2014

The Effects of Mood and Message Characteristics on Information Processing Styles and Advertising Effectiveness

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The effects of mood and message characteristics on information processing styles and advertising effectiveness

by

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A Thesis submitted to the graduate faculty

in partial fulfillment of the requirements for the degree of

MASTER OF SCIENCE

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Iowa State University

Ames, Iowa

2014

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ACKNOWLEDGEMENT

I would like to express my special appreciation and thanks to my major professor, Dr. Eric Abbott, who has been a tremendous mentor for me. I would like to thank him for encouraging my research and for allowing me to grow as an independent researcher. I would also like to thank my co-major professor, Dr. Sela Sar, who kept working closely with me even when he is not at Ames. Without his supervision and constant help, this thesis would not have been possible. I also want to thank Dr. Mack Shelley, for serving as my committee member even at hardship. I also want to thank these three professors for letting my defense be an enjoyable moment, and for their brilliant comments and suggestions.

I would especially like to thank Dr. Lulu Rodriguez, who taught me at the research methods class and supported me during the hard times. I thank her for the useful comments, remarks and engagement through the learning process of this master's degree.

I also want to thank Ms. Erin Wilgenbusch and Dr. Jay Newell, who kindly opened their classes to me for recruiting participants. Without their generous help, the process of data collection wouldn't have been so successful. Also, I would like to thank the participants in my experiment, who have willingly shared their precious time.

Furthermore, I would like to acknowledge with much appreciation the crucial role of the technical staff, Mr. Shane Scherschel and Mr. Sheng Ly, who gave permission to use all required equipment and the necessary materials to complete my laboratory experiment. I would also like to express my gratitude to Ms. Kim Curell, who helped me a lot during the past three years at Greenlee.

A good support system is important to surviving and staying sane in grad school. I was lucky to have a group of friends here at Greenlee, Jo-yun (Queenie) Li, Yiren (Evey)

Zhou, Nai-se (Nicer) Li, and Chenyan (Freya) Shan. We've all been there for one another and have taught ourselves and each other both academically and personally. I'll never forget the many wonderful moments and fun activities we've done together. And you made my days at Iowa State so precious and memorable.

I especially thank my mom, dad and grandparents. My hard-working parents have sacrificed their lives for me and provided unconditional love and care. I love them so much, and I would not have made it this far without them. I truly thank them for sticking by my side, even when I was irritable and depressed. And I know I always have my family to count on when times are rough.

Finally, special thanks to my fiancé, Yang, as well as his wonderful family who have been supportive and caring. Yang has been a true and great supporter and has unconditionally loved me during my good and bad times. He has faith in me and my intellect even when I felt like digging a hole and crawling into one because I didn't have faith in myself. We have both learned a lot about life and strengthened our commitment and determination to each other to live life to the fullest.

ABSTRACT

A 2 by 2 factorial experiment was conducted to examine how positive and negative mood and types of ad appeals influence people's information processing styles, and evaluations of the ad, product and purchase intention. A total of 263 undergraduate students at Iowa State University were recruited as participants in this study. The study was conducted in two separate phases; the first phase involved mood manipulation and the second phase focused on ad and brand evaluation. The findings showed that people in a positive mood were more likely to utilize relational processing, whereas people in a negative mood were more likely to utilize item-specific processing. Also, people tended to utilize relational processing when they were exposed to an experiential appeal, whereas people tended to utilize item-specific processing when they were exposed to a utilitarian appeal. However, the study failed to find any significant interaction effects between mood and message characteristics. The results showed that people in both positive and negative mood states evaluated ad and product more positively when they were exposed to ad with an experiential appeal. Mood and message characteristics did not have significant influence on people's purchase intention.

CHAPTER I

INTRODUCTION

The effects of mood on people's information processing styles have been extensively discussed in the literature of advertising effectiveness over the past 20 years (Batra & Stayman, 1990; Estrada, Isen & Young, 1997; Lee & Sternthal, 1999; Schwarz & Clore, 1983). A classic study conducted by Batra and Stayman in 1990, revealed that people with positive mood generate less elaboration on advertising messages, which results in more heuristic processing. However, Lee and Sternthal (1999) conducted research to examine the effect of mood on the learning of brand names, indicating that positive mood enhances relational elaboration by prompting classification of brands, rather than decreasing elaboration. The mixed findings from these two studies invoke a question about the role of mood in people's information processing styles in the context of advertising. Moreover, such research has not investigated how message characteristics and the interaction between mood and message characteristics affect people's information processing styles. Therefore, in the present research, the influence of mood, message characteristics, and the interaction between these two variables are examined.

Mood is defined here as a diffuse and generalized affective state, rather than intense emotions (Cohen, Pham & Andrade, 2008). The individual, induced by physiological activity or by external stimuli (weather, news, music), experiences a vague sense of feeling good or bad at some point in time. The different effects of positive mood and negative mood are also examined in this study to understand their impact on

information processing of two different types of advertising messages (i.e., experiential and utilitarian). The following paragraphs contain a brief definition of terms presented in this paper.

An experiential appeal message characteristic is defined as a message that places emphasis on promises of experiences that consumers can expect from a product (Samuelsen & Olsen, 2010). In other words, an experiential message characteristic creates user experiences through ad claims. Another message characteristic is utilitarian appeal, which "involves informing consumers of one or more key benefits that are perceived to be highly functional or important to target consumers" (Johar & Sirgy, 1991, p.23). That is, a utilitarian appeal message characteristic highlights the functional features of a product (or brand).

Information processing styles discussed in this study include relational and item-specific elaboration. The different processes of associating new information with existing knowledge play a significant role in understanding how consumers respond to advertising messages. When people use relational elaboration, they tend to link the similarities among pieces of information together or focus on shared themes in an advertisement (Hunt & Einstein 1981; Lee & Sternthal, 1999; Malaviya, 2007; Meyers-Levy, 1991; Zhu & Meyers-Levy, 2007). For example, relational elaboration occurs when an advertisement for a particular camera associates people having fun at a party using that particular camera (Zhu & Meyers-Levy, 2007). In this case, when people see this advertisement, they might link this camera with having a good time with friends. When people use item-specific elaboration, they may focus on distinctive or unique aspects of a particular ad claim (Hunt & Einstein, 1981; Maylaviya, 2007; Meyers-Levy,

1991; Zhu & Meyers-Levy, 2007). For example, item-specific elaboration occurs when a target ad presents unrelated and dissimilar functions of a particular camera, like panoramic photography, video recording, and an advanced autofocus system (Zhu & Meyers-Levy, 2007). In this case, when people are exposed to this advertisement, they may discriminate among all the functions of this camera and focus on the uniqueness of specific functions of that camera. Though very few studies investigated whether information processing styles (i.e., relational and item-specific) will be triggered by different message characteristics (i.e., experiential and utilitarian), the distinctive natures of experiential messages (consisting of a whole picture of user experience) and of utilitarian messages (focusing on dissimilar functions of a product) may elicit different information processing styles.

The main question in this study is how positive and negative mood states and message characteristics interact to influence advertising effectiveness. Based on distinctive features of experiential and utilitarian appeals, it is reasonable to ask if people incorporate different types of elaboration (relational and item-specific) to process information in advertisements. To be more specific, when watching an experiential advertisement, will consumers be prompted to engage in more relational elaboration to process information than item-specific elaboration? Or, will consumers be prompted to utilize item-specific elaboration to process information when they are exposed to an utilitarian advertisement? How information processing styles are influenced by message characteristics is important to examine because different information processing styles may trigger different types of information that consumers recall, recognize and use to evaluate advertisements.

In addition to advertising message characteristics, mood can also prompt different information processing styles. Lee and Sternthal's study (1999) showed that people in a positive mood were more likely to use relational processing to elaborate information. Their study showed that people in a positive mood tended to highlight similarities that linked various ad claims. Lee and Sternthal (1999) found that a positive mood promoted not only greater brand name recall but also greater clustering of brand names by their category membership and the recall of a greater number of categories than that found for neutral mood respondents.

This current study compares the effects of positive mood versus negative mood on memory and advertising evaluations and investigates how positive and negative mood affect consumers' information processing styles differently. Furthermore, this study explores the interaction effects between moods (positive and negative) and message characteristics (experiential and utilitarian) on memory of ad and advertising evaluations.

Studies by Hunt and Einstein (1981), Lee and Sternthal (1999), and Zhu and Meyers- Levy, (2007) found that consumers tended to recall more information from advertising messages and positively evaluated those messages when they used both types of processing styles. Based on these previous studies, the current study predicts that people in a positive mood will be more likely to be persuaded by utilitarian appeals. This is because utilitarian appeals tend to trigger item-specific processing, whereas a positive mood tends to trigger relational processing. In contrast, people in a negative mood will be more likely to be persuaded by experiential appeals in an advertisement. This is because experiential appeals tend to trigger relational processing and a negative

mood tends to trigger item-specific processing.

Lee and Sternthal's study (1999) used several lists of brand names to measure people's recall and recognition, and focused on the effects of only positive mood. This current study goes further by examining advertising message characteristics, and the interaction of ad message characteristics with positive and negative mood on information processing styles.

Meyers-Levy's study (1991) discussed the effects of relational and item-specific elaboration on advertising effectiveness. The study revealed that recall clustering of ad claims was greater when people used relational elaboration to process the ad claims than when they used item-specific elaboration. However, recognition of ad claims was greater when people used item-specific elaboration to process information in the ad than when they used relational elaboration. Moreover, recall of ad claims was likely to be greater when ad claims received a combination of relational and item-specific elaboration rather than only one type of elaboration. The findings from these two studies might offer a better understanding of how consumers in positive or negative mood process advertising messages with experiential or utilitarian appeals. This current study sees mood as another independent variable and examines the interaction effect of mood with advertising message characteristics on memory and advertising evaluations.

By understanding the interaction between mood and message characteristics on consumers' cognitive information processing styles, the findings of this study are expected to help advertising message strategists create better information strategies to enhance the persuasion of advertisements. Specifically, the predictions are that the interaction effects of mood and messages characteristics on advertising effectiveness

will contribute to current advertising literature.

The proposed theoretical model in this study is illustrated in Figure 1.

