

2

EMOTION AND REASON

*“ . . . and blest are those
Whose blood and judgment are so well comingled,
That they are not a pipe for fortune’s finger
To sound what stop she pleases. Give me the man
That is not passion’s slave, and I will wear him
In my heart’s core, ay, in my heart of heart,
As I do thee.”*

(Hamlet, III, 2)

*“Oh judgment, thou art fled to brutish beasts,
And men have lost their reason.”*

(Julius Caesar, III, 2)

The interplay of emotion and reason in the human mind has interested poets, psychologists, and philosophers. William Shakespeare, Sigmund Freud, and Bertrand Russell, to name just a few, have all pondered the nature of the relationships that govern the struggle between these archetypal aspects of the human psyche. Do they work together or separately? Under what conditions is one more dominant than the other? What are the sources in the human brain that lead to greater emotionality and greater rationality in people? And what are the sources in the outside environment that provoke, stimulate, and engender particular thoughts and feelings?

The answers to some of these questions are also of some significance to those in the persuasion “business.” For instance, marketing and advertising practitioners have always used emotional and rational appeals in promoting ideas, goods, and services. A Hallmark television commercial draws heavily on emotional devices like nostalgia, family affection, and children. A print advertisement for a mid-sized sedan uses both emotional and rational appeals in the slogan, “Drive Safely.” This chapter addresses the interplay of emotion and reason, their relative merits and uses in advertising and media planning, and their role in product positioning.

THE NATURE OF AFFECT

Although feelings are intrinsic to human beings, the study of affect (Emotion III) in specifically market persuasion situations has only recently begun. There was some interest during the 1950s and 1960s regarding emotional exploitation in advertising, but, in general, the role of affect in marketing applications did not begin to be studied until the early 1980s. This was probably because affects or feelings are difficult to assess because they are not amenable to control and evaluation as are the more often mentioned thoughtful, rational processes.

Since then, the marketing literature has established that affective executions of ads lead to more favorable attitudes for the product, because the liking for an advertisement gets conditioned onto the brand itself and becomes part of the attitude to the brand (Gorn, 1982). This may take place in the total absence of rational beliefs and product attributes. Some social psychologists disagree with this and consider affects to occur after rational processing has taken place (i.e., affects are dependent on reason because they occur after and as a result of rational processing). On the other hand, work done in the field by Zajonc (1980) bears out the independent nature of affective judgments. Zajonc has shown that affects may indeed precede rational processing. Moreland and Zajonc (1977) exposed subjects to Japanese ideographs and recorded a variety of recognition and liking judgments. Experimental evidence was obtained to show that reliable affective discrimination (like-dislike ratings) can be made in the total absence of a rational process such as recognition memory.

Characteristics of the affective component as described by Zajonc (1980) are:

- *Affects are primary.* They govern our first response to the environment and determine out subsequent relations with it. Very often we delude ourselves that we have arrived at a decision in a rational manner, whereas in reality, the decision has been made on an "I like it" basis. We may justify our choices by various reasons but it is the affective that has proved decisive.
- *Affects are basic.* Affective responses are universal among the animal species, irrespective of language or reason. Affects existed before language was evolved and before rational abilities were developed.
- *Affects are inescapable.* These experiences of affect occur with little control over them on our part. We may control the expression of emotion but we cannot escape the experience itself.
- *Affects are irrevocable.* Once an evaluation is formed on the basis of an affective response, it is not readily revoked. There is permanence to affect as, for example, in the abiding nature of our first impressions of people. Affective judgments are irrevocable because

they “feel” valid and we believe them to be “true.” Feelings may then well represent basic reality.

- *Affects implicate the self.* Affects identify the state of the person with relation to the object.
- *Affects are difficult to verbalize.* The communication of affect relies largely on nonverbal channels. Expressions of surprise, anger, delight, and serenity are very similar across cultures.
- *Affects may become separated from content and still remain.* The feelings caused by a book or movie are often readily accessible, though the contents may have been forgotten.

