation, abstraction, and evaluation), and three for affective information (i.e., general affective reaction, basic affective reaction, and specific affective reaction).

Three sets of analysis were conducted. The first set of analysis examined the impact of AMI and ADTYPE on the nature of the encoded information. For the purpose of this analysis, an index of the percentage of affective responses was computed for each subject. A comparison of the percentage of affective responses encoded across the four experimental conditions supports the predictions derived from the framework. Thus, ADTYPE had a significant effect on the nature of the encoded information, but not AMI. In line with the model predictions, subjects exposed to the emotional version reported a greater proportion of affective responses than those exposed to the neutral version. This result suggests that the characteristics of the stimuli are likely to determine

whether affective or cognitive information will be encoded during ad exposure, but not the level of involvement.

This finding is inconsistent with advertising models which have generally assumed that as involvement increases, subjects are more likely to focus on cognitive information (Baker and Lutz 1991; Chaiken 1980; Greenwald and Leavitt 1984; Petty and Cacioppo 1981). For instance, under a high level of involvement subjects are expected to engage in central/systematic processing (Chaiken 1980; Petty and Cacioppo 1981). When such processing occurs, attitude is the result of a detailed analysis of the message content. In contrast, when the level of involvement is low, subjects' attitude is the result of a limited processing of the message content. Affective processing such as classical conditioning is generally assumed to operate under low levels of involvement. Therefore, in line with these theories, one would expect to observe a main effect of AMI on the proportion of affective information encoded during ad exposure; which was not the case here.

It should be noted that the levels of AMI observed in this research were relatively high: means=5.1 and 6.3 on a 7 point scale for low and high AMI, respectively. Although such levels are not uncommon in laboratory settings, because the ad becomes the focus of attention (Lutz 1985; Celsi and Olson 1988), some of the authors who suggested that affective information was more likely to be processed under a low level of AMI had referred to very low levels

of involvement (e.g., Baker and Lutz 1991; Greenwald and Leavitt 1984). It is possible that the absence of an effect of AMI on the nature of information encoded during ad exposure is limited by the range of the levels of AMI manipulated in this research. Results were obtained with high levels of AMI.

The second set of analyses examined the valence of affective reactions, ad cognitions, and brand cognitions encoded during ad exposure. For the purpose of this analysis, indices of the percentage of positive affective responses, the percentage of positive ad cognitive responses, and the percentage of positive brand cognitive responses were computed for each subject.

According to the results, subjects exposed to the emotional version reported a greater percentage of positive affective responses, but did not report a greater percentage of positive ad cognitive responses and positive brand cognitive responses. In addition, for the three indices, the main effect of AMI and the interaction between AMI and ADTYPE were not significant. These results are consistent with the hypotheses, except for ad cognitive responses (although they were in the expected direction).

It should be noted that the absence of effect of ADTYPE and AMI on the proportion of positive brand cognition is in conflict with what was observed by Edell and Burke (1987). They found that affective reactions elicited during ad exposure influenced the valence of brand cognitions encoded. This result also calls into question the generality of the dual mediation hypothesis proposed in

the AAD literature (Brown and Stayman 1992; Homer 1990; MacKenzie et al. 1986). According to this hypothesis, AAD should have an indirect effect on AB through its impact on brand cognitions.

As mentioned in Chapter 5, a possible explanation for this result is that the structure of the ads used in this research was such that affective reactions were elicited after most of the brand information had been presented. Consequently, affective reactions did not have the opportunity to influence the valence of brand cognitions before they were encoded. It will be useful to examine the impact of the structure of the ad (i.e., whether emotions are elicited in the beginning or at the end of the ad) on the relationship between emotions and brand cognitions encoded during ad exposure.

In order to examine the impact of AMI and ADTYPE on the level of abstraction of the encoded information, separate analyses were conducted for cognitive and affective information.

The first analysis examined the level of abstraction of cognitive information encoded during ad exposure. For each subject, an index of the percentage of specific cognitive information was computed. A comparison across the four experimental conditions supports the predictions derived from the framework. Thus, as the level of AMI increases, cognitive information encoded during ad exposure becomes more specific. This finding is consistent with the view that abstract cognitive information is spontaneously encoded during the processing

of a stimulus (Kardes 1988; Uleman 1989; Winter and Uleman 1984), regardless of the level of involvement.

A second analysis was performed on affective responses. Here again, for each subject an index of the percentage of specific affective information was computed. Contrary to the case of cognitive information, a main effect of AMI was only expected to occur for those subjects exposed to the emotional ad, because those exposed to the neutral ad would not have the opportunity to experience strong affective reactions.

A comparison across the four experimental conditions did not support the predictions derived from the framework. Subjects under a high-AMI condition did not report a greater proportion of specific affective responses, when exposed to the emotional version of the ad.

A possible explanation for the effect of AMI on the level of abstraction of the information encoded during ad exposure not being the same for affective and cognitive information is that the encoding of specific affective information, in comparison to the encoding of specific cognitive information, may require less processing. Thus, because of the level of AMI used in this study, a ceiling effect may have been observed in the case of affective information.

In other words, because the levels of involvement were relatively high, most subjects may have experienced specific affective reactions, regardless of whether they were under the low or high AMI condition. An examination of the

percentage of specific cognitive and affective information encoded during ad exposure supports this interpretation. For instance, for subjects exposed to the low and high AMI condition, the percentages of specific cognitive information were 0.33 and 0.45 respectively. In the case of affective information, these percentages were much higher: 0.77 and 0.72, respectively.

Therefore, the absence of main effect of AMI on the percentage of specific affective responses encoded during ad exposure may simply suggest that it requires more effort to move the processing of cognitive information from the abstract level to the specific level, than to move the processing of affective information from the abstract to the specific level.

An alternative explanation is that the data collection procedure may not encourage subjects to report general affective reactions. Recall that subjects were told to report emotions and feelings they had experienced. It is possible that they did not consider general affective reactions as emotions or feelings. Consequently, they did not report these reactions.

9.2. The type of information used for making a judgment/choice

In order to examine the type of information individuals used for making judgment/choice, four different purchase situations were included in the experiment: low-BRI/cognitive-TPM, high-BRI/cognitive-TPM, low-BRI/affective-TPM, high-BRI/affective-TPM.

Based on the framework developed in this research, two hypotheses were formulated. The first hypothesis (H8) concerned the impact of ADTYPE in the four purchase situations. A three-way interaction involving ADTYPE, BRI, and TPM was predicted. In fact, an effect of ADTYPE was expected to occur under low BRI (regardless of TPM and AMI), and under high BRI if affective motives drove the purchase decision (regardless of AMI). The description of the rational underlying this hypothesis was presented in Chapter 5.

To test this hypothesis, three four-way ANCOVAs with AB, PI, and choice as the dependent variables, and ADTYPE, AMI, TPM, BRI, and all interactions as well as the covariate, familiarity with cameras, as independent variables, were conducted. Contrary to our expectations, for the three dependent variables, the three-way interaction involving ADTYPE, BRI, and TPM was not significant. Instead, two unexpected effects turned out to be significant: an interaction involving AMI, TPM, and BRI on AB, and a main effect of ADTYPE on choice.

The second hypothesis (H9) concerned the mediating role of AAD. It was predicted that AAD would not mediate all the effects of emotions on AB in the following experimental condition: high-AMI/high-BRI/affective-TPM.

This hypothesis was tested through a series of regressions analyses. The objective of these analyses was to determine if the effects of emotions on AB

continued to be significant, after the effects of AAD were partialled out. The results did not support this hypothesis.

Thus, the effects postulated in hypotheses #8 and #9 were not observed in the present research, but other unexpected effects were. Next, we will provide explanations for the two unexpected results: the interaction between AMI*BRI*TPM on AB, and the main effect of ADTYPE on choice. Then, a reason why the hypotheses #8 and #9 were not supported will be put forward.

9.2.1 The interaction between AMI*BRI*TPM on AB

According to this three-way interaction, regardless of the version of the ad to which they were exposed, subjects under the affective-TPM condition developed a more positive AB than those under the cognitive-TPM only when the levels of AMI and BRI were low.

A possible explanation for this result is that when AMI is low, BRI is low, and affective-TPM drives the purchase decision, subjects may have used affective reactions experienced during ad exposure as a basis for judgment, even if these affective reactions were irrelevant for a product such as a camera. In fact, in this situation, nothing encourages subjects to engage in deep processing (because AMI and BRI are low), or to focus on cognitive information (because affective motives drive the purchase decision), during ad exposure or judgment. Therefore, at the time of judgment, subjects may simply

recall having felt good during ad exposure, and used this feeling as a basis for judgment.

In contrast, in the other purchase situations (i.e., under high-AMI, high-BRI, or cognitive-TPM), cognitive information may have been used as a basis for judgment. For instance, when the level of AMI or BRI is high, subjects are expected to assess the relevance of affective information before using it as a basis for judgment making (Cacioppo and Petty 1989). It is possible that the emotions elicited by the two ads used in this research were not perceived as relevant for a product such as a camera, therefore affective information was disregarded during judgment. Similarly, when cognitive motives drive the purchase decision, affective information is also expected to be disregarded during judgment.

This interpretation of the three-way interaction rests on two assumptions: (1) that emotions elicited by the two ads were irrelevant for a product such as a camera, and (2) that the percentage of positive affective reactions was larger than the percentage of positive ad cognitive responses and positive brand cognitive responses, for both ads.

In order to verify the first assumption, we conducted a post-test on 18 subjects. After having shown them the emotional version of the ad, they were told to indicate whether the emotions elicited by the ad were not at all, little, moderately, or highly likely to be experienced during the usage of a camera.

An examination of subjects' responses confirmed our first assumption, as all 18 subjects indicated they were little or not at all likely to experience these emotions during the usage of a camera.

In order to verify the second assumption, we examined the percentage of positive affective and cognitive information encoded during ad exposure. As expected, for subjects exposed to the neutral and emotional version respectively, the percentage of positive affective responses (%=56 and 70) was much higher than the percentage of positive ad cognitive responses (%=32 and 36) and the percentage of positive brand cognitive responses (%=26 and 34). Consequently, when affective responses are used as a basis for judgment, a more positive AB is formed.

It should be noted that a possible reason for the absence of an effect for ADTYPE on AB under the low-AMI/low-BRI/affective-TPM condition, despite the fact that affective information was used for making a judgment, is that the superiority of the emotional version may have been attenuated as subjects combined affective reactions with brand and ad cognitions to make their judgment. Such phenomenon did not occur in the case of AAD, probably because affective reactions were the major determinant of AAD.

If we assume this interpretation is valid, the results reported in this study limit the generality of the propositions put forward in the proposed framework and those of Cacioppo and Petty (1989). According to the proposed framework,

irrelevant affective information should be used as a basis for judgment when BRI is low, and according to Cacioppo and Petty (1989) irrelevant affective information should be used when AMI is low. It appears that a state of low involvement (BRI or AMI) does not guarantee the use of irrelevant affective information in judgment. One also has to consider the TPM driving the purchase decision. Irrelevant affective information is not likely to be used as a basis for judgment when cognitive motives drive the purchase decision.

These results also have implications for the research on classical conditioning (Allen and Janiszewski 1989; Gorn 1982; Shimp et al. 1991). They suggest that classical conditioning is less likely to occur with products where cognitive motivations clearly dominate during the judgment making process. For example, based on the classification of products along the think/feel dimension proposed in the FCB grid (Ratchford 1987), it should be harder to observe classical conditioning for low involving/think products such as liquid bleach, insect repellant, than for low involving/feel products such as beer, soft drinks, and snacks. This proposition could be tested in future research.

An alternative explanation for the three-way interaction is that there is a mood effect confounded with the manipulation of TPM. Thus, if we consider that when AMI and BRI are low subjects used their mood as a basis for judgment (see section 3.3.1.4), the more positive AB developed under affective

versus cognitive-TPM could have been attributed to the fact that subjects under the affective-TPM condition experienced a more positive mood than subjects under the cognitive-TPM condition. Pretest #8 was explicitly designed to rule out this explanation. As reported in this pretest, subjects in the affective-TPM condition did not report a more positive mood than those in the cognitive-TPM condition.

9.2.2 The main effect of ADTYPE on choice

The main effect of ADTYPE on choice indicates that exposure to the emotional (versus neutral) version resulted in a greater likelihood of choosing the TAF-1000.