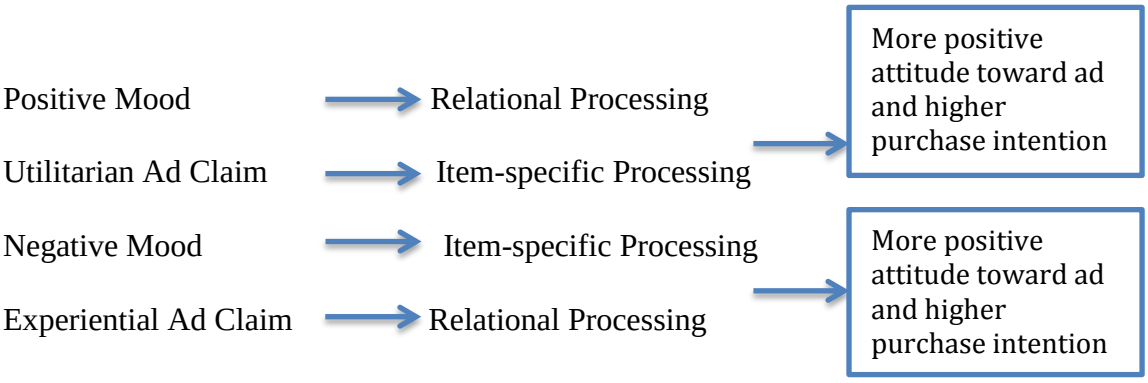

Figure 1. The Proposed Model of Interaction between Mood and Message Characteristic.

CHAPTER 2

LITERATURE REVIEW AND THEORETICAL FRAMEWORK

Mood

Mood is usually thought of as a "low intensity and diffuse affective state" (Cohen, et al., 2008) wherein individuals experience a vague sense of feeling good or bad but lack source identification of their mood. The mood of individuals could be induced either by physiological activity (such as changes in levels of serotonin and dopamine) or by external stimuli (music, weather, exposure to happy versus sad news, film clips).

There are multiple ways to manipulate moods in an experiment. Participants might be exposed, for example, to pleasant or unpleasant music (Storbeck & Clore, 2005), cheerful or depressing videos (Lee & Sternthal, 1999), or positive or negative information (Batra & Stayman, 1990). In one of Lee and Sternthal's studies (1999), participants were exposed to seven ads, which were designed to vary their mood state before the presentation of the experimental stimuli. People were induced to a positive mood state when they were assigned to view four humorous ads and three informational ads. The inclusion of informational ads provided a contrasting context that increased the impact of the humorous ads and therefore enhanced the mood manipulation. In addition to the positive mood condition, participants were shown seven informational ads in the neutral mood condition.

Mood can also be induced by using recall of past affective experiences. In Adaval's research (2003), participants were asked to describe a recent event that "made

you feel really happy (unhappy) and continues to make you feel happy (unhappy) whenever you think about it." After writing down their stories, participants were given the product evaluation task and a manipulation check.

To check the mood manipulation, following the viewing of mood stimuli or writing about their affective experiences, participants were asked to indicate how they felt at that moment on a mood scale. Lee and Sternthal (1999) used a four-item, seven-point semantic differential scale that was anchored by: sad-happy, bad mood-good mood, irritable-pleased, and depressed- cheerful (with 1 being the most negative and 7 being the most positive). The responses of participants were used to assess the effect of the mood manipulation. The theory of "affect-as-information" was developed by Schwarz and Clore (1983), who suggested that affect is often seen as having information value. Specifically, positive and negative affective states have congruent effects on evaluation, since people are often inclined to inspect their feelings toward objects in the course of evaluating objects. For instance, their studies showed that when people were interviewed on a sunny day, they were more likely to be in a good mood and therefore reported higher levels of life satisfaction than those who were more likely to be in a bad mood as a result of being interviewed on a rainy day. Schwarz and Clore (1983) showed that respondents used their momentary moods to make judgments about their general happiness and life satisfaction because they perceived these feelings to contain valuable judgmental information. Their study implied that different affect states might directly influence different ways in which people make judgments.

Message characteristics

In a study testing the persuasiveness of experiential versus functional ad claims (Samuelsen & Olsen, 2010), the authors refer to experiential claims as "focusing on promises of experiences the consumer should expect from the new brand" (Samuelsen & Olsen, 2010, p. 65), whereas functional claims are defined as "focusing on tangible attributes and benefits" (Samuelsen & Olsen, 2010, p. 65). In some sense, an experiential claim is somewhat similar to what Rossiter and Percy (1987) called "transformational advertising." The functional ad claim, also known as utilitarian appeal (Johar & Sirgy, 1991), involves one or more key benefits that are perceived to be important or functional features to target consumers. Johar and Sirgy (1991) defined the utilitarian advertising appeal as a "creative strategy that highlights the functional features of the product (or brand)" (p. 23), and Rossiter and Percy (1987) referred to this as "informational advertising."

The authors manipulated these two different types of advertisements in the following ways: The headline in the experiential claim said, "Do you remember your last ski vacation?" The headline in the functional claim said, "A good ski vacation offer." Below the headline, the experiential claim continued by urging the reader to "Think about a holiday experience where you...," followed by three bullet points with attribute information. In the functional claim version, the same attribute information was used, but it was introduced by the line "We offer you the following benefits: ..." Later they assessed the extent to which the participants perceived the claim profile of the advertisements as intended.

This study predicts that the differences in the nature of these two types of

message characteristics (i.e., experiential and utilitarian) will trigger different information processing styles. Consumers are likely to link their personal experiences with a product in an experiential advertisement and will tend to use relational elaboration to process information in an experiential advertisement. In regard to utilitarian message characteristics, more specific information is triggered and may prompt consumers to use item-specific elaboration to process information in a utilitarian advertisement.

Information processing styles

With respect to verbal learning, relational processing refers to the encoding of similarities among a class of events and individual-item processing refers to encoding of item- specific information (Hunt & Einstein, 1981). From the perspective of processing advertising messages, relational processing involves integrating and abstracting similarities or shared themes among disparate pieces of information (Meyers-Levy, 1991; Zhu & Meyers-Levy, 2007). To illustrate, consider a commercial for the Neutrogena eye cream that contains a large set of claims implying anti-aging (e.g., instant coverage plus correction to fight 7 signs of aging, including uneven tone, age spots, and wrinkles, helps to smooth lines and wrinkles, lifts the eye area, contains Vitamin C that penetrates the skin and stimulates collagen formation). This large set of ad claims, all implying the same benefit, should invite predominantly relational processing that focuses on the claims' shared anti-aging related aspects rather than their unique features.

Item-specific processing involves focusing on properties that are distinctive or

unique to a particular claim (Meyers-Levy, 1991). This type of processing generates "precise and context- specific associations to each individual item in isolation of other attributes" (Zhu & Meyers- Levy, 2007, p.90). Presenting people with message claims that are, in context, largely unrelated to or discrepant from other attributes appears to prompt spontaneous item-specific processing. For instance, in the Neutrogena ad, included amid the large set of anti-aging-related claims was a small set of two claims concerning safety (e.g., fragrance-free and additive-free, and dermatologist-recommended for sensitive skin). While these safe-to-use claims might receive some relational processing, their marked difference from the larger mass of ad claims is likely to have a more potent influence on the type of elaboration they receive, causing people to engage predominantly in item-specific processing that focuses on the ad's distinctive aspects (e.g., thoughts about how this eye cream would protect delicate skin around eyes).

Relational encodings are believed to serve a generative function during retrieval by depicting the category of information from which particular pieces of information can be drawn. It is thought, for example, that when a person attempts to retrieve particular claims from say, the Neutrogena ad, he or she begins by identifying a class of claims concerning a theme (i.e., anti-aging), and uses this thematic information to aid memory search. Relational encodings presumably facilitate this task because they capture common themes and benefits represented by a group of product claims. Hence, relational processing alone should increase the clustered recall of thematically common (e.g., anti-aging related) claims (Meyers-Levy, 1991). In this sense, increased clustering (i.e., consecutive reporting) of same-category items during free recall is a reliable

indicator of relational processing, for such clustering signifies that relationships have been discerned among such items (Zhu & Meyers-Levy, 2007).

As defined by Meyers-Levy (1991), recall clustering refers to "the extent to which ad claims implying a common theme or benefit are recalled in successive order" (p.360). Such clustering tracks the role that relational processing plays in the retrieval process, and therefore is considered a useful indicator of process measure. Since recall clustering is thought to be greatly dependent on the effective generation of categorical or thematic information, clustering of ad claims should be highest when the claims receive heightened relational processing because such processing depicts shared themes.

By contrast, item-specific encodings are thought to serve a discriminative function instead of a generative function. In situations requiring a highly precise response (e.g., recognition that requires distinguishing between "original" items and "newly-created" claims), fine discriminations among all the items related to a theme may be necessary. Item-specific information facilitates this discrimination among groups of items, for it captures the uniqueness of specific claims. Hence, Meyers-Levy (1991) found that item specific processing alone enhanced recognition of ad claims. In this sense, recognition serves as a process measure, for it tracks the role that item specific processing plays. During a recognition test in Meyers-Levy's research (1999), test-ad claims are presented explicitly, thereby eliminating the need for subjects to generate themes of claims and preventing relational processing. Instead, discriminative functions (i.e., discriminating between "original" and "newly-created" test claims) play the dominant role during ad-claim recognition. Because item-specific processing facilitates such discrimination, it follows that accurate recognition of ad claims is heightened when

conditions encourage item-specific processing.

Mood and information processing

Some previous studies have investigated the effect of mood on information processing. Lee and Sternthal (1999) examined the effect of mood on the learning of brand names. Two critical components were used to indicate the retrieval of brand names. One was brand rehearsal, defined as "the activation strength of the brand node, which is influenced by how often and recently the brand has been instantiated in memory" (Lee & Sternthal, 1999, p. 115). The other is relational elaboration, which is "the strength of association between the brand node and other nodes" (Lee & Sternthal, 1999, p.115). To illustrate the context of learning brand names, this association often resulted from linking the brand to the category in which it held membership. In their experiments, respondents were induced to be in either a positive or neutral mood and were presented with a list of brand names from different categories that they were subsequently asked to recall. Lee and Sternthal suggested that consumers were more likely to encode a brand's category membership when they were examining a brand name if they were in a positive mood versus a neutral mood. The findings supported this claim, indicating that a positive mood induces greater relational elaboration, which was manifested by more clustering of brands by category, recall of more categories, and better performance of brand name recall. Moreover, Estrada and his colleagues (1997) found that physicians in the affect group organized and integrated information more efficiently than did those in the control group, and did not engage in more superficial or hasty processing of information.