The last point indicates Zajonc’s main tenet that affective reactions need not depend on cognition. In the 1977 experiment mentioned before, Moreland and Zajonc showed 20 slides to pairs of subjects for 2 seconds each and at varying frequencies (0, 1, 3, 9, 27). Affect and recognition ratings were then taken. A strong path (.96) from stimulus exposure directly to subjective affect, independent of recognition, was found. Affective reactions to a stimulus may then be acquired by virtue of experience with that stimulus, even if not accompanied by a rational process such as recognition of the stimulus. In contrast to reason, affects are the first reaction to stimuli, are made without perceptual “encoding,” and are made with greater confidence and more quickly. Thus it is not necessary to “know” something before liking it. However, all rational cognitions are accompanied by affects despite parallel yet separate and independent systems.

To quote Zajonc (1980, p. 153) on the pervasive nature of emotions, he says, “There are practically no social phenomena that do not implicate affect in some important way. Affect dominates social interaction and it is the major currency in which all social intercourse is transacted.” For instance, one cannot meet a person without feeling some inner attraction or revulsion. Affective reactions are thus important because we do not simply see things as they are, but instead, we provide affective interpretations of them (e.g., not just a sunset, but a “beautiful” sunset).

COMPARING EMOTIONAL AND RATIONAL PERSUASION

Emotions can never be wrong. Understanding and the intellect can betray us and prove us wrong, but emotions are always true and real. There can be no doubt about the existence of feeling. This virtue has marketing applications. Consumers can be wrong about their beliefs about a product, but they can have no misconception about their emotional response to a product or advertisement. We, as marketers, may mistake how they feel and consumers themselves may not always reveal their true internal state. Nevertheless, if we can generate feelings, these will be genuine and accurate and, thus, more

resistant to competitive claims than a rational belief in the virtues of the product. Rational beliefs about products can be changed by competitors providing “new evidence” in the way of taste tests and the like. It will be much harder to change a consumer’s overall affective disposition to a brand. Beliefs are amenable to change; feelings are more resistant.

Buck (1984) makes the same point when he distinguishes between spontaneous communication, which is nonvoluntary, nonpropositional (cannot be false), and nonsymbolic, and signals meaning via a biologically based system, and symbolic communication, which is intentional, propositional, and functions on a socially shared system (such as language) between sender and receiver.

What would it take to change someone’s positive feelings of liking towards a brand? A price change? Bad word of mouth from a friend? A single bad experience with the brand? Nonavailability of the brand? None of the above? It would seem, then, that emotions can create long-term brand loyalty, which is the goal of most marketing campaigns. Of course, rational beliefs can lead to repeated buying of the brand as well. However, when you have an emotional commitment to the brand you may also have a superior kind of brand loyalty. Aaker (1991) distinguishes between different types of brand loyalty. Contrast, for example, the car buyer who buys a Beetle because she “loves” it and the buyer who buys a Hyundai because it is cheaper. Whose loyalty could you count on in the future?

Emotions are global. By showing photographs of facial expressions to observers, Ekman and Friesen (1975) identified six widely occurring emotions, usually referred to as the six basic affects: happiness, sadness, fear, anger, surprise, and disgust. Darwin’s (1872) seminal book on facial expressions established that such expressions are universal and not cultural. Affects are basic and common across cultures and universal in their signal systems. Thus, affects produce more predictable reactions across consumer segments than cognitive systems, which are different across cultures.

Emotional treatments would thus be preferable to rational treatments for “global” advertising. If you remember that emotional communication is “spontaneous,” then this enhances the utility of emotional messages in global persuasion campaigns. Notice how large companies with worldwide operations are developing logos and advertisements that are largely nonverbal and thus easily translated (emotionally) across cultures. Nike has replaced its name with just a swoosh. Coke uses ads with nonspeaking polar bears whose appeal can be “understood” (again, emotionally) in any culture. This emotional language is the new persuasion strategy in global marketing.

Emotions are fundamental. Ray and Batra (1983) state that the affective is the first level of response and governs our subsequent relations with the environment. It primes and makes available the inference rules that

favor positive appraisals, because it creates uncritical judgments of a favorable nature. Cognitive defenses are lowered by emotional treatments. Very often, we use rational arguments to justify what we really “feel” like doing. Volvo uses this in the headline of an ad urging Americans to buy the car in Europe because it is cheaper—“How to justify a European vacation.” The “real” reason is the pleasure of touring Europe in a new sedan. The justification is the rationality of obtaining a lower price for the car while in Europe.