A possible reason why this effect occurred when choice was used as the dependent variable, but not when AB or PI were used as the dependent variables, is based on the context of the decision. In a choice context, in comparison to a judgment context, subjects can not adopt a neutral opinion, because they have to select among several alternatives. Given that very little brand information was provided in the two ads, the three cameras may have been perceived as being very similar in terms of their physical characteristics. Therefore, subjects also may have relied on affective information to select among alternatives. The superiority of the emotional ad may be attributed to the

fact that subjects exposed to this ad elicited a greater proportion of positive affective reactions (see results on H2).

To test this interpretation, a logistic regression was conducted with choice as the dependent variable and using, as independent variables, familiarity with the cameras as well as the following three indices: POSIBR (number of positive minus negative brand responses), POSIAD (number of positive minus negative ad responses), and POSIAF (number of positive minus negative affective responses). When the effects of familiarity, brand cognitions (POSIBR), and ad cognitions (POSIAD) were partialled out, the effect of affective responses (POSIAF) remained marginally significant ($p=0.07$). Thus, this result is consistent with the proposed interpretation.

This finding is consistent with prior studies showing that there are fundamental differences between judgment and choice (Alba et al. 1991; Bettman et al. 1991; Payne 1982). Therefore, because in a choice situation one is forced to choose among several alternatives even if they seem similar in terms of their physical characteristics, irrelevant affective information may be used to discriminate among alternatives.

In addition, if we consider that reporting a choice is a more involving task than reporting a judgment, the main effect of ADTYPE observed is also consistent with the results obtained by Alba et al. 1992. According to these authors, when the ability to engage in extensive processing is limited (e.g.,

when brand information is not accessible), noncentral information (e.g., irrelevant affective reactions) may become more influential, particularly when motivation is high (see also Schwarz 1991).

9.2.3 Hypothesis #8

According to H8, exposure to the emotional version of an ad (in comparison to exposure to the neutral version) should have resulted in a more positive AB, PI, as well as an increased likelihood of choosing the TAF-1000 brand, when (1) BRI was low, regardless of AMI and TPM, and when (2) BRI was high, if affective motives drove the purchase decision, regardless of AMI.

To better understand why H8 was not supported in this research, consider what may have occurred under high and low-BRI, separately.

According to the framework, when BRI is high, subjects will determine whether the information is relevant, before using it as a basis for making their judgment. As suggested by the post-test, affective reactions may have been perceived as irrelevant for a product such as a camera. Thus, even if the emotional ad elicited a greater proportion of positive affective reactions (see results about H2), these responses may have been disregarded at the time of judgment making. Therefore, ADTYPE had no effect on AB.

As mentioned previously, when BRI is low, affective reactions experienced during ad exposure may only have been used as a basis for making a judgment

under low-AMI/affective-TPM condition. Thus, the absence of a significant ADTYPE effect under low-AMI/cognitive-TPM, high-AMI/cognitive-TPM, and high-AMI/affective-TPM conditions can be explained by the fact that affective responses were disregarded, as they were perceived as being irrelevant for judgment. The absence of an effect of ADTYPE under low-AMI/affective-TPM condition can be attributed to the fact that even if affective information was used for making judgments about the TAF-1000, it was not the only information considered. Thus, the superiority of the emotional version over the neutral version (attributed to larger proportion of positive affective responses) may have been attenuated as subjects combined affective reactions with brand and ad cognitions to make their judgment.

9.2.4 Hypothesis #9

H9 postulated that after having controlled for the effects of AAD, brand cognitions, and ad cognitions, a significant effect of emotions should be observed on AB in the following condition: high-BRI/high-AMI/affective-TPM.

A possible reason for this hypothesis not being supported is that because affective reactions were perceived as irrelevant for a product such as a camera (see the results of the post-test), they may have been disregarded under high-BRI. Therefore, it is not surprising to observe little direct effect of emotions on

on AB (once the effects of AAD were partialled out) in that experimental condition.

In sum, five major findings can be drawn from this study. First, ADTYPE determines the nature of the information that will be encoded during ad exposure, but not AMI. Second, when the structure of the ad is such that emotions are elicited after brand information is provided, emotions have a limited impact on the valence of brand cognitions encoded during ad exposure. Third, the impact of AMI on the level of abstraction of the information encoded during ad exposure is different for cognitive and affective information. Fourth, when nothing encourages subjects to engage in deep processing or to focus on cognitive information, irrelevant affective information is likely to be used as a basis for making a judgment. Finally, emotions impact differently on judgment and choice.

9.3 The limitations of the study

Several limitations in the present study should be noted. First, because only male students were employed, caution should be exercised in generalizing these results to other populations. In particular, we observed in the early pretests that females appear to react differently than males to the two ads. In addition, because of the cultural environment, we suspect that it might be more difficult for a male (versus a female) to express his emotions.

Second, the advertisements were presented within an artificial context. This increased the attention to the ad beyond that expected to occur in a natural exposure situation. This limits the external validity of the effects observed, but not the internal validity of the design.

Third, the product used in this research was a camera. It is possible that the purchase of such a product is mostly driven by cognitive considerations, even if the usage of a camera can be associated to emotional events. The impact of irrelevant affective information may differ in the case of products where the purchase is mostly driven by affective considerations (e.g., perfume). We hope that future research will address this issue.

Fourth, after reporting the affective reactions and the thoughts they had during ad exposure, subjects were requested to evaluate each of them on an evaluative scale. In the experimental procedure, this task was performed at the end of the first questionnaire, and consequently before that subjects reported their evaluation of the TAF-1000. It is possible that because this task required a great amount of effort from the subjects, it attenuated the impact of ADTYPE and AMI manipulations. In a future study, it might be preferable that subjects evaluate their affective and cognitive responses at the end of the second questionnaire.

Fifth, the objective of the two step data collection procedure developed in this research was to induce subjects to report affective reactions experienced

during ad exposure. As mentioned in Chapter 6, the number of affective responses reported in previous studies was quite low (Batra 1984; Batra and Ray 1986). This objective was achieved. On average, subjects reported 2.7 affective reactions. However, it is possible that the procedure encourages subjects to report specific affective reactions to the detriment of abstract affective reactions. The procedure should be improved to favor the reporting of abstract affective reactions.

Finally, we cannot categorically rule out the possibility that confound effects occurred in our manipulations. For instance, ADTYPE had a significant effect on the level of AMI, and TPM had a significant effect on the level of BRI. However, it should be noted that the magnitude of these effects ($\omega^2=0.02$ in both cases) was very low. Therefore, we believe it is unlikely that confounding effects alone explain the findings observed in this research.

9.4 Managerial implications

Several managerial implications can be drawn from the results reported in this study. Three will be outlined.

The first managerial implication concerns the absence of effect of ADTYPE on the valence of brand cognitions encoded during ad exposure. This finding suggests that if managers want to use emotions to influence the valence of brand cognitions encoded during ad exposure, it may not be a good strategy to

present brand information in the beginning of the ad; that is before affective reactions have been elicited.

The second managerial implication refers to the three-way interaction between AMI, BRI, and TPM on AB. This result indicates that when BRI and AMI are low, and affective-TPM drives the purchase decision (e.g., TV ad for Coke), managers should ensure that their ads elicit positive affective reactions. In contrast, when BRI is high and affective TPM drives the purchase decision (e.g., perfume), managers should be very careful to select the appropriate emotions, and to portray them in an appropriate context. If there is no "fit" between the emotions and the product, either because they are not associated with the consumption of the product or because they are not portrayed in an appropriate context, emotions will have minimal impact on AB (see for example, MacInnis and Park 1991).

The third implication concerns the main effect of ADTYPE observed when choice was the dependent variable, but not when AB or PI were used. This result demonstrates that the decision context (i.e., judgment versus choice) is an important variable to consider when evaluating the impact of emotional ads. Thus, considering that in real purchase situations subjects have to select among a few alternatives (generally those in their evoked set), managers should give greater attention to the choice measure when assessing the impact of emotions (e.g., Baker and Lutz 1988; Chattopadhyay and Basu 1989).

APPENDICES

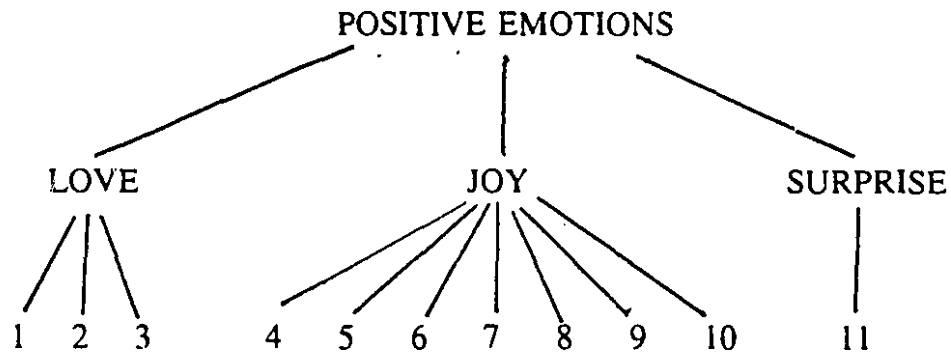
APPENDIX 2.1

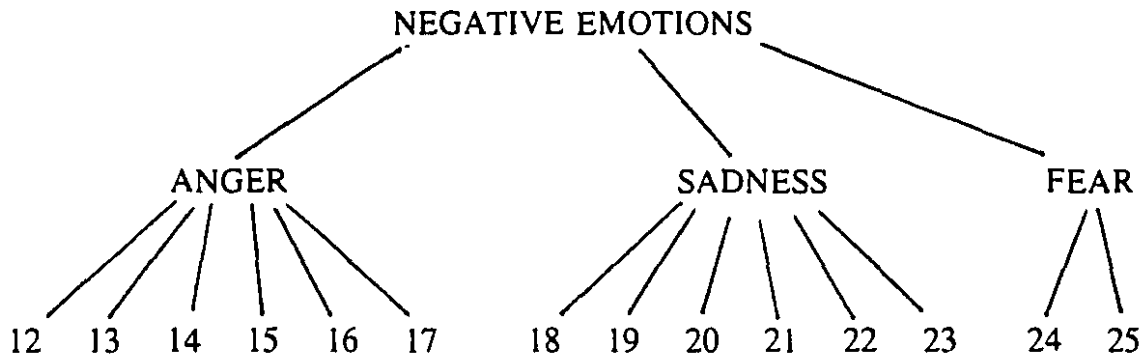
SHAVER ET AL.'S (1987) CLASSIFICATION

STORM AND STORM'S (1987) CLASSIFICATION

AAKER ET AL.'S (1988) CLASSIFICATION

SHAVER ET AL.'S (1987) CLASSIFICATION[1]





1- Numbers correspond to groups of emotions presented in page 279.