In contrast, negative mood induces a different type of processing, which is item-specific processing. Cognitive tuning theory (Friedman & Forster, 2002) suggests that focusing on positive states informs people that their current environment is benign and requires no particular action. Thus, such individuals are likely to behave in an exploratory manner, which may entail attending freely to relationships among items and noting higher-level abstractions. In contrast, focusing on negative states informs individuals that the environment is problematic and that specific action is needed to rectify this. Thus, people assess matters carefully in precise detail, presumably employing item-specific elaboration that entails attending to particulars. Thus, it is hypothesized that:

H1: Negative mood will trigger item-specific processing, whereas a positive mood will trigger relational processing.

Message Characteristics and Information Processing

Few studies have examined whether people use different processing styles to process value-expressive and utilitarian advertisements respectively. However, Zhu and Meyers-Levy (2007) manipulated the thematic ambiguity of the visuals in advertisements in a way that is comparable to experiential and functional advertisements. Their study tried to discern the differences in the degree to which people use relational and item-specific processing under the condition of different levels of thematic ambiguity. In the high thematic ambiguity condition, the advertisement displayed images with no obvious relationship to each other and the focal product; for example, a photo of a camera was surrounded by images of a dining table, a comfortable

bed, a man riding a bicycle, etc. These images loosely implied that this camera could capture the important moments of travelling, gathering, or leisure activities. Therefore, for this ad substantial relational elaboration would be required for successful theme identification; however, people might feel frustrated if they are trying to identify specific product features via item-specific processing since the visuals in the ad used in that study seemed unrelated and potentially distracting. In the low thematic ambiguity condition, the visuals in the advertisement related directly to each other and the product. The photos showed an unraveled roll of film, linking the camera, a zoom lens, a picture of flower, etc. An obvious theme (i.e., photography) was revealed. Hence, the low-ambiguity advertisement encouraged people to readily apprehend the product's specific features.

Another study carried out by Samuelsen and Olsen (2010) investigated how two advertising claim types (i.e., functional versus experiential ad claims) elicited different cognitive responses. To be more specific, experiential claims triggered more episodic memories whereas functional claims triggered mostly semantic memory. As defined by the authors, episodic memory is related to the self and events from one's own life, which could be referred to as personal memory and autobiographical memory. Some studies showed that advertising can exert a powerful retroactive effect on how consumers remember their past experiences with a product (Braun-LaTour, LaTour, Pickrell, & Loftus, 2004). That is, when autobiographical memories were retrieved and evoked there is reduced analysis of product information (Baumgartner, Sujan, & Bettman, 1992). These studies suggested that an advertisement might evoke people's autobiographical memories and make them link the product with their past experiences. This study

predicts that an experiential advertisement will lead people to associate their past experiences with the product or brand. Therefore, this study might offer an explanation about the underlying mechanism—that people will use relational elaboration to process the experiential advertisement by which their past experiences with a product are evoked and thus they retrieve more information about the product using experience instead of product information.

Semantic memory is fact-based knowledge about the attributes and benefits of the product in the category. The findings suggest that more references were made to one's own experiences (episodic memory) in response to experiential claims than in response to functional claims. With functional claims, more references were made to semantic (general facts, category knowledge) memory. These two findings imply that an experiential advertisement might encourage relational processing whereas a functional advertisement might encourage item-specific processing. Thus, it is hypothesized that:

H2: A utilitarian advertisement will trigger item-specific processing style, whereas an experiential advertisement will trigger relational processing style.

The Interactions between Mood and Advertising Message Characteristics

Recall has been viewed as a reliable measure for consumer learning. Hunt and Einstein (1981) found that "the combined relational and individual-item tasks produced higher recall than any other condition" (p.501). In other words, the manipulations designed to induce encoding of both types of information produced higher recall than conditions in which only one type of encoding was encouraged.

Moreover, Meyers-Levy (1991) also found similar results, indicating that recall

of ad claims was likely to be greater when claims received a combination of relational and item- specific elaboration rather than one type of elaboration exclusively. Her results suggest that both relational and item-specific elaborations appear to enhance performance when ad effectiveness is measured in terms of recall of ad claims: "Presumably, relational elaboration aided recall by cueing retrieval schemes (e.g., categories of ad claims) while item-specific elaboration benefits recall by facilitating discrimination between actual ad claims and plausible yet bogus claims" (Meyers-Levy, 1991, p.365). She manipulated the size of ad claims to be large (contained 8 items), medium (contained 4 items), and small (contained 2 items), and also randomly assigned subjects to one of three processing-focus conditions: image (item-specific) condition, organizer cue (relational) condition, and control condition. The study found that the large eight-claim set triggered relational elaboration whereas the small two- claim set triggered item-specific elaboration. Therefore, the recall of examination of the interaction between ad-claim sizes and the condition manipulations revealed that recall of ad claims from the large set (8 items) was greater in the item-specific processing focus condition than among subjects in the relational processing focus condition.

Large sets of ad claims encouraged spontaneous relational processing, yet once this relational processing had served the requisite generative function item-specific processing was more influential than additional relational processing because only the item-specific condition can provoke the needed discrimination. Thus, when the encoding of manipulation prompted individuals to add item-specific processing to the relational processing that already was being performed, large sets of ad claims were better recalled. However, recall of ad claims from the small two-claim set was greater among

subjects who received the advanced organizer cues (relational processing) than among those who imaged the features (item-specific processing). Since item-specific processing is presumed to occur spontaneously for small sets of ad claims and empowers only the discriminative aspects of recall, the recall of small sets of ad claims was more greatly benefited by manipulations that encourage relational rather than item-specific processing. Therefore, the relational processing manipulation provided a more useful role than item- specific processing manipulation in the recall of the small set of ad claims. The results of significant interaction between ad-claim sizes and types of elaboration conditions revealed that the learning and recall of an advertisement was highest when participants used both types of elaboration to process the advertising messages.

Previous studies have suggested that evaluation of the ad is consistent with consumers' learning. The rationale behind this statement is referred to as the dual elaboration hypothesis (Malaviya, 2007). The dual elaboration hypothesis posits that forming an evaluation requires message recipients to represent the message content in memory and to invoke a relevant comparison referent to draw inferences about the claims of the advertised product. More specifically, when respondents are asked to form a judgment of a target stimulus, they need first to have some cognitive representation of the target stimulus. In addition to cognitive representation, respondents also need to determine some standard of comparison to evaluate the stimulus. According to the dual elaboration hypothesis, item- specific elaboration facilitates the cognitive representation of the message whereas relational elaboration helps invoke the standard of comparison. Therefore, when message manipulation fosters both levels of the two types of

elaboration, a message recipient can positively assess the ad claims, leading to more favorable evaluation of the target ad. When only one type of elaboration dominates, assessing the ad claims is difficult, and the assessment of the ad claims is less favorable. Based on the dual elaboration hypothesis, Malaviya (2007) discovered that the evaluation of the advertising message depends on whether the message and the context in which it is presented provided both types of elaboration.

Another recent study (Lee & Lee, 2011) suggested that when low- knowledge consumers engaged in relational processing as well as item-specific processing, they were able to evaluate the target brand more accurately. This is because the lack of product category information in memory prevents low-knowledge consumers from assessing distinctive features of the target brand in relation to competing brands.

This current study predicts that people in a positive mood will likely use relational processing to process advertising messages, whereas people in a negative mood will likely use item-specific processing to process advertising messages. Also, an experiential advertisement is likely to trigger people's relational elaboration whereas a functional advertisement is likely to trigger people's item-specific elaboration. Since the previous studies (Hunt& Einstein, 1981; Lee & Lee, 2011; Malaviya, 2007; Meyers-Levy, 1991) suggested that learning related to advertisements will be highest when people utilize both types of processing, the interaction effect of mood and message characteristics on learning will be higher when participants in a positive mood are exposed to a utilitarian advertisement, because a positive mood triggers relational processing and a utilitarian advertisement triggers item-specific processing. But participants in a negative mood will perform better in recall when they are exposed to an

experiential advertisement, because a negative mood triggers item-specific processing and an experiential advertisement triggers relational processing.

Based on the above discussion, the effectiveness of advertisement is defined in this study as a combination of three indicators: higher recall, higher evaluation toward the advertisement and higher evaluation toward the brand. This leads to two related hypotheses:

H3: A utilitarian advertisement will be more effective when the ad is exposed to consumers in a positive mood. This is because a utilitarian ad tends to trigger item-specific processing, whereas a positive mood tends to trigger relational processing.

H4: An experiential advertisement will be more effective when the ad is exposed to consumers in a negative mood. This is because an experiential ad tends to trigger relational processing, whereas a negative mood tends to trigger item-specific processing.

Product Evaluation and Purchase Intention

Meyers-Levy (1991) found that subjects tended to judge the product benefits more favorably in the image (item-specific processing focus) condition rather than the advance organizer cue (relational processing focus) condition. Also, purchase intentions were significantly greater among subjects who received the image manipulation (item-specific processing focus) than among those who received the advance organizer cue manipulation (relational processing focus). These findings suggested that item-specific processing produced more favorable judgments than did relational processing and

exerted more influence on consumption intentions. Relative to relational processing, item-specific processing was likely to enhance not only subjects' product-benefit judgments and consumption intentions, but such processing could produce greater consistency between these responses.

However, some other studies (Lee & Lee, 2011; Malaviya, Kisielius, & Sternthal, 1996) suggested that product judgments are more favorable when an advertising message receives two types of elaboration, both item-specific and relational processing, than when only one of these types of elaboration is dominant. The rationale behind this conclusion is that "product evaluation appears to be influenced by the amount and content of retrieved information that is accessible and therefore comes to mind readily at the time of evaluation formation" (Lee & Lee, 2011, p. 366).

Based on the above mixed findings, a research question is posited and will be examined in this study.

Q1: How will positive mood versus negative mood affect purchase intention when people in these two different mood states are exposed to experiential versus utilitarian advertisements?