Emotions are fast, catchy, and memorable. Emotional appeals lead to better attention getting, better processing of information, and better retention in memory (Ray & Batra, 1983). Because these appeals are often (but not always) nonverbal they are also quicker to communicate. A picture speaks faster than a sentence and, once again, this type of “spontaneous” communication has an impact very different and often more complete than that of “symbolic” communication using words.

Emotions are permanent. According to Zajonc (1980), we have little control over affects and once evoked, they are irrevocable. Affects may become separated from content and still remain. We may forget the content of a book, movie, or advertisement, but not the feelings elicited by them. This is especially significant for marketing communications because affective attitudes may, thus, be less conducive to change than cognitive ones. For instance, whereas cognitive brand attitudes can be changed by merely supplying competing information of a more favorable kind (price appeals, etc.), brand attitudes created by affect may be more abiding and even irrevocable because, according to Zajonc, these are also independent of content.

Emotions are independent of rational cognition. Affects do not depend on rational cognitions, whereas all social phenomena involve affects (Zajonc, 1980). Affective reactions may be acquired by virtue of experience with a stimulus, even if not accompanied by a rational message. However, all rational cognitions are accompanied by affects—we do not see an advertisement without interpreting it as a “good” or “bad” ad.

Overall, emotional positioning is inherently superior to positioning your brand only on rational attributes. Your brand’s competitors can copy your rational product benefits and say that they “do it better.” However, if you have created a long-term emotional image for your brand, your competitors would be foolish to copy it. Think about it. If you used cowboys in a cigarette ad or babies in an automobile tires ad, who would consumers think the ad was for? You would actually be spending your ad dollars to promote Marlboro or Michelin!

Can you think of disadvantages of emotional treatments in advertising? I can think of one—they are more risky in terms of creating a controversy. Think of the Calvin Klein ads, which have been accused of child pornography, or the Benetton ads, which used emotional themes like

AIDS, war, and racism. These are all ads that have stirred negative feelings in people, and the sponsors of these ads have been criticized for poor taste. Will this negativity carry on to sales of the products? Or will the publicity generated by the ads create greater recall of the brands? For instance, the “sleeper effect” might lead us to believe that, over time, people may forget the negative element and just focus on the brand, in which case, they are really discussing an advantage of emotional treatments! However, in general, most companies play it safe and do not actively pursue a strategy of offending people. Emotional treatments using socially sensitive themes are too risky!

Another caveat to remember is that “image” without substance is not likely to work in the long run. Emotional persuasion must be backed up by quality products and services. I think it was Abraham Lincoln who said that “You can fool some of the people all of the time, and all of the people some of the time, but you cannot fool all of the people all of the time.” Not that emotional persuasion is the same as “fooling” people. Not at all. But, with most products, you need to satisfy the rational as well as the emotional needs of your consumers.

RESEARCH RESULTS¹

A Study of the Independence of Emotion and Reason

Purpose of the Study

The subject of the independence of affect from cognition has been a controversial one (Lazarus, 1984; Zajonc, 1980). According to Zajonc, affect can be evoked prior to cognition and it can be independent of cognition. On the other hand, Lazarus has argued that affect is dependent on cognition. Consumer researchers (Anand, Holbrook, & Stephens, 1988; Tsal, 1985) have also contested the notion of the independence of affect. Others (Heath, 1990; Janiszewski, 1988) have continued to espouse the mere exposure (Moreland & Zajonc, 1977) effect through which affect is supposed to obtain its effect independent of recognition.

Most studies have tested affect using generalized affect measurements such as like-dislike ratings. The purpose of this study is to test the independence of affect using qualitatively different types of affects such as prosocial feelings, based on paleocortical (limbic) parts of the brain, and reptilian feelings, based on subcortical areas (MacLean, 1993). Recent brain research shows that certain emotional structures in the brain receive

¹ This research is reprinted with permission from the 2004 AMA Winter Educators' Conference Proceedings, published by the American Marketing Association, Chaudhuri, Arjun, 2004, Vol. 15, 286–292.

information independently of the neocortical structures associated with cognition (LeDoux, 1996). Thus, it is possible that different types of affect may function differently in their relationship to cognition. Buck and his colleagues (1988, 1995, 1999) have argued that reptilian emotions involve “raw” sex and aggression whereas prosocial-limbic emotions involve attachment, which serves as the basis for feelings such as love, pride, and pity. Buck and his colleagues have also developed the ARI (Affect, Reason, Involvement) model in which reason and affect combine in different proportions, suggesting that affect is not an undifferentiated concept and that different types of affects may have different relationships with reason or cognition. It may be that both Zajonc and Lazarus are right, depending on which type of affect is in question.