SHAVER ET AL.'S (1987) CLASSIFICATION (continued)

POSITIVE EMOTIONS:

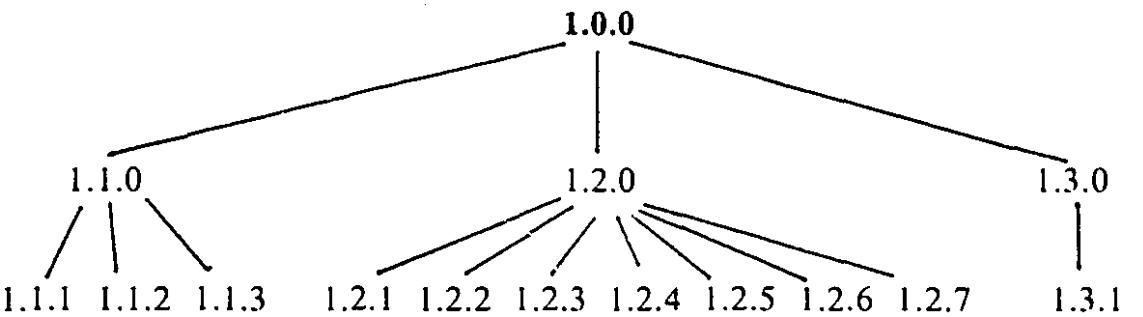
1- Adoration, affection, love, fondness, liking, attraction, caring, tenderness, compassion, sentimentality
2- Arousal, desire, lust, passion, infatuation
3- Longing
4- Amusement, joy, gaiety, glee, jolliness, joviality, cheerfulness, delight, enjoyment, gladness, happiness, jubilation, elation, satisfaction, ecstasy, euphoria, bliss
5- Enthusiasm, zest, excitement, thrill, exhilaration, zeal.
6- Contentment, pleasure
7- Pride, triumph
8- Eagerness, hope, optimism
9- Enthrallment, rapture
10- Relief

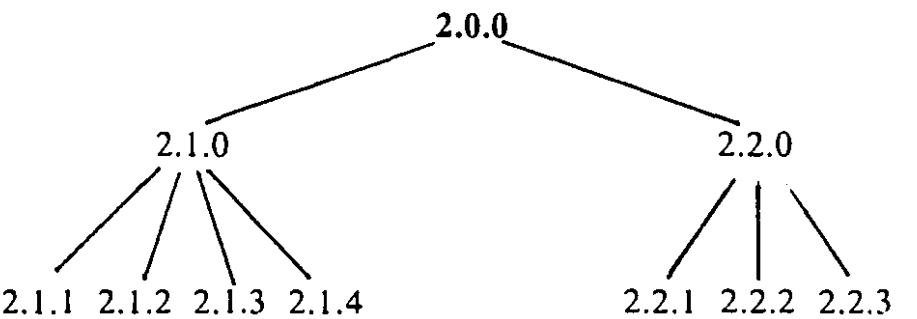
NEGATIVE EMOTIONS:

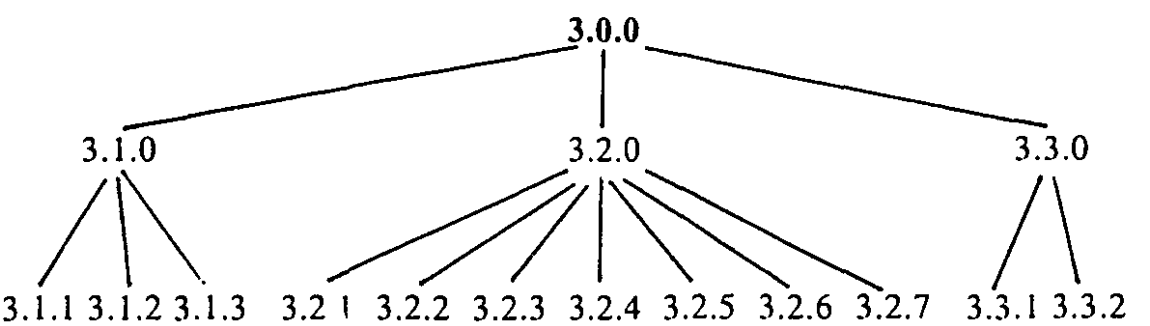
11- Amazement, surprise, astonishment
12- Aggravation, agitation, annoyance, grouchiness, irritation
13- Exasperation, frustration
14- Anger, rage, outrage, fury, wrath, hostility, ferocity, bitterness, hate, loathing, scorn, spite, vengefulness, dislike, resentment
15- Disgust, revulsion, contempt
16- Envy, jealousy
17- Torment
18- Agony, suffering, hurt, anguish
19- Depression, despair, gloom, glumness, grief, sadness, hopelessness, unhappiness, sorrow, woe, misery, melancholy
20- Dismay, disappointment, displeasure
21- Guild, shame, regret, remorse
22- Alienation, isolation, neglect, loneliness, rejection, homesickness, defeat, dejection, insecurity, embarrassment, humiliation, insult
23- Pity, sympathy
24- Alarm, shock, fear, fright, horror, terror, panic, hysteria, mortification.
25- Anxiety, nervousness, tenseness, uneasiness, apprehension, worry, distress, dread

STORM AND STORM'S (1987) CLASSIFICATION[1]

NEGATIVE EMOTIONS







1- Numbers correspond to groups of emotions presented in pages 281 and 282.

STORM AND STORM'S (1987) CLASSIFICATION (continued)

Group 1:

1.0.0 Bad, awful, dreadful, horrible, horrid, not good, rotten, terrible, frightful
1.1.0
1.1.1 Humiliated, inferior, intimidated, oppressed, put down
1.1.2 Shame, embarrassment, demoralized, foolish, mortified, ridiculous, sheepish, dumb, [silly], small, stupid, ugly
1.1.3 Shy, bashful, self-conscious, defensive
1.2.0 Sadness
1.2.1 Melancholy, blue, down, forlorn, gloomy, low, moping, unhappy, unsatisfied, woeful, cry
1.2.2 Disappointed, deflated, discouraged, disenchantment, dismay, let down, subdued
1.2.3 Wistful, lonely, longing, homesick, nostalgia, want, yearning
1.2.4 Guild, apologetic, regret, remorse, repentent, sorry
1.2.5 Hurt, betrayal, let down, misunderstood, neglected, rejected, reproachful, self-pity, unwanted, unwelcome, different, isolated
1.2.6 Sorrow, depressed, dejected, despair, despondent, drained, empty, hollow, hopeless, resigned, failure, useless
1.2.7 Grief, desolation, devastation, distraught, heartbroken, loss, mournful
1.3.0 Pain
1.3.1 Agony, anguish, distress, misery, suffering, tormented

Group 2

2.1.0 Anxiety
2.1.1 Worried, apprehension, bothered, discomfort, disturbed, perturbed, troubled, uncomfortable, uneasy, uptight
2.1.2 Nervous, butterflies, edgy, jumpy, tremulous
2.1.3 Tension, clenched, pent up, pressure, strain, suspense
2.1.4 Upset, agitation, consternation, emotional, flapped, frantic, hysterical, turmoil
2.2.0 Fear, afraid, frightened, scared
2.2.1 Dread, alarmed
2.2.2.Terror, panic, petrified
2.2.3 Shock, aghast, horror

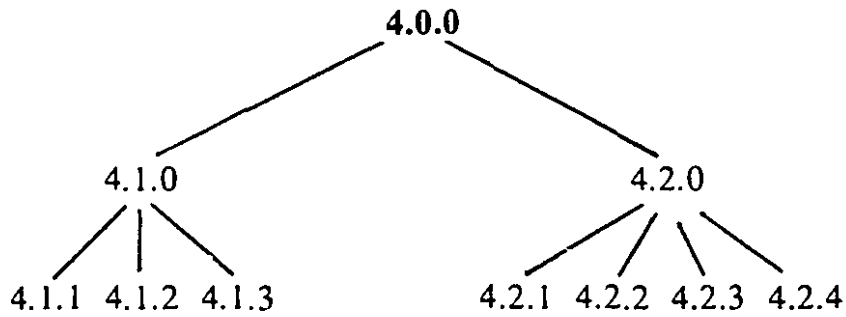
STORM AND STORM'S (1987) CLASSIFICATION (continued)

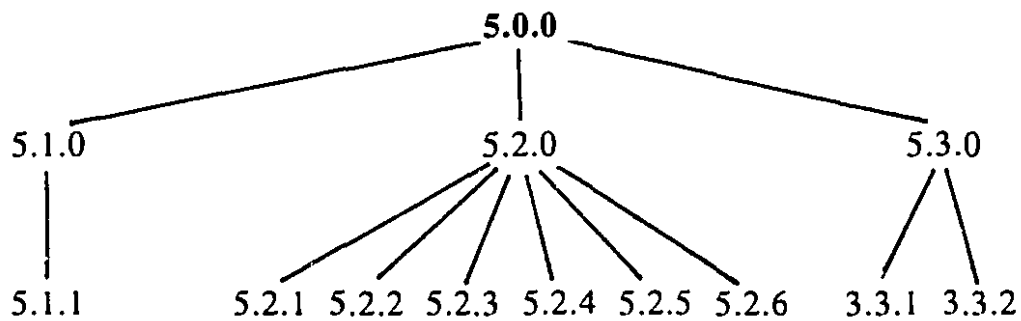
Group 3

3.1.0 Anger, mad, choler, fury, rage, wrath
3.1.1 Annoyed, aggravated, displeasure, fed up, frustrated, impatient, irritated, not pleased, pissed off, put out, sore, teed off, ticked off, frown, stern, unamused
3.1.2 Indignant, insulted, irate, offended, outrage
3.1.3 Cross, cranky, discontent, dissatisfied, grouchy, grumpy, moody, petulant, pique, sulky, bitch, pout
3.2.0 Hatred, abhor, animosity, detest, hostility
3.2.1 Revenge, vengeance, aggression, arguing, confrontation, disagreement, scolding, threatening
3.2.2 Defiant, rebellious, insolent, stubborn
3.2.3 Spite, evil, hateful, malice, cunning, harshness, mean, scheming, sly, sneaky, vicious
3.2.4 Envy, jealousy
3.2.5 Dislike, disapproval, unfriendly
3.2.6 Distrust, mistrust, suspicion, wary
3.2.7 Bitterness, resentment
3.3.0 Disgust
3.3.1 Contempt, despise, disdain, disrespect, loathing, scorn, reject sarcastic
3.3.2 Distaste, ill, repugnance, repulsion, revulsion, sick, sickened, squeamish, yuck

STORM AND STORM'S (1987) CLASSIFICATION (continued)[1]

POSITIVE EMOTIONS





1- Numbers correspond to groups of emotions presented in page 284.

STORM AND STORM'S (1987) CLASSIFICATION (continued)

Group 4

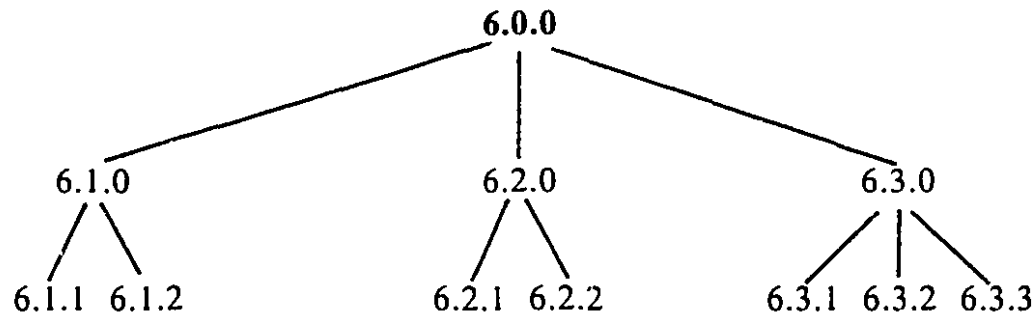
4.1.0 Love
4.1.1 Lust, desire, horny, passion, sensual, sexy, seductive
4.1.2 Attraction, ardent, infatuation, romantic, sentimental
4.1.3 Adoration, devotion, reverence, worship
4.2.0 Liking
4.2.1 Admiration, appreciation, gratitude, regard, respect, trust, impressed
4.2.2 Friendly, forgiving,[thoughtful], acceptance, agreement, considerate, encouraging, generous, giving, helpful, kind, sensitive, sincere, [understanding], warm
4.2.3 Affection, caring, comforting, concern, fondness, protective, tenderness
4.2.4 Pity, compassion, empathy, sorry for, sympathy

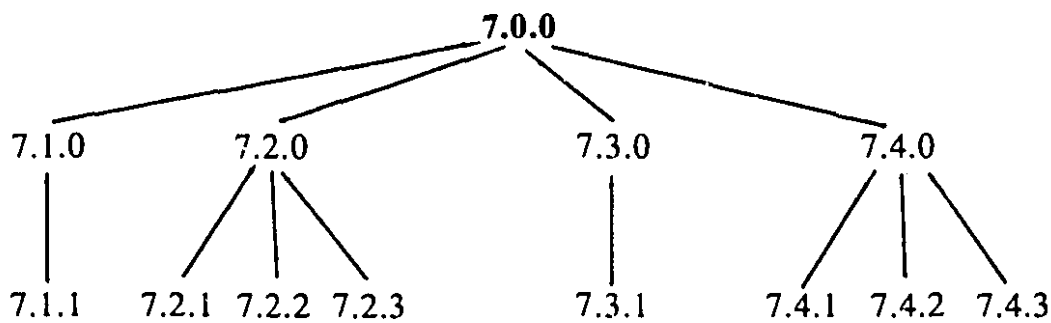
Group 5

5.0.0 Fine, excellent, fantastic, good, great, high, incredible, nice, perfect, pleasant, sensational, super, terrific, up, wonderful, beautiful, smile
5.1.1 Contentment, harmony, peaceful, relaxed, secure, serenity, tranquillity, comfortable, fulfillment
5.2.0 Happy
5.2.1 Glad, delighted, glee, gratified, pleased, reassured, release, relief, satisfaction, playful
5.2.2 Amusement, delight, enchanted, enjoy, entertained, erotic, pleasure, sensuous, tingly
5.2.3 Hope, anticipation, avid, eager, encouraged, [excited], expectant, sanguine
5.2.4 Gaiety, carefree, cheerful, devilish, enthusiasm, expansiveness, exuberant, [funny], giggly, having fun, lighthearted, merriment, mischievous, playful, humerous, laughing, [silly], teasing, witty
5.2.5 Rapture, bliss, carried away, ecstasy, exaltation, thrill, transported
5.2.6 Joy, elation, euphoric, exultation, jubilation, overjoyed, rejoice
5.3.0
5.3.1 Pride, [satisfaction], triumph, victorious, accomplished, brave, courageous, special, smug, complacent, superior, arrogant, conceited, condescending, domineering, egotistical, stuck up

STORM AND STORM'S (1987) CLASSIFICATION (continued)[1]

NEUTRAL EMOTIONS





1- Numbers correspond to groups of emotions presented in page 286.