CHAPTER 3

METHODOLOGY

Design and Participant

The experiment followed a two (mood: positive or negative) by two (message characteristic: experiential or utilitarian) factorial experimental design. Two-hundred and sixty three undergraduate students were recruited for this study. The experiment was conducted in a control environment. Participants were asked to come to a reserved computer lab as a group of 10 people. They were randomly assigned to four different experimental treatments (i.e. positive mood/ experiential appeal, positive mood/ utilitarian appeal, negative mood/ experiential appeal, and negative mood/ utilitarian appeal). When watching the experimental commercial on the computer, participants were required to put on an earphone.

Mood induction

Mood was manipulated following the procedure described by Schwarz and Clore (1983). Study participants in the mood state conditions were asked to write an essay for 5 to 10 minutes about personal life events that made them feel really good (positive mood state) or really bad (negative mood state). This mood manipulation method has been extensively tested in laboratory and field research, and has produced salient and enduring moods in the past (Fiedler, Nickel, Asbeck & Pagel, 2003; Forgas, 1995; Forgas, 2002; Schwarz & Clore, 1983). The mood manipulation in this study was described as a separate experiment to distract participants from being mindful of their

mood. Previous studies (Forgas, 1995 & 2002; Schwarz & Clore, 1983) suggest that alerting participants to their mood will lead them to correct their mood while evaluating an object.

To measure participants' existing mood state, participants were asked to indicate how they felt at that moment on a four-item, seven-point mood scale that was anchored by the following conditions: sad-happy, bad mood-good mood, irritable-pleased, and depressed- cheerful (with 1 being the most negative and 7 the most positive).

Experimental Stimulus

Two video commercials about a Samsung Galaxy product (a smart phone) were edited and developed as a stimulus for an experiential advertisement and a stimulus for a utilitarian advertisement. To make the commercials similar in all aspects other than the experiential content versus utilitarian content, the same photo-editing attribute of this high-tech product was used and this attribute implied that this smart phone could help you be creative and make your life more fun. In the clip for the experiential advertisement, a scene highlighting the day of a college-age man's birthday was presented. Several of his friends were using the cell phone to edit his photo by his birthday cake. They cropped his face and put it on a football player's body or on a superman's body. Some of his friends in different cities also shot a photo as they are kissing someone, and these friends' photos were cropped and put near the photos of the birthday boy to give the appearance that they are kissing him. This commercial depicts a happy and funny scene with up-beat music, making the audience feel that this product brings fun to people's lives and enables friends to get closer. In the other clip for the

utilitarian advertisement, there was a commentator informing the audience about how to use this smart phone to crop an image and create a birthday card for a friend. First, the commentator tells the audience that he needs to find a puppy as a birthday gift for his girlfriend; he then goes online and searches for a photo of a cute dog, and he crops and saves this photo of the cute dog on his phone. Next, the commentator notices that the birthday of one of his friends is coming up, and he draws birthday wishes and crops a birthday cake to make a birthday card for his friend with his smart phone. He then posts this birthday note on his friend's Facebook page. This commercial uses a commentator to clearly state the photo-editing function of this product step by step, allowing the audience to learn how to use this product to create any pictures they want.

Experimental Procedures

The experiment involved two phases. The first phase was a mood manipulation (two levels: positive and negative), and the second phase presented two types of advertisements (experiential and utilitarian) for the same product. After participants watched these two types of advertisements, a questionnaire was used to measure the dependent variables (recall, attitude toward the advertisements, brand attitude and purchase intention). A pre-test was conducted to detect if participants could discern two different advertising stimuli (i.e., one for experiential and the other for utilitarian). The pre-test was conducted to analyze participants' responses to two statements to assess the extent to which the participants perceived the message characteristics of the advertisements as intended. The statements are: "This commercial of Samsung Galaxy informs me about: functions of this product (1) to using experiences of this product (7),"

and “The commercial for Samsung Galaxy makes me think of: functions of this product (1) to experiences when I’m using this product.”

Independent Measures

Mood

To measure participants’ existing mood state, participants were asked to indicate how they felt at that moment on a four-item, seven-point mood scale that was anchored by the following conditions: sad-happy, bad mood-good mood, irritable-pleased, and depressed-cheerful (with 1 being the most negative and 7 the most positive) (Cronbach’s α=.89). The feeling of participants was assessed two times—after they finished their personal stories and at the end of the questionnaire.

Appeal

A seven-point scale was used to analyze participants’ responses to two statements to assess the extent to which the participants perceived the message characteristics of the advertisements as intended. The statements are: “This commercial of Samsung Galaxy informs me about: functions of this product (1) to using experiences of this product (7),” and “The commercial for Samsung Galaxy makes me think of: functions of this product (1) to experiences when I’m using this product.”

Dependent Measures

Recall

A free recall task was administered in which subjects were asked to record as much of the Samsung Galaxy advertisement as possible. Participants were asked to write

down their thoughts and feelings about the advertisement as well as the brand in the advertisement. The recall of advertisement and brand was used to test what type of information processing styles participants used to process the advertisements.

Also, respondents' thoughts about the target product were examined to assess the types of elaboration that occurred in the different experimental conditions. Thoughts were classified into two categories using the coding scheme proposed by Malaviya et al. (1996). Item- specific thoughts were those that are specific to the target product, including functions mentioned in the target ad (e.g., "I like the cropping function of the phone") or inferences drawn from these features (e.g., "It is easy to use"). Relational thoughts were those that referenced either the phone or the phone category (e.g., "Not sure how this compares with other phones") or the people and occasions associated with phones and phone-using (e.g., "Maybe this phone is for young people" and "This can be a phone for shooting fun pictures with friends at a party"). Two independent judges coded thoughts according to this scheme.

Types of thoughts generated were coded into three different categories: relational thoughts, item-specific thoughts, and thoughts that could not be categorized. A positive index will represent more relational thoughts than item-specific thoughts whereas a negative index will imply more item-specific thoughts than relational thoughts. An index of zero will indicate that the thoughts generated cannot be categorized into either type of processing or represents a balance between the two processing types.

Attitude toward ad

Nine seven-point semantic differential items were merged into a single scale to measure attitude toward the advertisement: good/bad, like/dislike, good quality/poor

quality, confusing/clear, not interesting/interesting, not informative/informative, not useful/useful, not convincing/convincing, and difficult to understand/easy to understand.

Attitude toward the brand

Ten seven-point semantic differential items were merged into a single scale to measure brand attitude: important/unimportant, of no concern/of concern to me, irrelevant/relevant, means nothing to me/means a lot to me, worthless/valuable, trivial/fundamental, doesn't matter to me/matters to me/, uninterested/interested, insignificant/significant, and boring/interesting. Also, a five-point scale with strongly disagree to strongly agree was used to measure participants' level of agreement on the statement that "In general, I have positive feeling toward this product."

Purchase Intention

Participants' behavioral intention of purchasing the Samsung Galaxy product was measured by using a seven-point semantic scale. The participants were presented with two likelihood statements: "I will likely purchase this brand," and "I will likely not purchase this brand," where 1 means "strongly disagree" and 7 means "strongly agree."

Potential Findings

This study expected to find that consumers in a positive mood would have a positive index of type of elaboration, which means that they would report more relational thoughts than item- specific thoughts. However, people in a negative mood would have a negative index score, which means that they would report more item-specific thoughts than relational thoughts.

In relation to hypothesis 2, this study predicted that when people are exposed to

an experiential advertisement, they would have a positive index, indicating that they report more relational thoughts than item-specific thoughts. However, when people are exposed to a utilitarian advertisement, they will have a negative index, indicating that they report more item-specific thoughts than relational thoughts.

Also, this study expected to find a significant interaction effect between mood and message characteristics. That is, when an experiential advertisement is shown to people in a negative mood, the ad will be more effective than a utilitarian one, whereas when a utilitarian advertisement is shown to people in a positive mood, the ad will be more effective than an experiential one.

CHAPTER 4

RESULTS

This study tests the effects of mood and message characteristics on information processing styles. It also tests the interaction between mood and message characteristics on respondents' evaluation toward advertisements and brands and on their purchase intention. To gather data, an online laboratory experiment was conducted. A total of 263 participants were recruited from three journalism and advertising classes with total enrollment of 800 students at Iowa State University.

The 263 participants were randomly assigned to one of the four experiment treatment groups. As indicated in Table 1, 63 were placed into a positive-mood group and watched the experiential stimulus, 69 were placed into a negative-mood group and watched the experiential stimulus, 67 were placed into a positive-mood group and watched the utilitarian stimulus, and 64 were placed into a negative-mood and watched the utilitarian stimulus.

Table 1. Numbers of participants in four experiment treatment groups

	Positive Mood	**Negative Mood**
Experiential	63	69
Utilitarian	67	64

Experiential messages emphasize promises of experiences that consumers can expect from a product (Samuelsen & Olsen, 2010). In the experiential stimulus, a happy and funny scene highlighting the day of a college-age man's birthday was presented. Several of his friends were using the cell phone to edit his photo by his birthday cake, which made the audience feel that this product brings fun to people's lives and enables

friends to get closer. Utilitarian messages highlight one or more specific functional feature(s) of the target product. In the utilitarian stimulus, a commentator informed the audience about how to use a Samsung smart phone to crop an image and create a birthday card for a friend on Facebook.

The hypotheses predicted that mood and message characteristics would trigger different information processing styles (i.e. relational or item-specific) as shown in Figure 2. Relational processing involves integrating and abstracting similarities among disparate pieces of information (Meyers-Levy, 1991; Zhu & Meyers-Levy, 2007). Item-specific processing involves focusing on properties that are distinctive to a particular claim (Meyers-Levy, 1991).

The interaction between mood and message characteristics would influence people's attitude toward the ad and the brand, as well as purchase intention to the target product. The evaluation to the ad and brand, and the purchase intention are measured by different scales and will be discussed later.