Accordingly, I conducted a study of the independence of affect using both prosocial and reptilian feelings as dependent variables and using a task manipulation to create the effect of cognition. The two ads described by Buck et al. (1995, p. 446) were used as the stimuli in the experiments, and these two ads will be referred to as the patriotic and sexual ads in the study. The effect of gender, familiarity with the ad, and attitude to advertising on prosocial and reptilian feelings was also studied. In addition, I examined the effects of all these variables on attitude to the ad because this concept includes liking ratings that have been used in previous research on the independence of affect (Anand, Holbrook, & Stephens 1988; Zajonc & Moreland, 1977). The main research questions in the study were as follows:

1. Are prosocial and reptilian feelings evoked differently for (a) different types of ads and (b) the different types of task environments in which they are viewed?
2. Do certain types of ads evoke prosocial/reptilian feelings under certain task environments?
3. Are prosocial ads more effective in terms of attitude to the ad (liking for the ad)? Is this effect greater in a high task condition?

Hypotheses

As discussed, Buck et al. (1995) suggest that the sexual ad used in this study should evoke reptilian feelings of sex, power, and other feelings associated with the reptilian brain, as discussed by MacLean (1973, 1990). The patriotic ad, in contrast, should evoke prosocial feelings, associated with the centers of affiliation in the mammalian brain, such as compassion, sympathy, and sadness. Thus, there will be a main effect of each ad type, such that,

- H1:* Prosocial feelings will be higher in the patriotic ad than in the sexual ad.
- H2:* Reptilian feelings will be higher in the sexual ad than in the patriotic ad.

Kardes (1988) states that personal relevance (or involvement) should increase the amount of cognitive effort allocated to message processing. I submit that prosocial feelings are *not* independent of cognition and, in fact, require cognitive effort and, thus, will benefit from the cognitive processing present under conditions of high task involvement. Further, that this will be in evidence for the patriotic ad but not for the sexual ad in a high task/cognition condition. On the other hand, reptilian feelings *are* independent of cognition and, thus, they will benefit from a low task involvement condition in which there is less competition for processing capacity from cognition. This will be in evidence for the sexual ad but not for the patriotic ad under conditions of low task involvement.

Anand, Holbrook, and Stephens (1988) state that under the independence hypothesis, affect and cognition compete for processing capacity and that this resource competition view is completely opposite to the affect dependence hypothesis under which "an increase in cognitive processing should result in greater positive affect that should move cognition and affect together." Therefore, because cognition is more available for prosocial feelings in a high task involvement situation, prosocial feeling should be greater in the more conducive environment of the high task involvement condition, especially for an ad that promotes such prosocial feelings. Thus, prosocial feelings will not be higher simply because of the level of involvement (i.e., there will be no main effect of task involvement for prosocial feeling). It will depend on the nature of the ad as well.

H3: There will be an interaction effect of ad type and task involvement such that in a high task involvement situation, prosocial feelings will be higher than in a low task involvement situation for the patriotic ad.

If the resource competition view is correct and affect and cognition fight for processing resources (Anand, Holbrook, & Stephens, 1988), then reptilian feelings, which are independent of cognition, should benefit from a decrease in cognitive activity in the low task condition. Thus, reptilian feelings should be higher in the low task condition because there will be less competition from cognition in this condition. In the high task condition, reptilian affect and cognition will compete for processing resources and there will be less available resources in that condition so that affect generation will be hindered. As before, this will also depend on the type of ad (sexual in this case) and not on the level of task involvement alone. Obviously, subjects will not feel reptilian affect only as a function of the task involvement. However, the sexual ad in the low task condition should create greater reptilian affect than in the high task condition, and this difference should be greater than the difference in the two conditions as a result of the patriotic ad. Hence,

H4: There will be an interaction effect of ad type and task involvement such that in a low task involvement situation reptilian feelings will be higher than in a high task involvement situation for the sexual ad.