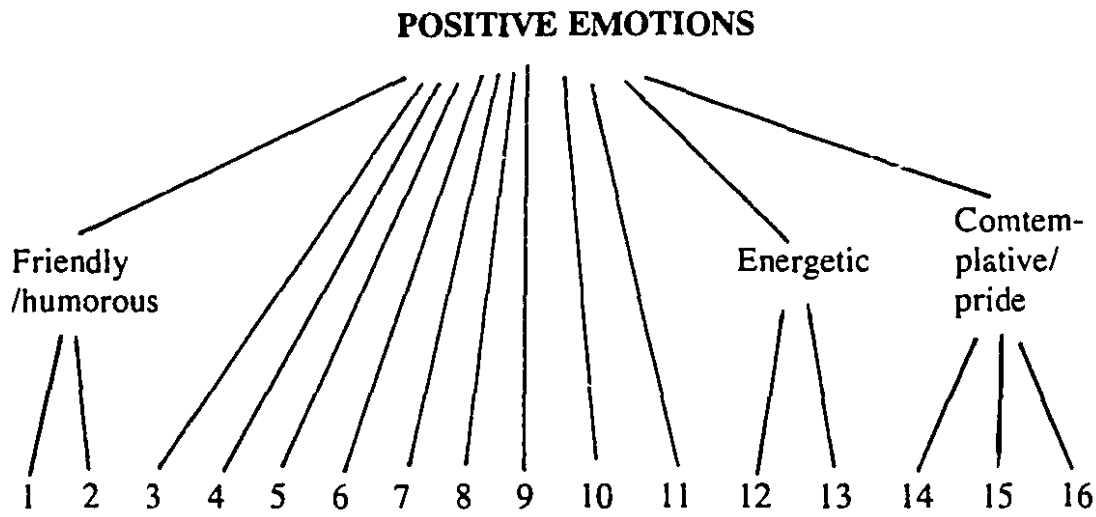
Group 6

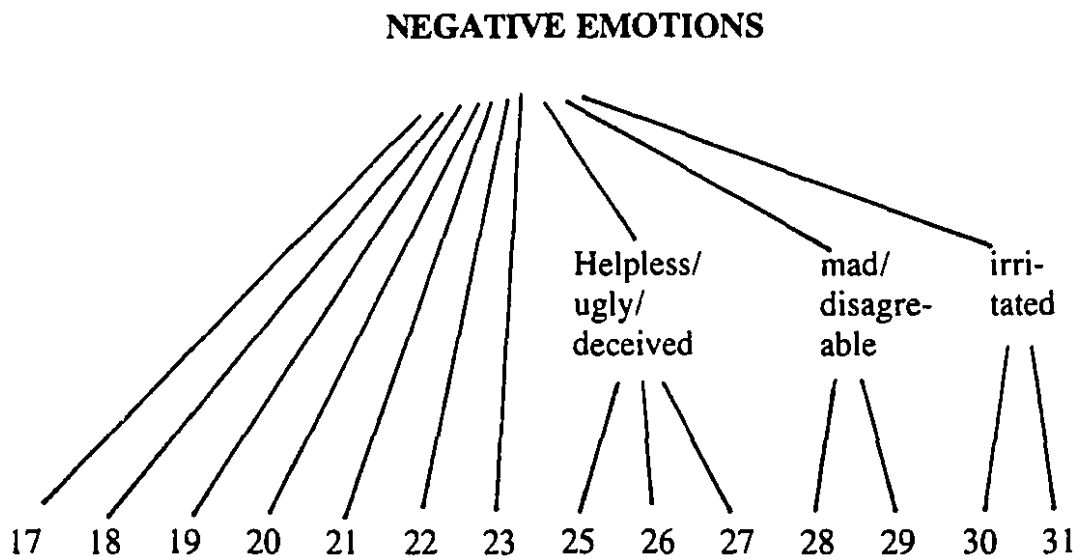
6.0.0 Passive
6.1.0 Sleepy, drowsy, exhausted, fatigued, heavy, punchy, tired
6.1.2 Listless, blah, languor, lassitude, lazy, slow
6.2.0
6.2.1 Apathy, detached, indifference, neutral, so-so, uncaring, unconcerned, alienated, cold
6.2.2 Boredom, ennui, uninterested
6.3.0
6.3.1 Calm, patient, placid
6.3.2 Dreamy, bemused, considering, contemplative, distracted, floating, pensive, preoccupied, reflective, [thoughtful], thinking
6.3.3 Strange, dizzy, faint, [funny], lightheaded, queer, spaced, stoned, weird

Group 7

7.0.0 Active
7.1.0
7.1.1 Arousal, electric, [excited], fired up, frenzied, hyper, restless, stimulated, stirred up, energetic, fast, itchy
7.2.0 Interest
7.2.1 Alert, attention, awake, conscious, aware, listening
7.2.2 Fascination, absorbed, caught up, concentration, engrossed, intent, involved, mesmerized, intense
7.2.3 Curious, inquisitive, intrigued, nosy, questioning, searching, wondering, inquiring
7.3.0 Surprise
7.3.1 Amazement, astonished, awe, dazed, dazzled, disbelief, disconcerted, dumbfounded, incredulity, skeptical, startled, stunned, unnerved, wonder
7.4.0
7.4.1 Confusion, baffled, bewilderment, helpless, mixed up, perplexed, puzzled, topsy-turvy
7.4.2 Uncertain, doubt, hesitant, indecision, misgivings, reluctant, undecided, unsure, ambiguity, cautious
7.4.3 Confidence, certain, decided, determination, inspiration, purposeful, realization, [understanding], assertive, assurance, challenged, cocky, empathic, firm, forceful, sassy, smart, strong

AAKER ET AL.'S (1988) CLASSIFICATION[1]





1- Numbers correspond to groups of emotions presented in page 288.

AAKER ET AL.'S (1988) CLASSIFICATION (continued)

1- Cheery, humorous, amused, gay, entertained, lighthearted
2- Friendly, pleasant, agreeable, sociable, good, trusting
3- Playful, childish, silly, mischievous, zany, youthful, spunky
4- Happy, wonderful, delighted, ecstasy, marvelous, exhilarated, elated, enchanted, great, pleased, dreamy
5- Interested, fascinated, attentive, impressed
6- Fearless, determinated, strong, confident, powerful, courageous
7- Tender, affectionate, compassion, love, warm, warmhearted, sentimental, intimate, emotional, romantic, sympathetic, empathetic
8- Relaxed, calm, serene, peaceful, soothed, relief, comfortable, easygoing, leisurely, contentment
9- Vigorous, active, tempted, challenged, expectant, attentive, determined, anticipation
10- Amazed, shocked, astonished
11- Set, calm, trusting, informed, persuaded, incorporated, contentment
12- Active, vigorous, impulsive, energetic, adventurous, spontaneous
13- Eager, inspired, excited, challenged, stimulated, enthusiastic
14- Wise, informed, mature, reflective, caution, contemplative, questioning
15- Pride, positive, admiration
16- Hope, set, tempted, expectant, accepted, persuaded, appetizing, incorporated, anticipation
17- Fear, afraid, frightened
18- Awful, bad, lousy, terrible, sick
19- Confused, puzzled, bewildered
20- Passive, apathy, so-so, unaffected, uninspired, indifferent, uninterested, lackadaisical.
21- Bored, blah, sluggish, dull washed-out, tiresomeness
22- Sad, gloomy, depressed, grief, sorrow, sombre, dreary, melancholy
23- Anxious, uptight, nervous, restless, tense, worried, impatient
24- Detest, hate, repulsion, disgusted,loathing, revolted, contempt, dislike, insulted
25- Helpless, timid, dissonant, inhibited, discouraged, disconnected
26- Ugly, stupid, unattractive, embarrassed
27- Pity, pain, deceived, distrust, guilt, empathetic
28- Anger, mad, furious, hostile, bitter
29- Jealous, sarcastic, intolerant, disagreeable
30- Annoyed, agitated, irritated, aggravated, antagonized
31- Moody, disturbed, distracted, emotional, frustrated

APPENDIX 6.1

QUESTIONNAIRES USED IN PRETEST #1 FOR SUBJECTS EXPOSED TO THE HALLMARK AD
(translation from French)

Instructions used for the collection of affective and cognitive responses, according to the one step and two step procedures.

In the space below, write down **all the feelings and emotions** that you felt during the presentation of the **HALLMARK** cards ad, without omitting those you had slightly felt. Moreover, write down also **all the thoughts** you had during the presentation of this ad, even those that might not appear important to you. You have three minutes to complete this task. If you finish this task before the time is up, please wait for further instructions. Report your feelings, emotions, and thoughts using one or two words or short phrases. WRITE ONLY ONE FEELING EMOTION, OR THOUGHT PER LINE.

Note: Write only one feeling, emotion, or thought per line.

R D

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DO NOT TURN THE PAGE! WAIT FOR THE INSTRUCTIONS

(note: these instructions were used in the one step procedure)

In the space below, write **all the thoughts** that you had during the presentation of the **HALLMARK** cards ad. Do not hesitate to write all your thoughts, even those that might not appear important to you. You have three minutes to complete this task. Some ads produce more thoughts than others. If you finished this task before the time is up, please wait for further instructions. Report your thoughts using one or two words or short phrases. WRITE ONLY ONE THOUGHT PER LINE.

Note: Write only one thought per line.

D

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DO NOT TURN THE PAGE! WAIT FOR THE INSTRUCTIONS

(note: these instructions were used in the two step procedure)

In the space below, write down **all the feelings and emotions** that you felt during the presentation of the **HALLMARK** cards ad, without omitting those you had slightly felt. However, only write the feelings and emotions **you had felt** and not those you believe the advertiser wanted to produce in the consumer. You have three minutes to complete this task. Some ads elicit more feelings and emotions than others. If you finish this task before the time is up, please wait for further instructions. Report your feelings and emotions using one or two words or short phrases. WRITE ONLY ONE FEELING OR EMOTION PER LINE.

Note: Write only one feeling or emotion per line.

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DO NOT TURN THE PAGE! WAIT FOR THE INSTRUCTIONS

(note: these instructions were used in the two step procedure)

APPENDIX 6.2

CHATTOPADHYAY AND ALBA'S (1988) SCHEME
(source: Chattopadhyay 1986)

SINGLE-CUE INTERPRETATIONS

1. Statements containing the meaning derived from a single attribute presented in the advertisement (e.g., the statement "accelerates from 0 to 60 in 7 seconds" may be interpreted as "rapid acceleration").
2. Statement containing evaluations of a single attribute (e.g., the feature steel belted tires may be interpreted as "good tires" or "long lasting tires").

ABSTRACT INTERPRETATIONS

1. Statements about the benefits derived from the product (e.g., "comfortable car").
2. Categorization statements. These are statements indicating the product type (e.g., "the car is a family car" or "the car is meant for older people").
3. Statements of consequences of using the product (e.g., "will be fun to drive the car").
4. Statements indicating similarity to other products along a particular dimension (e.g., "styled like BMW").
5. Excludes statements of overall evaluation.

OVERALL EVALUATIONS

1. Statements of overall evaluation of a product (e.g., "worth considering").
2. Excludes affective reactions to the product (e.g., "good car").
3. Excludes statements about subsets of features, i.e., abstractions.