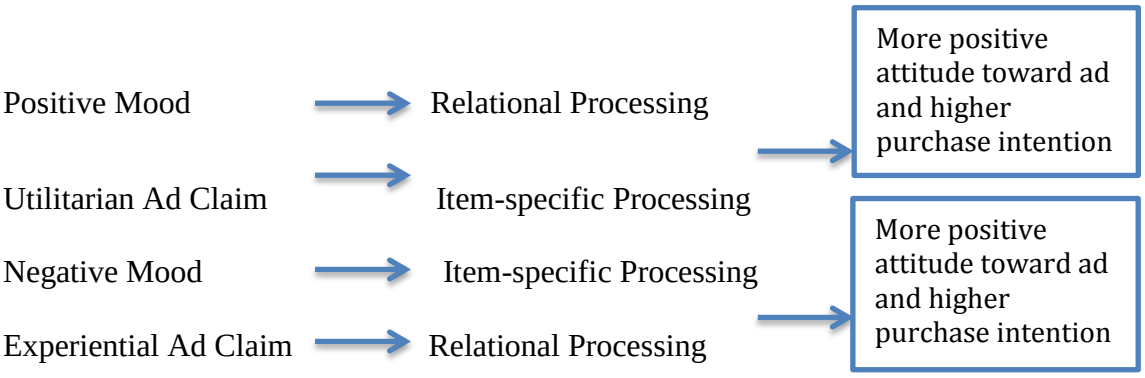

Figure 2. The Proposed Model of Interaction between Mood and Message Characteristic.

As expected of a college student sample, most were 18 to 29 years old. A large majority were female Caucasian students. Half of the participants majored in the College of Liberal Arts and Science. To test the demographic effects on information processing

styles, evaluation and purchase intention, the demographic factors were recoded into fewer categories. Age was recoded into two categories—"under 20" and "over 20." Race was recoded into "white" and "others." College was recoded into "Liberal Arts and Sciences" and "others." Gender and Class were not recoded. For the four experimental groups, the proportional distribution of age, gender, race and college is shown in Table 2. The effects of demographic factors on the ad and brand evaluation and purchase intention will be discussed later.

Table 2. Demographic features of 4 experiment treatment groups

		Positive * Experiential		**Negative * Experiential**		**Positive * Utilitarian**		**Negative * Utilitarian**	
		Freq.	%	Freq.	%	Freq.	%	Freq.	%
Age	Under 20	31	49.2	42	60.9	39	58.2	38	59.4
	Over 20	32	50.8	27	39.1	28	41.8	26	40.6
Gender	Female	51	81.0	54	78.3	52	77.6	50	78.1
	Male	12	19.0	15	21.7	15	22.4	14	21.9
Race	White	48	76.2	56	81.2	53	79.1	54	84.4
	Others	15	23.8	13	18.8	14	20.9	10	15.6
Class	Freshmen	17	27.0	26	37.7	23	34.3	20	31.3
	Sophomore	23	36.5	19	27.5	19	28.4	24	37.5
	Junior	14	22.2	16	23.2	18	26.9	14	21.9
	Senior	9	14.3	8	11.6	7	10.4	6	9.4
College	Liberal Arts and Science	31	49.2	36	52.2	39	58.2	26	40.6
	Others	32	50.8	33	47.8	28	41.8	38	59.4

Mood Manipulation Check

Following the initial positive and negative treatments, four semantic differential scales were used to measure mood with response options ranging from 1 (the most negative rating) to 7 (the most positive rating). These items were anchored on the bipolar adjectives (1) sad/happy, (2) bad mood/good mood, (3) irritable/pleased, and (4)

depressed/cheerful. The computed indices demonstrated a high reliability (Cronbach's alpha= .964).

The responses to these items were averaged separately for positive mood and negative mood. The results of an independent samples *t*-test suggest a significant difference between the two groups *(t= -28.338; df=261; p=< .001)* in terms of participants' mood evaluations. That is, as shown in Table 3, a higher score on the mood index resulted from positive mood manipulation *(M=6.25; SD= .94)* compared to the negative mood manipulation *(M= 2.73; SD= 1.06)*.

Table 3. Results of independent samples *t*-tests comparing the two mood groups

	t	***df***	**Sig. (2-tailed)**	**Mean (–)**	**Mean (+)**	**Mean difference**	**Std. error difference**
Mood evaluation	-28.338	261	<.001	2.73	6.25	-3.51871	.12417

Message Characteristic Manipulation Check

To assess the extent to which the participants perceived the experiential and utilitarian message characteristics of the advertisements as intended, seven-point Likert-type items were used to analyze each participant's responses to two statements. The first statement is: "This commercial of Samsung Galaxy informs me about: functions of this product (1) to using experiences of this product (7)." The results of an independent samples *t*-test suggest a significant difference between the two groups (*t*=8.911; *df*=261; *p*=< .001) in terms of participants' answers to this statement. That is, as shown in Table 4, a higher score on this statement resulted from the experiential stimulus (*M* =4.50; *SD*=1.71) than from the utilitarian stimulus (*M*=2.56; *SD*=1.82).

The second statement is: "This commercial for Samsung Galaxy makes me think of: functions of this product (1) to experiences when I'm using this product (7)." The

results of an independent samples *t*-test suggest a significant difference between the two groups (*t*=5.429; *df*=261; *p*=< .001) in terms of participants' answers to this statement. That is, as shown in Table 4, a higher score on this statement resulted from the experiential stimulus (*M* =4.92; *SD*=1.81) compared to the utilitarian stimulus (*M*=3.58; *SD*=2.17).

Table 4. Results of independent samples *t*-tests comparing the two message characteristic groups

	t	***df***	**Sig. (2-tailed)**	**Mean (experiential)**	**Mean (utilitarian)**	**Mean difference**	**Std. error difference**
1. Commercial informs me about functions or experiences	8.911	261	<.001	4.50	2.56	1.935	.217
2. Commercial makes me think of functions or experiences	5.429	261	<.001	4.92	3.58	1.337	.246

Inter-coder reliability for information processing styles

To test inter-coder reliability, two coders were asked to code respondents' thoughts about the advertisements and the brand into different information-processing styles, where "1" represents relational thought, "-1" represents item-specific thought and "0" represents those that cannot be categorized into either of the first two categories. For thoughts about the advertisements, the Pearson correlation between these two coders is .932, which is significant at the 0.01 level (2-tailed). For thoughts about the brand, the Pearson correlation is .946, which is significant at the 0.01 level (2-tailed). The results of the Pearson correlation indicate that the inter-coder reliability is good overall and could be used for the following analysis.

Comparing Information Processing Styles between Mood Groups

The first hypothesis posits that those in a negative mood would tend to use item-specific processing whereas those in a positive mood would tend to use relational processing. For respondents' thoughts on advertisements, the results of the one-sample *t*-test show a significant positive score (greater than zero) for the positive-mood group (*t*=3.902; *df*=129; *p*=< .001), (*M*=.32; *SD*=.92), indicating that they tended to use relational processing styles more to perceive the ad content. Similarly, a one-sample *t*-test found a significantly negative (item-specific) score when compared to zero (*t*=-3.837; *df*=131; *p*=< .001), indicating a more item-specific information processing in the negative-mood group (*M*=-.30; *SD*=.91).

For respondents' thoughts about the target brand, the results were similar. A one-sample *t*-test showed those in the positive-mood group (*M*=.47; *SD*=.85) used relational processing (positive score greater than zero) (*t*=7.045; *df*=159; *p*=.000). Therefore, participants in the positive-mood group tended to use relational processing styles to perceive the brand. The result of the one-sample *t*-test for the negative-mood group found a significant difference between information processing styles in the negative mood group and 0 (*t*=1.954; *df*=132; *p*=.027). However, as shown in Table 5, information processing styles in the negative-mood group are significantly greater than 0 (*M*=.16; *SD*=.93). Therefore, participants in the negative-mood group seemed to use relational processing styles to perceive the brand. That is, people in different mood states might not use different information processing to the brand.

Table 5. Summary of results of one-sample *t*-tests comparing two mood groups with 0 in terms of information processing styles (Test value = 0)

	Mean	***t***	***df***	**Sig. (1-tailed)**	**Mean difference**
1. Positive mood on ad thoughts	.315	3.902	129	<.001	.3154
2. Negative mood on ad thoughts	-.303	-3.837	131	<.001	-.3030
3. Positive mood on brand thought	.4719	7.045	129	<.001	.47188
4. Negative mood on brand thought	.1579	1.954	132	.027	.15789

Hypothesis 1 also posited that the people in positive-mood and negative-mood groups would use totally different information processing styles. The results of an independent samples *t*-test suggest a significant difference between the positive-mood and negative-mood groups (t=5.473; df=260; p<=.001) in terms of participants' information processing styles on ad thoughts. In terms of processing ad thoughts, a positive mood triggered relational processing, whereas a negative mood triggered item-specific processing. In terms of processing brand thoughts, an independent samples *t*-test indicates that the positive-mood group was significantly different from the negative-mood group (t=3.897; df= 261; p=<.001). However, the one-sample *t*-test for negative-mood group on brand thoughts shows that audiences' information-processing is not significantly lower than 0, which means that the negative mood fails to trigger item-specific processing in brand thoughts. Therefore, mood might not be an effective predicator for information processing styles in terms of processing the brand.

Table 6. Results of independent samples *t*-tests on mood effects in terms of ad thoughts and brand thoughts

	t	***df***	**Sig. (2-tailed)**	**Mean (+)**	**Mean (–)**	**Mean difference**	**Std. error difference**
1. Mood effect on ad thoughts	5.473	260	<.001	.315	-.303	.6184	.1130
2. Mood effect on brand thoughts	3.897	261	<.001	.4719	.1579	.4152	.1065

Comparing Information Processing Styles between Message Characteristics Groups

The second hypothesis posits that those exposed to a utilitarian advertisement would tend to use item-specific processing whereas those exposed to an experiential advertisement would tend to use relational processing. For respondents' thoughts on advertisements, the results of a one-sample *t*-test (Table 7) show a significant difference; those in the experiential group (*M*=.35; *SD*=.90) had more relation-oriented scores—significantly greater than zero, indicating that they tended to use relational processing styles to perceive the ad content (*t*=4.381; *df*=131; *p*=<.001). Similarly, a one-sample *t*-test (Table 7) found a significant difference, for the utilitarian group (*M*=-.34; *SD*=.90), with mean scores significantly below zero (*t*=-4.336; *df*=129; *p*=<.001). This indicates they tend to use item-specific processing styles to perceive the advertisement.