Attitude to the ad measures usually include the like-dislike ratings used in previous studies on the independence of affect. Thus, I included attitude to the ad as a dependent variable in the study to see if the results replicate any of the results for the prosocial or reptilian feelings. It has been well documented that feeling responses influence attitude to the ad (Brown & Stayman, 1992; Muehling & McCann, 1993). At the same time, Stayman and Aaker (1988) found that not all the effects of ad-induced feelings were mediated by attitude to the ad. Further, Chaudhuri and Buck (1995) tested 240 ads for prosocial and reptilian feelings and found that prosocial feelings were strongly and positively related to liking for the ad (similar to attitude to the ad) but that there was no relationship between reptilian affect and liking for the ad. Perhaps reptilian affect is effective in other ways in advertising, such as recall of the ad. Thus, because the patriotic ad should create prosocial feelings and prosocial feelings have been related to liking, I posit that

H5: Attitude to the ad will be higher for the patriotic ad than for the sexual ad.

The Elaboration Likelihood Model (Petty & Cacioppo, 1986) posits that attitude formation should be greater under conditions of high involvement. However, this holds for messages using central routes to persuasion such as those found in rational, argument-based messages. The patriotic and sexual stimuli in this study fall into the peripheral route category and, thus, in keeping with the ELM, I posit that

H6: Attitude to the ad will be higher in the low task involvement condition than in the high task involvement condition.

Because both ads are likely to follow the peripheral route, I do not offer an interaction hypothesis for ad type and level of interaction with attitude to ad as the dependent variable. In other words, there should be no difference in attitude to the ad for the two ads based on the level of task involvement. Also, the findings using like-dislike ratings in past studies on the independence of affect (Anand, Holbrook, & Stephens, 1988; Zajonc & Moreland, 1977) have provided conflicting evidence. Thus, it is unwise to predict an interaction effect at this juncture. At the same time, it will be interesting to note which, if any, of the results of the other dependent variables may be reproduced for attitude to the ad.

Method

Stimuli

Two print advertisements with no verbal elements were the stimuli in the study. These were chosen because previous research (Buck et al., 1995) identified these as effective in the elicitation of reptilian and prosocial feelings. It was expected that the “patriotic” ad with the soldier embracing the child would engender prosocial feelings whereas the other, “sexual,” ad, depicting a half-naked man and a woman in a passionate embrace, would engender reptilian feelings. The ads were distributed to the subjects in a package containing the other elements in the study as described next.

Subjects and Procedure

One hundred and sixteen undergraduate students (67 men and 49 women) participated in a study with two different factors. In addition to the ad type factor, task involvement was manipulated in the following way. The high task involvement group was told that they would receive course credit for reading an article and correctly answering questions on the article. The article provided was a difficult piece on critical relativism and the falsity of realism, which required cognitive effort and concentration. Subjects were given a package containing the article on the first page, the ad (either patriotic or sexual) on the next page, and the questionnaire on the following pages. Before the article was handed out to the subjects, they were told not to turn to the second page until instructions to do so were given. Subjects were then given 5 minutes to read the first page. After that, subjects were asked to turn to the second page and look at the ad. Next, they were instructed to turn to the third page and fill in their ratings for the ad just viewed and to proceed on to the rest of the questionnaire. On completing the questionnaire, subjects were debriefed on the actual purpose of the study. In the low task involvement group, subjects were not told that they would receive course credit for the task or that they would have to answer questions on the article. The article provided in the low task group was a relatively light reading piece on English social history.

Manipulation Check

Three scaled responses at the end of the questionnaire served as checks on whether the high and low task manipulation was successful. A seven-point scale (anchored by “not at all” and “very much”) was used for the following scale items: “How involved were you with the article? How much did you concentrate on the article? How much effort did you spend on the article?” For all three responses, the scores for the high task involvement group were higher and significantly different from the scores for the low task involvement group ($p < .01$).