INTRUSIONS

1. Statements about the presence of features not mentioned in the advertisement.

FREQUENCY STATEMENTS

1. Statements about the number of features (e.g., "has many features").

RECALL

1. Statements containing specific information presented in the advertisement.
2. Excludes those elements of recall that have been included in other categories because of further processing of the information.

OTHER EVALUATIVE THOUGHTS

1. Statements about the credibility of the brand (e.g., "never heard of this brand before").

2. Statements pointing out the lack of specific features or expressing uncertainty about the existence of a feature (e.g., "not sure if it had a power steering or didn't have power brakes").
3. Statement about the features in general without reference to any feature in particular, and excluding overall evaluations (e.g., "has good features").

CURIOSITY THOUGHTS

1. Statements expressing a desire for more information (e.g., "I'd like to know the details of the warranty").
2. Questions about what the features mean (e.g., "I wonder what electronic fuel injection means").

CREDIBILITY STATEMENTS

1. Statements questioning the validity of the claims (e.g., "I'm not sure if that statement is accurate").
2. Statements about the believability or truthfulness of advertising (e.g., "I dont believe that brand X is the most popular car in the US").
3. Statements about the honesty of the sponsor (e.g., "they"ll say anything to make a buck").

AD EXECUTION STATEMENTS

1. Statements about the quality of the execution (e.g., "the ad is not excitingly worded").
2. Statements about the realism of the advertisement.
3. Normative statements about ad execution (e.g., "should included information on price").

IRRELEVANT THOUGHTS

Statement that do not reflects any type of relevant evaluation of the advertised message or the advertisement itself (e.g., " I wish this were over" or "I'm getting tired").

APPENDIX 6.3

PROPOSED CODING SCHEME

PROPOSED CODING SCHEME

BRAND RECALL[1]

1. Statements containing specific information presented in the advertisement about the brand (e.g., the camera has a six month warranty).
2. Excludes those elements of recall that have been included in other categories because of further processing of the information.

BRAND SINGLE-CUE INTERPRETATIONS

1. Statements containing the meaning derived from a single attribute of the brand presented in the advertisement (e.g., when the statement "weight of 450 grams" is interpreted as a heavy camera).
2. Statements containing evaluations of a single attribute (e.g., when the statement "six months guarantee" is interpreted as a bad warranty).

BRAND ABSTRACTIONS

1. Statements about the benefits derived from the product (e.g., sophisticated brand).
2. Categorization statement. Statements indicating product type (e.g., camera for non-experts).
3. Statements of the consequence of using the product (e.g., It will be nice to use this camera).
4. Statements indicating the similarity with other products along a particular dimension (e.g., the same style as Pentax).
5. Exclude statements of overall evaluation.

BRAND EVALUATIONS

1. Statements of overall evaluation of the brand (e.g., it is a good brand).
2. Affective reactions toward the brand (e.g., I like this brand)[2].
3. Exclude statements about subsets of features (i.e., abstraction).

1- Brand cognition categories are adapted from Chattopadhyay (1986).

2- In Chattopadhyay and Alba classification, affective reactions are excluded from the brand evaluation category.

OTHER BRAND THOUGHTS

Statements that are related to the brand, but that cannot be classified in previous categories. For example:

1. Intrusion: statements about the presence of features not mentioned in the advertisement.
2. Frequency statement: statements about the number of features (e.g., has many features).
3. Curiosity: Statements expressing a desire for more information (e.g., what does the guarantee include?).
4. Credibility: Statements questioning the validity of the claim (e.g., they will say anything in order to sell).

AD RECALL

1. Statements about specific aspects of the ad (e.g., when the coach arrived, the kids were in the rest room).

AD SINGLE-CUE INTERPRETATIONS

1. Statements containing the meaning derived from a single aspect of the advertisement (e.g., when the coach's strong voice is interpreted as an authoritarian coach).
2. Statements containing evaluations of a single aspect of the advertisement (e.g., the kid was not a good actor, the music was good).

AD ABSTRACTIONS

1. Statements containing the meaning derived from major aspects of the ad (e.g., this ad is sentimental).
2. Categorization statements. Statements indicating ad type (e.g., this is an american type of ad).
3. Statements indicating the similarity to other ads along a particular dimension (e.g., the ambience of a christmas ad).
4. Evaluation of a major aspect of the ad (e.g., good scenario, unrealistic ad, the ad is too short)

AD EVALUATIONS

1. Evaluation of the overall ad (e.g., it is a good ad, stupid ad)
2. Affective reactions toward the ad (e.g., I like this ad)

OTHER AD THOUGHTS

Any statement that is related to the ad, but that cannot be classified in other categories. For example:

1. Intrusion: statements about the presence of elements not presented in the advertisement.
2. Curiosity: statements expressing some questioning about the ad (e.g., why not use a french version).
3. Expectation: statements expressing expectations during ad processing (e.g., I thought that the coach would cry).
4. Honesty: statements about the honesty of the sponsor (e.g., they should not have used emotions to sell a product).

GLOBAL AFFECTIVE RESPONSE

1. Affective responses representing very general feelings (e.g., good, bad, great, positive, see the top level of Storm and Storm (1987) hierarchy).

BASIC AFFECTIVE RESPONSE

1. Affective responses moderately differentiated (e.g., happiness, sadness, mad, see the intermediary-level of Storm and Storm (1987) hierarchy).

SPECIFIC AFFECTIVE RESPONSE

1. Affective reactions highly differentiated (e.g., pity, tenderness, attraction, melancholy, irritation, shock, see the bottom-level of Storm and Storm (1987) hierarchy).

OTHER AFFECTIVE RESPONSE

1. Any affective reactions that cannot be classified in the other three categories.

IRRELEVANT THOUGHTS

Statements that are not directly related to the brand or the advertisement (e.g., When will this finish, I have to pay my rent soon).

APPENDIX 6.4

QUESTIONNAIRE USED IN PRETEST #2
(translation from French)

Pages 1, 2, and 8

In the space below, write down **all the feelings and emotions** that you felt during the presentation of the **TAF-1000** camera ad, without omitting those you had slightly felt. Moreover, do not hesitate to use short phrases to express the feelings or emotions that were rather vague. Write only the feelings and emotions you felt, not those which you believe the advertiser wanted to provoke in the consumer. You have three minutes to complete this task. Some ads produce more feelings and emotions than others. If you finish this task before the time is up, please wait for the next instructions. Report your feelings and emotions using one or two words or short phrases. WRITE ONLY ONE FEELING OR EMOTION PER LINE.

Note: Write only one feeling or emotion per line.

During the presentation of the ad I felt:

D

_____ : _____

_____ : _____

_____ : _____

_____ : _____

_____ : _____

_____ : _____

_____ : _____

_____ : _____

_____ : _____

_____ : _____

DO NOT TURN THE PAGE! WAIT FOR THE INSTRUCTIONS

In the space below, write **all the thoughts** that you had during the presentation of the **TAF-1000** camera ad. Do not hesitate to write all your thoughts, even those which may seem less important. You have three minutes to complete this task. Some ads produce more thoughts than others. If you finish this task before the time is up, please wait for further instructions. Report your thoughts using one or two words or short phrases. WRITE ONLY ONE THOUGHT PER LINE.

Note: Write only one thought per line.

D

_____ : _____

_____ : _____

_____ : _____

_____ : _____

_____ : _____

_____ : _____

_____ : _____

_____ : _____

_____ : _____

_____ : _____

DO NOT TURN THE PAGE! WAIT FOR THE INSTRUCTIONS

Now, return to pages 1 and 2 (where you had to write the feelings and emotions you felt, and all the thoughts you had during the presentation of the TAF-1000 camera ad), and evaluate your answers using the scale below.

You should determine if the answers you wrote correspond to feelings (emotions) or thoughts that you would qualify as very positive, very negative or neutral. For each of your answers, use the scale below to make your judgment. Thus, a +4 indicates that you qualify the feeling (emotion) or the thought you wrote as being very positive, a -4 as being very negative, and a 0 as being neither positive nor negative.

VERY NEGATIVE	-4	-3	-2	-1	0	1	2	3	4	VERY POSITIVE

For each of your answers, indicate your evaluation by writing the number in the space reserved to that purpose under the column headed by the letter D (see pages 1 and 2).

ONCE THIS TASK IS COMPLETED, GO TO THE NEXT PAGE FOR FURTHER INFORMATION

APPENDIX 6.5

QUESTIONNAIRE USED IN PRETEST #5
(translation from French)

The studies have demonstrated that individuals tend to draw conclusions from simple product characteristics. For example, knowing that a car can pass from 0 to 60 Km/h in 7 seconds, a person could conclude that this car has a good acceleration speed or that it is powerful.

You will find bellow a list of characteristics corresponding to a camera. We would like to know which are the conclusions you are likely to make from each of these characteristics. It is possible that for some characteristics, you could make many conclusions. In such a case, write all of them in the space given. It is also possible that for some characteristics you could not make any conclusion. In such a case, go to the next characteristics.

Weight of 447 grams _____

Auto focus _____

Rechargeable battery _____

Built-in flash _____

4.5 cm. thick _____

3 month guarantee

Auto film advance

Back light correction

Auto film load

Continuous photograph

Auto film rewind

Made in France

Color viewfinder

Metal body cased with rubber _____
_____
_____

Shutter speed of 1/4th to 1/500th sec _____
_____
_____

Self-timer of 10 sec. _____
_____
_____

Please, answer all the general questions below.

1- Your sex? _____

2- Your age? _____

3- In general, are you familiar with cameras?

Very familiar _____

Somewhat familiar _____

Little familiar _____

Not at all familiar _____

APPENDIX 6.6

QUESTIONNAIRES USED IN PRETEST #6
(translation from French)

Dear students,

During the last few years, the public has formulated some criticism regarding the basic education of Quebec university students. Among other things, student are frequently charged with having limited knowledge about history, geography, and arts. In its quest for excellence, the *Université de Sherbrooke* has chosen to adopt the means that could at least, partially, remedy this deficiency.

Thus, the *Université de Sherbrooke* is currently studying the possibility of organizing a competition between faculties in order to increase the general knowledge of students. This competition, which would be broadcasted on the Sherbrooke community channel, would be similar to the program "*Génies en herbe.*"

However, before going forward with this project, it is indispensable for us to know your interest for this type of competition, considering you are the first concerned by this initiative. This is therefore the main objective of the present study.

In a few minutes, we will be presenting a short excerpt of the program "*Génies en herbe.*" Pay careful attention to this excerpt imagining that you, or one of your classmates, could participate in this type of competition. Next, you will have to fill in a questionnaire concerning this program.

Thank you for your participation, yours sincerely.

Claude Roy
Person in charge of the
Inter-faculty Research Group

(Note: these instructions were used for subjects in the low-AMI condition.)

Dear students,

During the last few years, the public has formulated some criticism regarding the basic education of Quebec university students. Among other things, student are frequently charged with having limited knowledge about history, geography, and arts. In its quest for excellence, the *Université de Sherbrooke* has chosen to adopt the means that could at least, partially, remedy this deficiency.

Thus, the *Université de Sherbrooke* is currently studying the possibility of organizing a competition between faculties in order to increase the general knowledge of students. This competition, which would be broadcasted on the Sherbrooke community channel, would be similar to the program "*Génies en herbe.*"

During a first series of studies, we determined the main rules of the competition. The purpose of this study is essentially to find out about your reactions to advertisements that could be aired during this type of program.

In a few minutes, we will be presenting a short excerpt of the program "*Génies en herbe*" followed by few advertisements. We would like you to pay a lot of attention to these ads. You will receive an amount of $5 if you correctly answer the questions regarding these ads.

Thank you for your participation, yours sincerely.

Claude Roy
Person in charge of the
Inter-faculty Research Group

(Note: these instructions were used for subjects in the high-AMI condition.)

INTER-FACULTY COMPETITION PROJECT

(UNIVERSITÉ de SHERBROOKE)

This questionnaire includes two sections. First, we want to know your interest for a project of the type "Génies en herbe" proposed by the *Université de Sherbrooke*. Second, we want to know the reactions produced by the advertisements that could be presented during these programs.

Please, answer the following questions about the program "Génies en herbe." Indicate to which extent you strongly agree, agree, disagree or strongly disagree with the following statements:

If the *Université de Shebrooke* organized this type of competition, I would like to participate.