For respondents' thoughts on the target brand, the results of a one-sample *t*-test for the experiential group (*t*=6.969; *df*=131; *p*=<.001) show (Table 7) a mean relational information processing score significantly above zero (*M*=.50; *SD*=.82), indicating they tend to use relational processing styles to perceive the brand. However, results of a one-sample *t*-test for the utilitarian group did not support the hypothesis. In fact, results show significant relational processing in the utilitarian group (*t*=2.776; *df*=130; *p*=.003)

(*M*=.23; *SD*=.93). Thus, participants in both the experiential and the utilitarian groups tend to use relational processing styles to perceive the brand.

Table 7. Summary of results of one-sample *t*-tests comparing two mood groups with 0 in terms of information processing styles (Test value = 0)

	Mean	***t***	**Df**	**Sig. (1-tailed)**	**Mean difference**
1. Experiential stimulus on ad thoughts	.345	4.381	131	<.001	.3447
2. Utilitarian stimulus on ad thoughts	-.342	-4.336	129	<.001	-.3423
3. Experiential stimulus on brand thoughts	.5000	6.969	131	<.001	.50000
4. Utilitarian stimulus on brand thoughts	.2252	2.776	130	.003	.22519

Overall, results indicate the experiential and utilitarian groups are significantly different in terms of participants' information processing styles on ad thoughts (*t*= 6.163; *df*=260; *p*=<.001). In terms of processing the ad content, the experiential stimulus triggered relational processing, whereas the utilitarian stimulus triggered item-specific processing. In terms of processing the brand, there is also a significant difference between experiential and utilitarian groups (*t*=-2.539; *df*=261; *p*=.012). However, according to the results in the one-sample *t*-tests, both message characteristics triggered relational processing to the brand.

Table 8. Results of independent samples *t*-tests on message characteristics effects in terms of ad thoughts and brand thoughts

	t	**df**	**Sig. (2-tailed)**	**Mean (experiential)**	**Mean (utilitarian)**	**Mean difference**	**Std. error difference**
1. Message characteristic effect on ad thoughts	6.163	260	<.001	.345	-.342	.6870	.1115
2. Message characteristic effect on brand thoughts	-2.539	261	.012	.5000	.2252	.2748	.1083

Testing the Attitude and Purchase Intention Effects

The third hypothesis posits that a utilitarian advertisement will be more effective when the ad is exposed to consumers in a positive mood. The fourth hypothesis predicts that an experiential advertisement will be more effective when the ad is exposed to consumers in a negative mood. The effectiveness of an advertisement is measured by attitude toward the ad, attitude toward the brand, and purchase intention.

Attitude toward the ad. To measure attitude toward the advertisements, nine semantic differential scales were used with response options ranging from 1 (the most negative rating) to 7 (the most positive rating). These items were anchored on the bipolar adjectives (1) bad/good, (2) dislike/like, (3) poor quality/good quality, (4) confusing/clear, (5) not interesting/interesting, (6) not informative/informative, (7) not useful/useful, (8) not convincing/convincing, and (9) difficult to understand/easy to understand. The result of factor analysis showed that this scale is not unidimensional. After rotating this nine-item scale, results showed that items 1, 2, 3, 5, and 8 are loaded on one component while items 4, 6, 7, and 9 are loaded on the other component. Items 1,

2, 3, 5 and 8 focused on quality of the ad whereas items 4, 6, 7 and 9 focused on clarity of the ad. Therefore, the variable of ad evaluation was measured by these two separate scales (i.e., quality and clarity). The computed indices for quality demonstrated high reliability (Cronbach's alpha= .905) and the indices for clarity also demonstrated high reliability (Cronbach's alpha= .763).

In Table 9, the results of a two-way ANOVA test for the quality index showed that at least two groups among the four groups were significantly different (F (3, 259)=10.559; p=<.001) and this resulted from the significant main effect of message characteristic. In other words, the F-test suggests a significant difference between the two message characteristic groups (F=27.991; df=1; p=<.001) in terms of quality toward the ad. The post hoc t-tests showed that participants had a significantly higher evaluation toward the experiential ad than the utilitarian ad no matter which mood group they belonged to.

Table 9. The influence of moods and message characteristics on the attitude toward the ad in terms of quality

	df	**Mean Square**	***F***	**Sig.**
Corrected Model	3	17.355	10.559	<.001
Mood	1	3.957	2.408	.122
Message Characteristic	1	46.004	27.991	<.001
Mood * Message Characteristic	1	2.584	1.572	.211

Table 10. Post hoc *t*-tests on the attitude toward the ad in terms of quality

Groups (I) – Groups (J)	Mean (I)	Mean (J)	Mean difference	Std. Error	Sig.
1. Positive * Experiential – Positive * Utilitarian	5.4095	4.7697	.63983	.22581	.030
2. Positive * Experiential – Negative * Utilitarian	5.4095	4.3250	1.08452	.22753	<.001
3. Negative * Experiential – Positive * Utilitarian	5.3623	4.7697	.59262	.22073	.046
4. Negative * Experiential – Negative * Utilitarian	5.3623	4.3250	1.03732	.22249	<.001

In Table 11, the results of a two-way ANOVA using the clarity index showed that the four groups are not all the same ($F(3,259)=13.659$; $p=<.001$). There is a significant main effect of message characteristic. In other words, the *F*-test suggests a significant difference between the two message characteristic groups ($F=40.545$; $df=1$; $p=<.001$) in terms of the clarity of the ad. The post hoc *t*-tests (Table 12) showed that participants had a significantly higher evaluation toward the utilitarian ad than experiential ad no matter which mood groups they were in.

Table 11. The influence of moods and message characteristics on the attitude toward the ad in terms of clarity

	df	**Mean Square**	***F***	**Sig.**
Corrected Model	3	14.991	13.659	<.001
Mood	1	.278	.254	.615
Message Characteristic	1	44.401	40.454	<.001
Mood * Message Characteristic	1	.001	.001	.977

Table 12. Post hoc *t*-tests on the attitude toward the ad in terms of clarity

Groups (I) – Groups (J)	Mean (I)	Mean (J)	Mean difference	Std. Error	Sig.
1. Positive * Experiential – Positive * Utilitarian	4.7897	5.6157	-.82599	.18386	<.001
2. Positive * Experiential – Negative * Utilitarian	4.7897	5.5469	-.75719	.18593	<.001
3. Negative * Experiential – Positive * Utilitarian	4.7283	5.6157	-.88741	.17969	<.001
4. Negative * Experiential – Negative * Utilitarian	4.7283	5.5469	-.81861	.18181	<.001

Based on the above findings, participants had higher evaluation toward the experiential ad with respect to quality and participants had higher evaluation toward the utilitarian ad with respect to clarity.

Attitude toward the brand. The third hypothesis posits that consumers in a positive mood and exposed to a utilitarian advertisement would have a more positive attitude toward the brand. The fourth hypothesis suggests that consumers in a negative mood and exposed to experiential advertisement would have a more positive attitude toward the brand. To measure attitude toward the brand, 10 semantic differential items were used with response options ranging from 1 (the most negative rating) to 7 (the most positive rating). The responses were anchored on the bipolar adjectives: (1) unimportant/important, (2) of no concern/of concern to me, (3) irrelevant/relevant, (4) means nothing to me/means a lot to me, (5) worthless/valuable, (6) trivial/fundamental, (7) doesn't matter to me/matters to me, (8) uninterested/interested, (9) insignificant/significant, and (10) boring/interesting. An exploratory factor analysis showed that all 10 items loaded on the same underlying indicator, and there is only one component in the component matrix. The computed indices demonstrated high reliability (Cronbach's alpha =.950).

In Table 13, the results of a two-way ANOVA showed that there is no significant difference among the four groups (F (3, 258)=1.596; p=.191). However, the F-test suggests a significant difference between the two message characteristic groups (F=7.082; df=1; p=.049) in terms of attitude toward the brand. The post hoc tests showed that participants had no significant difference in attitude toward the brand among the four groups.

Table 13. The influence of moods and message characteristics on the attitude toward the brand

	df	**Mean Square**	***F***	**Sig.**
Corrected Model	3	2.892	1.596	.191
Mood	1	1.525	.842	.360
Message Characteristic	1	7.082	3.909	.049
Mood * Message Characteristic	1	.355	.196	.658

Purchase intention. A research question was posited on purchase intention: How will positive mood versus negative mood affect purchase intention when people in these two different mood states are exposed to experiential versus utilitarian advertisements? To measure purchase intention, the participants were presented with two likelihood statements: "I will likely purchase this brand," and "I will likely not purchase this brand," where 1 means "strongly disagree" and 7 means "strongly agree."

To test if respondents have consistent answers toward these two statements, answers to the second statement were flipped and recoded to align with the first statement, and the correlation between answers to these two statements was tested. The Pearson correlation is .863, which is significant at the 0.01 level (2-tailed). Since the correlation of answers to these two statements is high, the answers were added up and divided by 2 to create a new scale to measure people's purchase intention.

As shown in Table 14, the results of a two-way ANOVA on purchase intention indicated that there is no significant difference among the four groups ($F(3,259)=.493$; $p=.687$).The post hoc *t*-tests showed that participants had no significant difference in purchase intention among the four groups.

Table 14. The influence of moods and message characteristics on the purchase intention

	df	**Mean Square**	***F***	**Sig.**
Corrected Model	3	1.661	.493	.687
Mood	1	1.771	.526	.469
Message Characteristic	1	1.052	.312	.577
Mood * Message Characteristic	1	2.272	.675	.412

Possible Pre-Existing Attitude Effect

To measure a possible pre-existing attitude effect, participants were asked to write down the names of their current smart phone. Their answers were recoded into 0 and 1, where 0 represents those who are not using a Samsung smart phone and 1 represents those who are using a Samsung smart phone. A total of 61 out of 263 respondents already owned a Samsung smart phone.

One of the reasons for no significant result in Table 14 could be the influence of the Samsung owners. Therefore, it is reasonable to exclude the Samsung owners and reestimate a two-way ANOVA. As shown in Table 15, there is still no significant difference among the four experimental groups ($F(3,259)=.493$; $p=.687$).