Measures

The dependent variables were measured as follows on a seven-point rating scale. Subjects were asked to indicate how the picture they had just seen made them feel. Prosocial feelings were measured as the sum of subjects' responses to "sad, patriotic, sympathetic, compassionate, sorrowful, sentimental." Reptilian feelings were measured as the sum of the responses to "sexy, powerful, aggressive, excited, dominant, aroused." Principle components analysis of the 12 affect items showed two factors with eigenvalues greater than 1. The two factors explained 72% of the total variance in the items. All the prosocial items loaded greater than .76% on the first factor (39% of the total variance). All the reptilian items loaded greater than .77% on the second factor (33% of the total variance). Coefficient alpha for the prosocial items was .91. Coefficient alpha for the reptilian items was .92.

Attitude to the ad was measured as the sum of the responses to a seven-point semantic differential scale composed of "pleasant/unpleasant, favorable/unfavorable, likeable/unlikable, negative/positive, good/bad, interesting/uninteresting, irritating/not irritating." These items have been widely used to measure attitude to the ad in previous research (Muehling & McCann, 1993).

Controls

The following items served as two controls in the study. Prior familiarity with the picture was operationalized by "How familiar were you with the picture from before this task?" Attitude to advertising was measured as "In general, how much do you like advertising?" The means for these items (seven-point scale) were 2.18 and 5.02, respectively. Cox and Cox (1988) discuss how previous familiarity with an ad can affect attitudes, and MacKenzie and Lutz (1989) include attitude to advertising as an antecedent of attitude to the ad. Hence, these two items were included as co-variates in the study design.

Results

H1, H2, H3, and H5 were supported in the study, whereas H4 and H6 were not supported.

Prosocial Feelings as Dependent Variable

Analysis of variance for the effect of ad type on prosocial feelings found a significant main effect. Ratings for the patriotic ad (24.09) were significantly higher than for the sexual ad (10.25; $F = 114.55$; $p < .01$). Thus, H1 was supported.

As expected (H3), the effect of ad type was also moderated by a significant interaction effect of ad type with task involvement ($F = 10.51$; $p < .01$). The patriotic ad evoked greater prosocial feelings in the high

task condition (25.88) than in the low task condition (21.71). The results were exactly opposite for the sexual ad in which greater prosocial feelings were found in the low task condition (12.81) than in the high task condition (8.15). This finding suggests that the patriotic ad benefited from the greater cognitive processing available to subjects in the high task condition and lends supports to the view that prosocial feelings are dependent on cognition.

No significant ($p > .05$) effects for gender differences, familiarity with the ads, and liking of advertising were found.

Reptilian Feelings as Dependent Variable

There was a main effect of ad type for reptilian feelings as well. Ratings for the sexual ad (16.47) were significantly higher than for the patriotic ad (10.77; $F = 13.34$; $p < .01$). Thus, H2 was supported. However, there was no support for H4 because there was no significant interaction between ad type and task involvement for reptilian feelings ($F = .00$; $p > .10$). Thus, reptilian feelings were in evidence (from H2), but these varied by ad type and not by the effect of task involvement on ad type.

Although not hypothesized, there was a marginally significant effect for involvement ($F = 3.62$; $p < .10$) and for gender ($F = 3.46$; $p < .10$). Reptilian feelings were greater in the low task condition (15.43) than in the high task condition (12.37). Also, reptilian feelings were higher for men (15.01) than for women (11.94).

No significant ($p > .05$) effects for the covariates, familiarity with the ads, and liking of advertising were found.

Attitude to the Ad as Dependent Variable

There was a significant main effect of ad type on attitude to ad. The patriotic ad was rated higher than the sexual ad (36.22 and 32.22; $F = 6.86$; $p < .01$). Thus, H5 was supported. However, there was no significant main effect for task involvement ($F = 1.65$; $p > .10$) and H6 was not supported. Further, there was no significant interaction between ad type and task involvement ($F = .55$; $p > .10$). Although nonsignificant, the scores across the four groups reflected the same pattern of scores as with prosocial feelings, that is, for the patriotic ad, the means were higher in the high task group (36.5) than in the low task group (35.88), and the pattern was reversed for the sexual ad in which the low task group was higher (35.11) than the high task group (29.85).

Interestingly, there was a significant interaction effect ($F = 19.81$; $p < .01$) of gender and ad type, such that women were lower than men in attitude to the ad scores for the sexual ad.