1	2	3	4
strongly agree	agree	disagree	strongly disagree

If the *Université de Shebrooke* allowed me to take a credited course preparing me for this type of competition, I would like to participate.

1	2	3	4
strongly agree	agree	disagree	strongly disagree

In my opinion, the students from Université de Sherbrooke would be interested by this type of program if students from their own faculties participated in the competition.

1	2	3	4
strongly agree	agree	disagree	strongly disagree

In my opinion, the Shebrooke public would be interested by this type of program.

1	2	3	4
strongly agree	agree	disagree	strongly disagree

Please, answer the following questions by indicating your choice in the designated spaces.

In your opinion, how long should such a program last?

30 minutes ____
60 minutes ____

In your opinion, when should this program be broadcasted?

wednesday evenings ____
thursday evenings ____
friday evenings ____
saturday evenings ____

In your opinion, which of the following would be the best broadcasting time?

6 PM ____
7 PM ____
8 PM ____
10 PM ____

In your opinion, who should host this type of program?

A professor ____
A student ____
A professional ____

In your opinion, what prize should the winners receive?

A trip ____
School materials ____
Reduction of tuition feeds ___
Other (specify) _____

Please, answer the following questions which evaluate your attention to the **TAF-1000 camera ad** presented during the program "Génies en herbe".

Were you attentive to the TAF-1000 camera ad?

1	2	3	4	5	6	7	8	9
not at all attentive								highly attentive

Were you interested in listening to the TAF-1000 camera ad?

1	2	3	4	5	6	7	8	9
not at all interested								highly interested

Were you motivated to listen to the TAF-1000 camera ad?

1	2	3	4	5	6	7	8	9
not at all motivated								highly motivated

Please, evaluate the ad for the **TAF-1000** camera on each of the four scales presented below. Indicate your answer by circling a number between +4 and -4.

I LIKE THIS AD	+4	+3	+2	+1	0	-1	-2	-3	-4	I DISLIKE THIS AD
GOOD AD	+4	+3	+2	+1	0	-1	-2	-3	-4	BAD AD
PLEASANT AD	+4	+3	+2	+1	0	-1	-2	-3	-4	UNPLEASANT AD
INTERESTING AD	+4	+3	+2	+1	0	-1	-2	-3	-4	BORING AD

Below, you will find several feelings or emotions that you might have felt during the exposure to the ad for the **TAF-1000** camera. Please indicate to what extent you have not at all or very strongly felt each of them by circling a number between 1 and 7.

	Not at all						Very strongly
I felt amused	1	2	3	4	5	6	7
I felt moved	1	2	3	4	5	6	7
I felt dynamic	1	2	3	4	5	6	7
I felt happy	1	2	3	4	5	6	7
I felt touched	1	2	3	4	5	6	7
I felt energetic	1	2	3	4	5	6	7
I felt sentimental	1	2	3	4	5	6	7
I felt pleased	1	2	3	4	5	6	7
I felt active	1	2	3	4	5	6	7
I felt entertained	1	2	3	4	5	6	7
I felt caring	1	2	3	4	5	6	7
I felt irritated	1	2	3	4	5	6	7
I felt indifferent	1	2	3	4	5	6	7
I felt impatient	1	2	3	4	5	6	7

Please, answer the following questions concerning the ad for the **TAF-1000** camera. Indicate your answer for each statement by circling a number between 1 and 5.

The ad for the **TAF-1000** camera presents:

a lot of information about the TAF-1000 camera	1	2	3	4	very little information about the TAF-1000 camera

The ad for the **TAF-1000** camera is:

of a lesser quality than most ads presented on television	1	2	3	4	of a better quality than most ads presented on television

Please, answer the general questions below.

Your sex? _____

Your age? _____

Your faculty? _____

THANK YOU FOR YOUR COOPERATION

Dear members,

A few years ago, in cooperation with the *Université de Sherbrooke*, the Student Federation of the University decided to support different associations in the Eastern townships. This year, the Federation plans on donating twenty cameras.

The association to which the Federation is considering giving these cameras is the *Association des jeunes photographes amateurs de l'Estrie*. This association's goal is to initiate young people to photography. They learn techniques on how to take pictures of objects surrounding them such as buildings, houses, bridges, automobiles, still life, etc. Each year, the *Association des jeunes photographes amateurs de l'Estrie* organizes a competition between young photographers around a specific theme. For example, the last exhibit's theme was the public buildings of Sherbrooke.

Because these donations are done in your name, we would like to know your opinion about different kinds of cameras. Your answers to the following questions are very important to us, and this is why we are asking you to take all the time you need to complete the questionnaire. Moreover, if you answer carefully, $5 will be given to you.

Thank you for your cooperation.

Daniel Rouleau
President of the FEUS

(Note: these instructions were used for subjects in the high-BRI/cognitive-TPM condition.)

Dear members,

A few years ago, in cooperation with the *Université de Sherbrooke*, the Student Federation of the University decided to support different associations in the Eastern townships. This year, the Federation plans on donating twenty cameras.

The association to which the Federation is considering giving these cameras is *Enfant-Estrie* which every year organizes a summer camp for the under-privileged children of Sherbrooke. For many of these children, this represents their first experience in a summer camp. Their stay in the camp is an important moment in their life. Imagine! They could take pictures of activities to which they would participate such as archery, rifle shooting, camp-fires, evening plays, initiation rituals, nights under the stars, to name only a few. These are happy moments they would most likely enjoy sharing with their parents and friends.

Because these donations are done in your name, we would like to know your opinion about different kinds of cameras. Take a few minutes to answer this questionnaire. Your answers to the following questions will only be considered as being informative, and will constitute one opinion among many others.

Thank you for your cooperation.

Daniel Rouleau
President of the FEUS

(Note: these instructions were used for subjects in the low-BRI/affective-TPM condition.)

FEUS COMMUNITY PROJECT

QUESTIONNAIRE

If you had to offer a camera to a young member of the *Association des jeunes photographes amateurs de l'Estrie*, what would be your evaluation of the **TAF-1000** camera. Indicate your answer by circling a number between +4 and -4.

I AM FAVORABLE TO THIS BRAND	+4	+3	+2	+1	0	-1	-2	-3	-4	I AM UNFAVORABLE TO THIS BRAND
IT IS A GOOD BRAND	+4	+3	+2	+1	0	-1	-2	-3	-4	IT IS A BAD BRAND
I LIKE THIS BRAND	+4	+3	+2	+1	0	-1	-2	-3	-4	I DISLIKE THIS BRAND

If you had to offer a camera to a young member of the *Association des jeunes photographes amateurs de l'Estrie*, what is the probability of you buying the **TAF-1000** camera? Indicate your choice by circling a number between +4 and -4.

UNLIKELY	+4	+3	+2	+1	0	-1	-2	-3	-4	VERY LIKELY
IMPOSSI-BLE	+4	+3	+2	+1	0	-1	-2	-3	-4	POSSIBLE
IMPROBA-BLE	+4	+3	+2	+1	0	-1	-2	-3	-4	PROBABLE

Here are three relatively similar cameras. Judging from your knowledge of products labelled Zellers and Wise, which brand of those would you choose to offer a child who is a member of the *Association des jeunes photographes amateurs de l'Estrie*?

a) TAF-1000 by TAF

b) DL-900 by ZELLERS

c) R70 by WISE

Please, answer the following questions which evaluate the amount of effort you gave in answering the questions about **the TAF-1000 camera** on pages 1,2, and 3 of this questionnaire.

Have you spent a lot of effort responding to pages 1, 2, and 3 of this questionnaire?

1	2	3	4	5	6	7	8	9
Little effort								A lot of effort

Were you interested in responding to this questionnaire?

1	2	3	4	5	6	7	8	9
Not at all interested								Very interested

Were you motivated to respond to this questionnaire?

1	2	3	4	5	6	7	8	9
Not at all motivated								Very motivated

Please, answer the following questions concerning the choice of a camera you would offer a young person who is a member of the *Association des jeunes photographes amateurs de l'Estrie*. Indicate your answer by circling a number between 1 and 9.

If I had to choose a camera to give to a young person who is a member of the *Association des jeunes photographes amateurs de l'Estrie*, I would consider the technical characteristics of the camera.

1	2	3	4	5	6	7	8	9
Not at all								Very much

If I had to choose a camera to offer a young person who is a member of the *Association des jeunes photographes amateurs de l'Estrie*, my decision would be rational.

1	2	3	4	5	6	7	8	9
Not at all rational								Very rational

If I had to choose a camera to offer a young person who is a member of the *Association des jeunes photographes amateurs de l'Estrie*, the feeling I had for the brand would be one of the elements that I would considerate in my decision.

1	2	3	4	5	6	7	8	9
Not at all								Very much

If I had to choose a camera to offer a young person who is a member of the *Association des jeunes photographes amateurs de l'Estrie*, my decision would be emotional.

1	2	3	4	5	6	7	8	9
Not at all emotional								Very emotional

(Note: these instruction were used for subjects in the affective-TPM condition.)

Please, answer the following general questions.

In general, are you familiar with cameras?

Very familiar _____
Quite familiar _____
A little familiar _____
Not at all familiar _____

In your opinion, what were the objectives of this study?

_____

_____

_____

_____

_____

_____

THANK YOU FOR YOUR COOPERATION

APPENDIX 6.7

FRACTIONAL DESIGN USED IN PRETEST #6

FRACTIONAL DESIGN USED IN PRETEST #6

A	B	C	D
1	1	1	1
1	1	2	2
1	2	1	2
1	2	2	1
2	1	1	1
2	1	2	2
2	2	1	2
2	2	2	1

A = ADTYPE
B = AMI
C = BRI
D = TPM

The use of this fractional design would normally permit only the estimation of main effects. This is true when all the measures are collected after the manipulation of the four independent variables. In the present case, the measures of AMI, AAD, emotional reactions, and ad perceived informativeness were collected after the manipulations of AMI and ADTYPE, but before the manipulations of BRI and TPM. Therefore, for these dependent measures, it is possible to test for the main effect of AMI, the main effect of ADTYPE, and the interaction between AMI and ADTYPE. In the case of the manipulation check measures of BRI and TPM, only the main effects of AMI, ADTYPE, BRI, and TPM can be assessed.

APPENDIX 6.8

QUESTIONNAIRES USED IN PRETEST #7
(translation from French)

Dear members,

A few years ago, in cooperation with the *Université de Sherbrooke*, the Student Federation of the University decided to support different associations in the Eastern townships. This year, the Federation plans on donating twenty cameras.

The association to which the Federation is considering giving these cameras is the *Association des jeunes photographes amateurs de l'Estrie*. This association's goal is to initiate young people to photography. They learn techniques on how to take pictures of objects surrounding them such as buildings, houses, bridges, automobiles, still life, etc. Each year, the *Association des jeunes photographes amateurs de l'Estrie* organizes a competition between young photographers around a specific theme. For example, the last exhibit's theme was the public buildings of Sherbrooke.

Because these donations are done in your name, we would like to ask you a few questions concerning the way you choose a camera. Your answers to the following questions are very important to us, and this is why we are asking you to take all the time you need to complete the questionnaire.

Thank you for your cooperation.

Daniel Rouleau
President of the FEUS

(Note: these instructions were used for subjects in the cognitive-TPM condition.)

Dear members,

A few years ago, in cooperation with the *Université de Sherbrooke*, the Student Federation of the University decided to support different associations in the Eastern townships. This year, the Federation plans on donating twenty cameras.

The association to which the Federation is considering giving these cameras is *Enfant-Estrie* which every year organizes a summer camp for the under-privileged children of Sherbrooke. For many of these children, this represents their first experience in a summer camp. Their stay in the camp is an important moment in their life. Imagine! They could take pictures of activities to which they would participate such as archery, rifle shooting, camp-fires, evening plays, initiation rituals, nights under the stars, to name only a few. These are happy moments they would most likely enjoy sharing with their parents and friends.

Because these donations are done in your name, we would like to ask you a few questions concerning the way you choose a camera. Your answers to the following questions are very important to us, and this is why we are asking you to take all the time you need to complete the questionnaire.

Thank you for your cooperation.

Daniel Rouleau
President of the FEUS

(Note: these instructions were used for subjects in the affective-TPM condition.)