Table 15. The influence of moods and message characteristics on the purchase intention of non-Samsung owners

	df	**Mean Square**	***F***	**Sig.**
Corrected Model	3	2.202	.862	.462
Mood	1	5.540	2.169	.142
Message Characteristic	1	1.202	.471	.493
Mood * Message Characteristic	1	.144	.056	.812

Samsung owners' attitudes toward the Samsung smart phone were compared before and after watching the stimulus. Before they watched the commercial, they were asked their attitude toward their current smart phone ranging from 1 (the most negative) to 7 (the most positive). To measure attitude toward the product after the stimulus, the participants were asked the extent to which they agree that they "have a positive feeling toward this product." Here, the response options ranged from 1 (strongly disagree) to 5 (strongly agree). Since these two questions used different level of measurements, the answers to these questions were standardized to z-scores for a paired *t*-test comparison. The result of a paired *t*-test (Table 16) indicates a significant difference in attitude toward the Samsung smart phone before and after the ad (t=5.983; df=60; p=<.001). That is, Samsung adopters had a higher evaluation toward the target product after they watched the stimulus (M=.41; SD=.90) than when asked initially about their current smart phone (M=-.46; SD=1.12). Table 17 shows significant differences in product attitude (t=-3.766; df=261; p=<.001) and brand attitude (t=-4.427; df=260; p=.001) between Samsung owners and non-Samsung owners. For both product attitude and brand attitude, Samsung owners show a higher evaluation than non-Samsung owners.

Table 16. Results of paired *t*-test for pre and post attitude toward Samsung smart phone

	Mean (After)	**Mean (Before)**	**Paired Mean Difference**	***t***	***df***	**Sig. (2-tailed)**
Zscore(AFTER) – Zscore(BEFORE)	.41	-.46	.87096558	5.983	60	<.001

Table 17. Results of independent samples *t*-tests on difference in product attitude and brand attitude between Samsung owners and non-Samsung owners

	t	***df***	**Sig. (2-tailed)**	**Mean (Non Samsung)**	**Mean (Samsung)**	**Mean difference**	**Std. error difference**
Product attitude	-3.766	261	<.001	3.56	4.00	-.436	.116
Brand attitude	-4.427	260	<.001	3.9408	4.7852	-.84445	.19074

Demographic Factors

Table 18 summarizes the participants' demographic characteristics.

Table 18. The demographic characteristics of the sample

		Frequency	%
Age	Under 20	150	57.0
	Over 20	113	43.0
Gender	Female	207	78.7
	Male	56	21.3
Race	White	211	80.2
	Others	52	19.8
Class	Freshmen	86	32.7
	Sophomore	85	32.3
	Junior	62	23.6
	Senior	30	11.4
College	Liberal Arts and Science	131	49.8
	Others	132	50.2

As shown in Table 19, the results of an independent samples *t*-test on two age groups indicate a significant difference with respect to their evaluation toward the quality of the ad (t=-2.642; df=260; p=<.001). Those who are under 20 demonstrated a

less positive attitude toward the quality of the ad (*M*=4.78; *SD*=1.42) than those who are over 20 (*M*=5.22; *SD*=1.21).

Table 19. Results of independent sample *t*-tests comparing age groups

	Mean (Under 20)	**Mean (Over 20)**	***t***	***df***	**Sig. (2-tailed)**	**Mean difference**
1. Age on ad evaluation in terms of quality	4.7812	5.2212	-2.642	260	.009	-.44003
2. Age on ad evaluation in terms of clarity	5.1000	5.2588	-1.138	261	.256	-.15885
3. Age on brand evaluation	3.9967	4.3259	-1.963	260	.051	-.32923
4. Age on purchase intention	3.19	3.58	-1.694	261	.091	-.382

For different gender groups, the results of an independent samples *t*-test indicate a significant difference between males and females with respect to their evaluation of the clarity of the ad (*t*=2.004; *df*=261; *p*=.046). Those who are male demonstrated a more positive attitude toward the clarity of the ad (*M*=5.43; *SD*=.97) than did those who are female (*M*=5.10; *SD*=1.15). The *t*-test results outlined in Table 20 (*t*= 2.284; *df*=260; *p*=.023) indicate that those who are male reported a higher evaluation toward the target brand (*M*=4.50; *SD*=1.22) compared with those who are female (*M*=4.04; *SD*=1.37), and that this difference was significant.

Table 20. Results of independent sample *t*-tests comparing gender groups

	Mean (Male)	**Mean (Female)**	***t***	***df***	**Sig. (2-tailed)**	**Mean difference**
1. Gender on ad evaluation in terms of quality	5.2321	4.9000	1.637	260	.103	-.33214
2. Gender on ad evaluation in terms of clarity	5.4330	5.0966	2.004	261	.046	.33642
3. Gender on brand evaluation	4.5000	4.0388	2.284	260	.023	.46117
4. Gender on purchase intention	3.66	3.28	1.411	261	.159	.385

In terms of racial groups, class groups and college groups, there was no significant result. That is, race, class and college didn't influence participants' evaluation toward the target product in this study.

Summary of Results

In summary, the results of the *t*-tests suggest that mood and message characteristics have influence on people's information processing styles. In this case, people in a positive mood seemed to utilize relational processing to perceive the ad content while people in a negative mood tended to use item-specific processing. An experiential advertisement triggered a relational processing style on the ad content, whereas a utilitarian advertisement triggered an item-specific processing style.

Moreover, the message characteristics also influence evaluations toward the ad and the brand. People had higher evaluation toward the quality of the ad and the target brand when they were exposed to the experiential advertisement than the utilitarian advertisement. However, people had a more favorable evaluation of the clarity of the ad

when they were exposed to the utilitarian advertisement than to the experiential advertisement.

Results of this study indicated that mood and message characteristics have effects on people's information processing styles. Yet we failed to find any significant interaction effects between mood and message characteristics on evaluations and purchase intention.

CHAPTER 5

DISCUSSION AND CONCLUSIONS

This study investigated the impacts of mood and message characteristics on people's information processing styles, their evaluation of the advertisements and the brand, and their purchase intention regarding the target product. It was expected that this study would show that mood would influence people's information processing styles; that is, a positive mood would trigger more relational thoughts whereas a negative mood would trigger more item-specific thoughts. This study also predicted that different message characteristics would influence people's information processing styles. It was expected that when people are exposed to an experiential ad, they would report more relational thoughts. In contrast, it was expected that when people are exposed to a utilitarian ad, they would report more item-specific thoughts. Also, it was expected that the results would show significant interaction effects between mood and message characteristics on ad evaluation, brand evaluation, and purchase intention.

The experiment involved two phases. The first phase manipulated mood (two levels: positive and negative), and the second phase presented two types of ad (experiential and utilitarian) for a Samsung smartphone. Since we took into account the possibility that some respondents already might have a Samsung phone, we asked about their current phone brand and their attitude toward it. Before participants watched the ad, a questionnaire was used to measure the dependent variables (recall, attitude toward the ad, attitude toward the brand, and purchase intention). A total of 263 participants were recruited from three journalism and advertising classes at Iowa State University. Testing

the effects of mood and message characteristics on information processing styles, the results indicated that mood and message characteristics influenced relational and item-specific processing. However, that processing didn't influence ad evaluation, product evaluation or purchase intention.

The first hypothesis predicted that a negative mood would trigger item-specific processing, whereas a positive mood would trigger relational processing. Participants were asked to write an essay about personal life events that made them felt really good (positive mood state) or really bad (negative mood state). To measure participants' existing mood state, participants were asked to indicate how they felt at that moment on a four-item, seven-point mood scale that was anchored by the following conditions: sad-happy, bad mood-good mood, irritable-pleased, and depressed-cheerful. After the mood manipulation, they were asked to watch and write down their thoughts about an ad (experiential or utilitarian) and the brand in the ad. Respondents' thoughts about the ad and the brand were examined to assess the type of elaboration that occurs in the different experimental conditions.

Two coders were asked to code respondents' thoughts into two categories using the coding scheme proposed by Malaviya et al. (1996). To analyze respondents' thoughts about the ad, findings demonstrated that a positive mood triggered more relational processing than item-specific processing, whereas a negative mood induced more item-specific processing than relational processing. These findings are consistent with previous studies on the effects of mood on type of elaboration (Fiedler et al., 2003; Lee & Sternthal, 1999; Storebeck & Clore, 2005). However, when analyzing

respondents' thoughts about the target brand, findings demonstrated that both positive and negative mood groups triggered relational processing.

After reviewing all answers from the respondents, many respondents mentioned their own smart phone brand when they were asked about their thoughts on the target brand, such as "I love my IPhone." Therefore, one of the reasons leading to the lack of difference might be that asking respondents' opinions on the brand reminded them of the brand they were using and led them to compare the brand in the advertisement with their current brand. Therefore, many answers that mentioned the owners' current brands were coded as relational thoughts, which resulted in a failure to detect the effects of mood on information processing styles.

The second hypothesis predicted that a utilitarian ad would trigger an item-specific processing style, whereas an experiential ad would trigger a relational processing style. Two video commercials about a Samsung Galaxy product were edited and developed as a stimulus for an experiential advertisement and a stimulus for a utilitarian advertisement. Two seven-point scales were used to assess the extent to which the participants perceived the experiential and utilitarian message characteristics of the advertisements as expected. The statistical results indicated that the manipulation of message characteristics was successful, and the findings showed that message characteristics could trigger different processing styles. In other words, an experiential stimulus could trigger more relational processing than item-specific processing, whereas a utilitarian stimulus induced more item-specific processing than relational processing. Since few studies have examined whether people use different processing styles to process experiential and utilitarian advertisements respectively, these findings add new

knowledge about the relation between ad type and information processing styles. Findings indicate that experiential and utilitarian message characteristics indeed trigger relational and item-specific processing styles respectively.

The third and fourth hypotheses predicted that the interaction effects between mood and message characteristics would be significant, since previous studies suggested that learning and evaluation will be highest when people utilize both types of processing. However, no interaction effect was found between mood and message characteristic on ad evaluation, brand evaluation and purchase intention. The findings revealed only that there were strong main effects from the message characteristic. That is, people in both positive and negative mood groups evaluated the ad and the product more favorably when they were exposed to the experiential stimulus than did those who were exposed to the utilitarian stimulus. These results indicate that the influence of message characteristics might be too strong, causing a failure to detect the effects of mood. Based on the respondents' thoughts about the advertisements, many participants said the ad was very interesting when they watched the experiential ad whereas those who watched the utilitarian ad said they thought the ad was boring. Thus, it is also possible that the difference in the quality of the two stimuli hindered the interaction effects of mood and ad type. Another possibility accounting for the failure to detect the interaction effects might be the use of an online questionnaire. Participants were required to type and fill out the questionnaire on a computer screen. However, some other studies prefer a paper-based questionnaire instead of an online one to test the effects of mood and advertisements.