No effects ($p > .05$) for familiarity or liking of advertising were found.

Discussion

Prosocial and reptilian feelings were seen in this study to be different in nature and to be evoked under different conditions. Principal components analysis found two separate and orthogonal factors in the data on these feelings. Further, analysis of variance found that a patriotic ad evoked significantly greater prosocial feelings than reptilian feelings and that a sexual ad created significantly greater reptilian feelings than prosocial feelings. This is in keeping, generally, with previous research. Chaudhuri and Buck (1995) found that family appeals (based on affiliation, as are patriotic appeals) were positively related to prosocial feelings and negatively related to reptilian feelings. These authors also found that status appeals (based on power and dominance) were positively related to reptilian feelings but not related at all to prosocial feelings. Overall, there is evidence that these feelings exist independently and that they have different antecedents.

This study was also designed to see if these feelings occurred differently under different cognitive conditions. It was found that the patriotic ad created greater prosocial feelings under high cognition conditions than under low cognition. This finding confirms the cognitive-affective view of affect described by Anand, Holbrook, and Stephens (1988), which holds that if affect is dependent on cognition, it will be evoked more strongly under highly cognitive conditions. Interestingly, the sexual ad created fewer prosocial feelings in the high cognition condition than in the low condition. The sexual ad tended to inhibit and reduce prosocial feelings in a high cognition condition. For an ad that promotes reptilian feelings (as in the case of the sexual ad), which may be independent of cognition and not based on attachment to others, perhaps there was a “cognitive-affective crossfire” (Swann, Griffin, Predmore, & Gaines, 1987) or conflict in the high cognition condition such that prosocial feelings for the reptilian ad were lower in the high cognition condition than in the low task condition. In any case, the effect on prosocial feelings was exactly opposite for the two ads. Overall, consistent with expectations, there is evidence that certain types of affect (prosocial feelings in this study) are not independent of cognition.

However, contrary to expectations, the sexual ad did not generate significantly greater reptilian feelings than the patriotic ad in the low cognition condition over the high cognitive condition. Under the resource competition view described by Anand, Holbrook, and Stephens (1988), it was expected that the sexual ad would benefit from low cognitive conditions and elicit greater reptilian feelings under such conditions. Because reptilian feelings are not dependent on cognition, it was expected that a low cognition condition, where there would be less “competition” from cognition, would help the elicitation of reptilian feelings in contrast to a high cognition condition. Although the scores for both ads were higher in the

low cognition condition, the interaction of ad type and task condition was not significant. Thus, based on the resource competition view, there is no evidence in this study that reptilian feelings are independent of cognition.

Future research needs to address two issues. First, is the resource competition view adequate in explaining feelings such as reptilian affects that may be independent of the processing mechanisms utilized for cognition? The resource competition view assumes that affect and cognition share a limited amount of processing capability. It is possible that reptilian feelings are not only independent of cognition, but also independent of the same processing facilities that produce cognition. If so, then the amount of reptilian affect will be completely independent of the level of cognition and reptilian feelings will be equally present regardless of the task condition. If reptilian feelings do not require cognition and do not share the same processing facilities, then the level of task involvement may not matter at all. According to MacLean (1990), the three brains have evolved literally on top of one another over the course of evolution, so it is possible that there are greater interconnections between the mammalian (prosocial, etc.) and neomammalian (cognition) brains than between the reptilian and the neomammalian. Perhaps future developments in brain research will shed more light on this aspect of reptilian feelings.

Second, we need to understand better the effects and consequences of reptilian feelings. The patriotic ad that produced greater prosocial feelings also produced better attitude to the ad scores than the sexual ad that was found to create greater reptilian feelings. Previous research also found that reptilian feelings were not associated with either liking for the ad or purchase intent for the brand (Chaudhuri & Buck 1995). How, then, do reptilian feelings influence advertising responses? The question would seem to be a critical one, given that we know that reptilian feelings exist and are qualitatively different from other feelings, and that a large amount of advertising appears to be sexual in its appeal. Status appeals, used in ads for cars and the like, are also "power" appeals that have been shown to produce reptilian feelings in previous research. Once again, it seems incumbent on consumer researchers to try to fathom the mysterious depths of these ancient emotional systems that are a part of the ancestral heritage of the human brain.