Please, answer the following questions concerning the choice of a camera you would offer to an association such as the *Association des jeunes photographes amateurs de l'Estrie*. Indicate your answer by circling a number between 1 and 9.

If I had to choose a camera to offer to the *Association des jeunes photographes amateurs de l'Estrie*, I would consider the technical characteristics of the camera.

1	2	3	4	5	6	7	8	9
Not at all								Very much

If I had to choose a camera to offer to the *Association des jeunes photographes amateurs de l'Estrie*, my decision would be rational.

1	2	3	4	5	6	7	8	9
Not at all rational								Very rational

If I had to offer a camera to the *Association des jeunes photographes amateurs de l'Estrie*, I would get from it:

1	2	3	4	5	6	7	8	9
Little personal pleasure								A lot of personal pleasure

The fact to offer a camera to the *Association des jeunes photographes amateurs de l'Estrie*, is a gesture associated with:

1	2	3	4	5	6	7	8	9
Little emotions								A lot of emotions

(Note: these instructions were used for subjects in the cognitive-TPM condition.)

Please, answer the following questions concerning the choice of a camera you would offer to a child who participate to the summer camp organized by *Enfant-Estrie*. Indicate your answer by circling a number between 1 and 9.

If I had to choose a camera to offer to a child who participate to the summer camp organized by *Enfant-Estrie*, I would consider the technical characteristics of the camera.

1	2	3	4	5	6	7	8	9
Not at all								Very much

If I had to choose a camera to offer to a child who participate to the summer camp organized by *Enfant-Estrie*, my decision would be rational.

1	2	3	4	5	6	7	8	9
Not at all rational								Very rational

If I had to offer a camera to a child who participate to the summer camp organized by *Enfant-Estrie*, I would get from it:

1	2	3	4	5	6	7	8	9
Little personal pleasure								A lot of personal pleasure

The fact to offer a camera to child who participate to the summer camp organized by *Enfant-Estrie*, is a gesture associated with:

1	2	3	4	5	6	7	8	9
Very few emotions								A lot of emotions

(Note: these instructions were used for subjects in the affective-TPM condition.)

APPENDIX 7.1

MEASURES OF AAD AND AB USED IN SEVERAL STUDIES

MEASURES OF AAD USED IN MAJOR STUDIES

	Good/Bad	Pleasant/ Unpleasant	Interesting/ Uninteresting	Like/ Dislike	Irritating/ Not Irritating	Favorable/ Unfavorable	Number of other Items	Cronbach Alpha
Mitchell and Olson 1981	X		X	X	X			.87
Gardner 1985	X		X	X	X			.82
Park and Young 1986				X				-
Mitchell 1986	X		X	X	X			.90
Holbrook and Batra 1987	X			X		X	1	.99
Machleit and Wilson 1988	X			X	X	X	4	.95
Hastack and Olson 1989	X	X		X			1	>.9
Laczniak and Carlston	X		X	X	X		5	.92
Mittal 1990	X		X	X				.85
Lutz et al. 1983			X			X		
Mackenzie et al. 1986			X			X		.85
Chattopadhyay and Basu		X	X	X	X			.91
Chattopadhyay- Nedungadi	X	X	X	X				.86
Homer 1990			X			X	1	.90
Aaker et al. 1986				X				-
Stayman and Aaker 1988				X				-
Aaker and Stayman 1989								-
Edell and Burke 1986						X		-
Edell and Burke 1987						X		-
Burke and Edell 1989						X		-
Batra and Ray 1986				X				
Mackenzie and Lutz 1989	X	X				X		.89

Source: Compiled by the author

MEASURE OF AB USED IN MAJOR STUDIES

	Good/Bad	Pleasant/ Unpleasant	High quality/ Poor quality	Like/ Dislike	Nice/ Not nice	Favorable/ Unfavorable	Number of other Items	Cronbach Alpha
Mitchell and Olson 1981	X	X	X	X				.88
Gardner 1985	X	X		X				.74
Park and Young 1986						X		-
Mitchell 1986	X	X		X				.90
Holbrook and Batra 1987	X			X		X	1	.98
Machleit and Wilson 1988				X			6	.94
Hastack and Olson 1989	X		X	X				>.9
Laczniak and Carlston							5	.94
Mittal 1990	X			X			1	.85
Lutz et al. 1983	X					X	1	
Mackenzie et al. 1986	X					X	1	.92
Chattopadhyay and Basu	X			X	X			.93
Chattopadhyay -Nedungadi	X			X	X			.87
Homer 1990	X			X		X		.88
Aaker et al. 1986								-
Stayman and Aaker 1988	X			X				.85
Aaker and Stayman 1989								-
Edell and Burke 1986	X							-
Edell and Burke 1987						X		-
Burke and Edell 1989						X		-
Batra and Ray 1986	X	X			X		2	.80
Mackenzie and Lutz 1989	X	X				X		.86

Source: Compiled by the author

APPENDIX 7.2

QUESTIONNAIRE THAT WILL BE USED IN THE FIRST PART OF MAIN STUDY
(translation from French)

Dear students,

During the last few years, the public has formulated some criticism regarding the basic education of Quebec university students. Among other things, student are frequently charged with having limited knowledge about history, geography, and arts. In its quest for excellence, the *Université de Sherbrooke* has chosen to adopt the means that could at least, partially, remedy this deficiency.

Thus, the *Université de Sherbrooke* is currently studying the possibility of organizing a competition between faculties in order to increase the general knowledge of students. This competition, which would be broadcasted on the Sherbrooke community channel, would be similar to the program "*Génies en herbe.*"

However, before going forward with this project, it is indispensable for us to know your interest for this type of competition, considering you are the first concerned by this initiative. This is therefore the main objective of the present study.

In a few minutes, we will be presenting a short excerpt of the program "*Génies en herbe.*" Pay careful attention to this excerpt imagining that you, or one of your classmates, could participate in this type of competition. Next, you will have to fill in a questionnaire concerning this program.

Thank you for your participation, yours sincerely.

Claude Roy
Person in charge of the
Inter-faculty Research Group

(Note: these instructions were used for subjects in the low-AMI condition.)

Dear students,

During the last few years, the public has formulated some criticism regarding the basic education of Quebec university students. Among other things, student are frequently charged with having limited knowledge about history, geography, and arts. In its quest for excellence, the *Université de Sherbrooke* has chosen to adopt the means that could at least, partially, remedy this deficiency.

Thus, the *Université de Sherbrooke* is currently studying the possibility of organizing a competition between faculties in order to increase the general knowledge of students. This competition, which would be broadcasted on the Sherbrooke community channel, would be similar to the program "*Génies en herbe.*"

During a first series of studies, we determined the main rules of the competition. The purpose of this study is essentially to find out about your reactions to advertisements that could be aired during this type of program.

In a few minutes, we will be presenting a short excerpt of the program "*Génies en herbe*" followed by few advertisements. We would like you to pay a lot of attention to these ads. You will receive an amount of $2 if you correctly answer the questions regarding these ads.

Thank you for your participation, yours sincerely.

Claude Roy
Person in charge of the
Inter-faculty Research Group

(Note: these instructions were used for subjects in the high-AMI condition.)

INTER-FACULTY COMPETITION PROJECT

(UNIVERSITÉ de SHERBROOKE)

This questionnaire includes two sections. First, we want to know your interest for a project of the type "Génies en herbe" proposed by the *Université de Sherbrooke*. Second, we want to know the reactions produced by the advertisements that could be presented during these programs.

Please, answer the following questions about the program "Génies en herbe." Indicate to which extent you strongly agree, agree, disagree, or strongly disagree with the following statements:

If the *Université de Shebrooke* organized this type of competition, I would like to participate.

1	2	3	4
strongly agree	agree	disagree	strongly disagree

If the *Université de Shebrooke* allowed me to take a credited course preparing me for this type of competition, I would like to participate.

1	2	3	4
strongly agree	agree	disagree	strongly disagree

In my opinion, the students from Université de Sherbrooke would be interested by this type of program if students from their own faculties participated in the competition.

1	2	3	4
strongly agree	agree	disagree	strongly disagree

In my opinion, the Shebrooke public would be interested by this type of program.

1	2	3	4
strongly agree	agree	disagree	strongly disagree

Please, answer the following questions by indicating your choice in the designated spaces.

In your opinion, how long should such a program last?

30 minutes _____
60 minutes _____

In your opinion, when should this program be broadcasted?

wednesday evenings _____
thursday evenings _____
friday evenings _____
saturday evenings _____

In your opinion, which of the following would be the best broadcasting time?

6 PM _____
7 PM _____
8 PM _____
10 PM _____

In your opinion, who should host this type of program?

A professor _____
A student _____
A professional _____

In your opinion, what prize should the winners receive?

A trip _____
School materials _____
Reduction of tuition feeds ____
Other (specify) _____

Please, answer the following questions which evaluate your attention to the **TAF-1000 camera ad** presented during the program "Génies en herbe".

Were you attentive to the TAF-1000 camera ad?

1	2	3	4	5	6	7	8	9
not at all attentive								highly attentive

Were you interested in listening to the TAF-1000 camera ad?

1	2	3	4	5	6	7	8	9
not at all interested								highly interested

Were you motivated to listen to the TAF-1000 camera ad?

1	2	3	4	5	6	7	8	9
not at all motivated								highly motivated

In the space below, write down **all the feelings and emotions** that you felt during the presentation of the **TAF-1000** camera ad, without omitting those you had slightly felt. Moreover, do not hesitate to use short phrases to express the feelings or emotions that were rather vague. Write only the feelings and emotions you felt, not those which you believe the advertiser wanted to provoke in the consumer. You have two and a half minutes to complete this task. Some ads produce more feelings and emotions than others. If you finish this task before the time is up, please wait for the next instructions. Report your feelings and emotions using one or two words or short phrases. WRITE ONLY ONE FEELING OR EMOTION PER LINE.

Note: Write only one feeling or emotion per line.

During the presentation of the ad I felt:

D

_____ : _____

_____ : _____

_____ : _____

_____ : _____

_____ : _____

_____ : _____

_____ : _____

_____ : _____

_____ : _____

_____ : _____

DO NOT TURN THE PAGE! WAIT FOR THE INSTRUCTIONS

In the space below, write **all the thoughts** that you had during the presentation of the **TAF-1000** camera ad. Do not hesitate to write all your thoughts, even those which may seem less important. You have two and a half minutes to complete this task. Some ads produce more thoughts than others. If you finish this task before the time is up, please wait further next instructions. Report your thoughts using one or two words or short phrases. WRITE ONLY ONE THOUGHT PER LINE.

Note: Write only one thought per line.

D

_____ : _____

_____ : _____

_____ : _____

_____ : _____

_____ : _____

_____ : _____

_____ : _____

_____ : _____

_____ : _____

_____ : _____

DO NOT TURN THE PAGE! WAIT FOR THE INSTRUCTIONS

Please, evaluate the ad for the **TAF-1000** camera on each of the four scales presented below. Indicate your answer by circling a number between +4 and -4.

I LIKE THIS AD	+4	+3	+2	+1	0	-1	-2	-3	-4	I DISLIKE THIS AD
GOOD AD	+4	+3	+2	+1	0	-1	-2	-3	-4	BAD AD
PLEASANT AD	+4	+3	+2	+1	0	-1	-2	-3	-4	UNPLEASANT AD
INTERESTING AD	+4	+3	+2	+1	0	-1	-2	-3	-4	BORING AD

Below, you will find several feelings or emotions that you might have felt during the exposure to the ad for the **TAF-1000** camera. Please indicate to what extent you have not at all or very strongly felt each of them by circling a number between 1 and 7.

	Not at all						Very strongly
I felt amused	1	2	3	4	5	6	7
I felt moved	1	2	3	4	5	6	7
I felt happy	1	2	3	4	5	6	7
I felt sentimental	1	2	3	4	5	6	7
I felt pleased	1	2	3	4	5	6	7
I felt active	1	2	3	4	5	6	7
I felt entertained	1	2	3	4	5	6	7
I felt caring	1	2	3	4	5	6	7
I felt indifferent	1	2	3	4	5	6	7
I felt impatient	1	2	3	4	5	6	7

Now, return to pages 4 and 5 (where you had to write the feelings and emotions you felt, and thoughts you had during the presentation of the TAF-1000 camera), and evaluate your answers using the scale below as a reference.