Another finding that was not a hypothesis concerned the attitude change among participants who already were Samsung owners before they watched the advertisements. The Samsung owners showed a significantly positive change in their attitude toward the Samsung product after they were exposed to the advertisements. One possible reason for this attitude change could be explained by cognitive dissonance theory (Festinger, 1957), which suggests that people are most likely to seek out information about their product after they purchase it. And the main purpose of the search after purchase is to justify that they made the correct decision. Even though this study was not meant as a test of cognitive dissonance, the results are supportive. This tendency might have influenced with other possible effects.

Implications of the Findings for Theory

Cognitive tuning theory (Friedman & Forster, 2002) posits that people in positive states are likely to behave in an exploratory manner and focus more on relationships among items, whereas people in negative states assess matters carefully in precise detail and employ item-specific elaboration that focuses more on particulars. The findings of this study align with cognitive tuning theory in the context of advertisements.

The findings of this study echo those of Samuelsen and Olsen (2010), who found that experiential claims triggered more episodic memories whereas functional claims triggered mostly semantic memory. As Hypothesis 2 predicted, an experiential advertisement evoked people's autobiographical memories and made them use relational elaboration to process the experiential advertisement. Their past experiences with a

product were evoked and thus they retrieved more information about the product using experience instead of product information.

The finding of this study on Samsung owners' attitude change supports the theory of cognitive dissonance. The theory of cognitive dissonance predicts that people will tend to look for information or ideas that maintain consistency and avoid the discomfort of incompatible opinions (Festinger, 1957). The underlying theory holds that an individual seeks balance and consistency of attitudes and values, and consequently avoids or misperceives incoming messages (e.g., from the advertisements) that challenge settled opinions and beliefs. In so far as cognitive consistency dominates, it will encourage reinforcement of existing views. In this study, the Samsung owners became more positive about the Samsung brand after they watched the Samsung commercial. It could be that their pre-existing attitude was strengthened by exposure to the Samsung ad.

Implications of the Findings for Professional Practice

Findings of this study have some implications for advertising practitioners. For instance, the strong effects of message characteristics suggest that ad and product evaluation might be optimized when consumers are exposed to an experiential stimulus.

Moreover, the results indicated that audiences might have higher evaluations toward the experiential stimulus in terms of ad quality. Experiential ads could be used to attract consumers' attention. However, the audience had higher evaluation toward the utilitarian stimulus in terms of ad clarity. Utilitarian ads could be used to offer more detailed information to consumers.

Limitations of the Study and Suggestions for Further Research

There are some limitations on the extent to which the findings can be applied in some situations. First, the participants were all students at Iowa State University who might have their own preferences in smart phone brand (e.g., Apple's IPhone). Thus, their evaluation and behavioral intentions may not necessarily reflect, and may not significantly correlate with, actual behavioral outcomes. The sample's demographic characteristics were quite homogeneous in terms of age and smart phone brand preference, since more than half of the respondents were IPhone users who had a very positive attitude toward their cell phone. The findings of this study show that non-Samsung owners have a different brand attitude than Samsung owners, which might indicate that brand preference would influence brand evaluation. Also, it is possible that people older than college students might have neither strong brand consciousness nor own a smart phone. Therefore, we suggest that future studies should test the same research questions on a more heterogeneous population (i.e., with more diverse brand preferences). Also, since the brand preferences might lead to bias on brand evaluation, we suggest future studies should use a target product that does not exist.

Second, multiple *t*-tests were applied for analysis in this study, which might increase the Type I error and lower the confidence level. We could use Bonferroni *t*-test to adjust this problem. However, since most of our results got very significant p-value, <.001, we are confident that the multiple *t*-test would not affect the overall results.

Third, the two stimuli were not the same in terms of ad quality. Indeed, some participants provided open-ended remarks about the utilitarian ad, saying that, "Higher ad quality would have pulled me in much more." This may have somehow affected the

participants' evaluations of and attitude toward the utilitarian ad, and consequently, their attitude toward the Samsung smart phone. In the pre-test of this study, we only asked respondents to discern the two message characteristics but not the quality of the ad. Future studies should be more careful about the existing difference in stimuli quality and test this difference in a pre-test.

Fourth, the 9 items in the original index of participants' attitude toward the ad didn't measure the same concept, and some of the items indicated ad quality whereas others indicated ad clarity. Further studies should be careful about using this index.

Moreover, findings of this study imply that information processing style could be triggered by mood and message characteristics respectively. Further studies using mood or message characteristics to manipulate information processing styles should be able to test the influence of information processing styles and their interactions on other variables.

Based on the findings of this study, future experiments should carefully manipulate the message characteristics, and a pre-test should be conducted to detect if the quality of the stimuli itself will influence people's attitude.

Deeper insights about cognitive dissonance can be gleaned from more detailed studies. The findings of this study suggest that people tend to have a more positive attitude after they purchase the same brand product. More studies could be conducted to investigate the effects of cognitive dissonance.

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APPENDIX

QUESTIONNAIRE

This study includes two phases. In the first phase of this study, you will be asked to write down a personal story. In the second phase of this study, you will be shown an advertisement and will need to answer some questions about the advertisement.

First Phase: Please answer the following questions as truthfully as possible and provide as much detail as possible for each question. As you answer each question make sure that you try to make your answers as positive (negative) as possible so that the person who reads your answer will also feel positive just from reading your answers. You have 5-10 minutes to do this task.

Please briefly describe five events or situations that made you feel really GOOD (BAD).

Please select one of the above events/situations and describe it in more detail.

1. Feeling
Using the following range of responses, please circle only one number to indicate how you were feeling when you were writing the essay about the moment in your life you identified in Question No.2 above. *(Please circle one)*

Sad	1	2	3	4	5	6	7	Happy
Bad mood	1	2	3	4	5	6	7	Good mood
Irritable	1	2	3	4	5	6	7	Pleased

Depressed 1 2 3 4 5 6 7 Cheerful

Second Phase:
You will be asked to evaluate an advertisement about a smart phone. Before the advertisement, please answer the following questions related to your smart phone usage.

2. Do you have a smart phone?

Yes. [ ] No. [ ]

3. What is the brand of your current smart phone?

_____

4. What is your attitude toward the smart phone?

Very negative 1 2 3 4 5 6 7 Very positive

(Place Advertisement here):

5. Please take as much time as you need to write down your thoughts and feelings about the advertisement.

6. Please take as much time as you need to write down your thoughts and feelings about the brand in the advertisement.

III. Using the following range of responses, please circle the number that best describes your perception about the commercial.

7. This commercial for Samsung Galaxy informs me about:

Functions of this product 1 2 3 4 5 6 7 Experiences using this product

8. This commercial for Samsung Galaxy makes me think of:
Functions of this product 1 2 3 4 5 6 7 Experiences when I'm using this product

III. Please indicate your level of agreement with the following statements:

9. I knew a lot about this product before seeing the ad.

Strongly disagree [ ] Disagree [ ] Neutral [ ] Agree [ ] Strongly agree [ ]

10. In general, I have a positive feeling toward this product.

Strongly disagree [ ] Disagree [ ] Neutral [ ] Agree [ ] Strongly agree [ ]

11. I would like to buy this product some day.

Strongly disagree [ ] Disagree [ ] Neutral [ ] Agree [ ] Strongly agree [ ]

12. Using the following range of responses, please circle the number that best describes your evaluation of the advertisement. *(Please circle one)*

Bad	1	2	3	4	5	6	7	Good
Dislike	1	2	3	4	5	6	7	Like
Poor quality	1	2	3	4	5	6	7	Good quality
Confusing	1	2	3	4	5	6	7	Clear
Not interesting	1	2	3	4	5	6	7	Interesting
Not informative	1	2	3	4	5	6	7	Informative
Not useful	1	2	3	4	5	6	7	Useful
Not convincing	1	2	3	4	5	6	7	Convincing
Difficult to understand	1	2	3	4	5	6	7	Easy to understand

13. Using the following range of responses, please circle the number that best describes your evaluation of the brand. *(Please circle one)*

Unimportant	1	2	3	4	5	6	7	Important
Of no concern me	1	2	3	4	5	6	7	Of concern to me
Irrelevant	1	2	3	4	5	6	7	Relevant
Means nothing to me	1	2	3	4	5	6	7	Means a lot to me
Worthless	1	2	3	4	5	6	7	Valuable
Trivial	1	2	3	4	5	6	7	Fundamental
Doesn't matter to me	1	2	3	4	5	6	7	Matters to me
Uninterested	1	2	3	4	5	6	7	Interested
Insignificant	1	2	3	4	5	6	7	Significant
Boring	1	2	3	4	5	6	7	Interesting

VI. Please circle the number that best describes your intention to purchase the product mentioned in the advertisement.

14. I will likely purchase this brand.

Strongly disagree	1	2	3	4	5	6	7	Strongly agree

15. I will likely not purchase this brand.

Strongly disagree	1	2	3	4	5	6	7	Strongly agree

16. Feeling

Using the following range of responses, please circle only one number to indicate how you are feeling at this moment. *(Please circle one)*

Sad	1	2	3	4	5	6	7	Happy
Bad mood	1	2	3	4	5	6	7	Good mood
Irritable	1	2	3	4	5	6	7	Pleased
Depressed	1	2	3	4	5	6	7	Cheerful

VIII. Please tell us a little about you.

17. What was your age on your last birthday? _____ years

18. Please indicate your gender Male Female Neither

19. Which one of these groups would you say best represents your race?

White
Black or African American
Asian
Native Hawaiian or other Pacific Islander
American Indian or Alaska Native
Cannot choose one race
I wish not to disclose

20. Which class year are you in?

Freshmen
Sophomore
Junior
Senior

21. Which one of the following college are you in?

Agriculture and Life Sciences
Business
Design
Engineering
Human Sciences
Liberal Arts and Sciences
Veterinary Medicine