You should determine if the answers you wrote in pages 4 and 5 correspond to feelings (emotions) or thoughts that you would qualify as very positive, very negative, or neutral. For each of your answers use the scale below as reference to make your judgments. Thus, a +4 indicates that you qualify the feeling (emotion) or the thought you wrote as being very positive, a -4 as being very negative, and a 0 as being neither positive nor negative.

VERY NEGATIVE	-4	-3	-2	-1	0	1	2	3	4	VERY POSITIVE

For each of your answers, indicate your evaluation by writing the number in the space reserved to that purpose under the column headed by the letter D (see pages 4 and 5).

ONCE THIS TASK IS COMPLETED, GO TO THE NEXT PAGE FOR FURTHER INFORMATION

DO NOT TURN THE PAGE! WAIT FOR THE INSTRUCTIONS

Below, you will find five strings of letters. For each of them, create the longest word you can and write it in the space reserved for that purpose. You will have five minutes to complete the exercise. The person in charge will tell you when the time is up. If you should finish before, please wait for the next instructions.

V E U S T P A E _____

E Y B B E O L I _____

T O E A R D C U _____

I M X S H U A R _____

G O I C S J I E _____

DO NOT TURN THE PAGE! WAIT FOR THE INSTRUCTIONS.

Below, you will find two strings of numbers. For each one of them, find which operations (+, -, / , x) would permit you to obtain the result appearing in parentheses. Please note that all numbers have to be used, and that each number has to be used only once (see the example below). Write your calculations in the space reserved for that purpose. You have five minutes to complete this exercise. If you finish should before, please wait for the next instructions.

33 11 13 5 10 **(183)**

(13+5)x10 = 180
(33/11) = 3
(180+3) = 183

8 10 47 31 3 **(15)**

25 17 11 5 4 **(291)**

DO NOT TURN THE PAGE! WAIT FOR THE INSTRUCTIONS.

Please, answer the general questions below.

What is your sex? _____

What is your age? _____

What is your faculty? _____

THANK YOU FOR YOUR COOPERATION

APPENDIX 7.3

QUESTIONNAIRE THAT WILL BE USED IN THE SECOND PART OF MAIN STUDY
(translation from French)

Dear members,

A few years ago, in cooperation with the *Université de Sherbrooke*, the Student Federation of the University decided to support different associations in the Eastern townships. This year, the Federation plans on donating twenty cameras.

The association to which the Federation is considering giving these cameras is the *Association des jeunes photographes amateurs de l'Estrie*. This association's goal is to initiate young people to photography. They learn techniques on how to take pictures of objects surrounding them such as buildings, houses, bridges, automobiles, still life, etc. Each year, the *Association des jeunes photographes amateurs de l'Estrie* organizes a competition between young photographers around a specific theme. For example, the last exhibit's theme was the public buildings of Sherbrooke.

Because these donations are done in your name, we would like to know your opinion about different kinds of cameras. Your answers to the following questions are very important to us, and this is why we are asking you to take all the time you need to complete the questionnaire. Moreover, if you answer carefully, $2 will be given to you.

Thank you for your cooperation.

Daniel Rouleau
President of the FEUS

(Note: these instructions were used for subjects in the high-BRI and cognitive-TPM condition.)

Dear members,

A few years ago, in cooperation with the *Université de Sherbrooke*, the Student Federation of the University decided to support different associations in the Eastern townships. This year, the Federation plans on donating twenty cameras.

The association to which the Federation is considering giving these cameras is *Enfant-Estrie* which every year organizes a summer camp for the under-privileged children of Sherbrooke. For many of these children, this represents their first experience in a summer camp. Their stay in the camp is an important moment in their life. Imagine! They could take pictures of activities to which they would participate such as archery, rifle shooting, camp-fires, evening plays, initiation rituals, nights under the stars, to name only a few. These are happy moments they would most likely enjoy sharing with their parents and friends.

Because these donations are done in your name, we would like to know your opinion about different kinds of cameras. Take a few minutes to answer this questionnaire. Your answers to the following questions will only be considered as being informative, and will constitute one opinion among many others.

Thank you for your cooperation.

Daniel Rouleau
President of the FEUS

(Note: these instructions were used for subjects in the low-BRI and affective-TPM condition.)

Dear members,

A few years ago, in cooperation with the *Université de Sherbrooke*, the Student Federation of the University decided to support different associations in the Eastern townships. This year, the Federation plans on donating twenty cameras.

The association to which the Federation is considering giving these cameras is the *Association des jeunes photographes amateurs de l'Estrie*. This association's goal is to initiate young people to photography. They learn techniques on how to take pictures of objects surrounding them such as buildings, houses, bridges, automobiles, still life, etc. Each year, the *Association des jeunes photographes amateurs de l'Estrie* organizes a competition between young photographers around a specific theme. For example, the last exhibit's theme was the public buildings of Sherbrooke.

Because these donations are done in your name, we would like to know your opinion about different kinds of cameras. Take a few minutes to answer this questionnaire. Your answers to the following questions will only be considered as being informative, and will constitute one opinion among many others.

Thank you for your cooperation.

Daniel Rouleau
President of the FEUS

(Note: these instructions were used for subjects in the low-BRI and cognitive-TPM condition.)

Dear members,

A few years ago, in cooperation with the *Université de Sherbrooke*, the Student Federation of the University decided to support different associations in the Eastern townships. This year, the Federation plans on donating twenty cameras.

The association to which the Federation is considering giving these cameras is *Enfant-Estrie* which every year organizes a summer camp for the under-privileged children of Sherbrooke. For many of these children, this represents their first experience in a summer camp. Their stay in the camp is an important moment in their life. Imagine! They could take pictures of activities to which they would participate such as archery, rifle shooting, camp-fires, evening plays, initiation rituals, nights under the stars, to name only a few. These are happy moments they would most likely enjoy sharing with their parents and friends.

Because these donations are done in your name, we would like to know your opinion about different kinds of cameras. Your answers to the following questions are very important to us, and this is why <u>we are asking you to take all the time you need to complete the questionnaire</u>. Moreover, if you answer carefully, $2 will be given to you.

Thank you for your cooperation.

Daniel Rouleau
President of the FEUS

(Note: these instructions were used for subjects in the high-BRI and affective-TPM condition.)

FEUS COMMUNITY PROJECT

QUESTIONNAIRE

If you had to choose a camera to offer to the *Association des jeunes photographes amateurs de l'Estrie*, what would be your evaluation of the **TAF-1000** camera. Indicate your answer by circling a number between +4 and -4.

I AM FAVORABLE TO THIS BRAND	+4	+3	+2	+1	0	-1	-2	-3	-4	I AM UNFAVORABLE TO THIS BRAND
IT IS A GOOD BRAND	+4	+3	+2	+1	0	-1	-2	-3	-4	IT IS A BAD BRAND
I LIKE THIS BRAND	+4	+3	+2	+1	0	-1	-2	-3	-4	I DISLIKE THIS BRAND

(Note: these instructions were used for subjects in the cognitive-TPM condition.)

If you had to choose a camera to offer to a child who participate to the summer camp organized by *Enfant-Estrie*, what would be your evaluation of the **TAF-1000** camera. Indicate your answer by circling a number between +4 and -4.

I AM FAVORABLE TO THIS BRAND	+4	+3	+2	+1	0	-1	-2	-3	-4	I AM UNFAVORABLE TO THIS BRAND
IT IS A GOOD BRAND	+4	+3	+2	+1	0	-1	-2	-3	-4	IT IS A BAD BRAND
I LIKE THIS BRAND	+4	+3	+2	+1	0	-1	-2	-3	-4	I DISLIKE THIS BRAND

(Note: these instructions were used for subjects in the affective-TPM condition.)

If you had to choose a camera to offer to the *Association des jeunes photographes amateurs de l'Estrie*, what is the probability of you buying the **TAF-1000** camera? Indicate your choice by circling a number between +4 and -4.

UNLIKELY	+4	+3	+2	+1	0	-1	-2	-3	-4	VERY LIKELY
IMPOSSI-BLE	+4	+3	+2	+1	0	-1	-2	-3	-4	POSSIBLE
IMPROBA-BLE	+4	+3	+2	+1	0	-1	-2	-3	-4	PROBABLE

(Note: these instructions were used for subjects in the cognitive-TPM condition.)

If you had to choose a camera to offer to a child who participate to the summer camp organized by *Enfant-Estrie*, what is the probability of you buying the **TAF-1000** camera? Indicate your choice by circling a number between +4 and -4.

UNLIKELY	+4	+3	+2	+1	0	-1	-2	-3	-4	VERY LIKELY
IMPOSSI-BLE	+4	+3	+2	+1	0	-1	-2	-3	-4	POSSIBLE
IMPROBA-BLE	+4	+3	+2	+1	0	-1	-2	-3	-4	PROBABLE

(Note: these instructions were used for subjects in the affective-TPM condition.)

Here are three relatively similar cameras. Judging from your knowledge of products labelled Zellers and Wise, which brand of those would you choose to offer to the *Association des jeunes photographes amateurs de l'Estrie*?

a) TAF-1000 by TAF

b) DL-900 by ZELLERS

c) R70 by WISE

(Note: these instructions were used for subjects in the cognitive-TPM condition.)

Here are three relatively similar cameras. Judging from your knowledge of products labelled Zellers and Wise, which brand of those would you choose to offer to child who participate to the summer camp organized by *Enfant-Estrie*?

a) TAF-1000 by TAF

b) DL-900 by ZELLERS

c) R70 by WISE

(Note: these instructions were used for subjects in the affective-TPM condition.)

Please, answer the following questions which evaluate the amount of effort you gave in answering the questions about **the TAF-1000 camera** on pages 1,2, and 3 of this questionnaire.

Have you spent a lot of effort responding to pages 1, 2, and 3 of this questionnaire?

1	2	3	4	5	6	7	8	9
Little effort								A lot of effort

Were you interested in responding to this questionnaire?

1	2	3	4	5	6	7	8	9
Not at all interested								Very interested

Were you motivated to respond to this questionnaire?

1	2	3	4	5	6	7	8	9
Not at all motivated								Very motivated

Please, answer the following questions concerning the choice of a camera you would offer to an association such as the *Association des jeunes photographes amateurs de l'Estrie*. Indicate your answer by circling a number between 1 and 9.

If I had to choose a camera to offer to the *Association des jeunes photographes amateurs de l'Estrie*, I would consider the technical characteristics of the camera.

1	2	3	4	5	6	7	8	9
Not at all								Very much

If I had to choose a camera to offer to the *Association des jeunes photographes amateurs de l'Estrie*, my decision would be rational.

1	2	3	4	5	6	7	8	9
Not at all rational								Very rational

If I had to offer a camera to the *Association des jeunes photographes amateurs de l'Estrie*, I would get from it:

1	2	3	4	5	6	7	8	9
Little personal pleasure								A lot of personal pleasure

The fact to offer a camera to the *Association des jeunes photographes amateurs de l'Estrie*, is a gesture associated with:

1	2	3	4	5	6	7	8	9
Little emotions								A lot of emotions

(Note: these instructions were used for subjects in the cognitive-TPM condition.)

Please, answer the following questions concerning the choice of a camera you would offer to a child who participate to the summer camp organized by *Enfant-Estrie*. Indicate your answer by circling a number between 1 and 9.

If I had to choose a camera to offer to a child who participate to the summer camp organized by *Enfant-Estrie*, I would consider the technical characteristics of the camera.

1	2	3	4	5	6	7	8	9
Not at all								Very much

If I had to choose a camera to offer to a child who participate to the summer camp organized by *Enfant-Estrie*, my decision would be rational.

1	2	3	4	5	6	7	8	9
Not at all rational								Very rational

If I had to offer a camera to a child who participate to the summer camp organized by *Enfant-Estrie*, I would get from it:

1	2	3	4	5	6	7	8	9
Little personal pleasure								A lot of personal pleasure

The fact to offer a camera to child who participate to the summer camp organized by *Enfant-Estrie*, is a gesture associated with:

1	2	3	4	5	6	7	8	9
Very few emotions								A lot of emotions

(Note: these instructions were used for subjects in the affective-TPM condition.)

Please, answer the following general questions.

In general, are you familiar with cameras?

Very familiar _____
Quite familiar _____
A little familiar _____
Not at all familiar _____

In your opinion, what were the objectives of this study?

_____

_____

_____

_____

_____

_____

THANK YOU FOR YOUR COOPERATION

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