DATE: May 18, 2006

I, Mary Lou Kohne, hereby submit this work as part of the requirements for the degree of:

Doctorate of Philosophy

in:

Business Administration (Marketing)

It is entitled:

Effects of Self-Affirmation and Individualistic-Collectivistic Appeals on Open-Mindedness and Advertising Effectiveness.

This work and its defense approved by:

Chair: Frank R. Kardes, Ph. D.
James J. Kellaris, Ph. D.
Edward B. Klein, Ph. D.
Effects of Self-Affirmation and Individualistic-Collectivistic Appeals on Open-Mindedness and Advertising Effectiveness

A Dissertation Submitted to my Dissertation Committee
In partial fulfillment of the requirements for the degree of

DOCTORATE OF PHILOSOPHY (Ph. D.)

In the Department of Marketing of the College of Business,
University of Cincinnati

2006
By Mary Lou Kohne
B.A., University of Cincinnati, 1975
M.B.A., University of Cincinnati, 1977

Committee Chairman: Frank R. Kardes, Ph.D.

Committee Members:

James J. Kellaris, Ph.D. and Edward B. Klein, Ph.D.
ABSTRACT

Effects of Self-Affirmation and Individualistic-Collectivistic Appeals on Open-Mindedness and Advertising Effectiveness

By Mary Lou Kohne
Chairman: Frank R. Kardes

Abstract:

Consumers often resist information that conflicts with their preexisting attitudes or beliefs. Resistance to advertising messages is common, even when the advertiser attempts to communicate important and novel messages. This research focuses on a new advertising technique called self-affirmation, which attempts to enhance consumers' self-perceptions to reduce resistance to persuasion. Two advertising experiments focusing on high-involvement product categories, including an on-line job search portal and hybrid/alternative fuel vehicles, explored the impact of self-affirmation on consumers’ open-mindedness to advertising messages and overall advertising effectiveness. This research offers the first demonstration of embedded self-affirmation working in the context of an advertising message.

Subjects were assigned to provide reactions to an advertisement containing either an affirmation treatment or control condition; effects of this advertising content on consumer elaboration, cognitions, and intentions were then studied.

Study 1 tested the impact of positive self-affirmation (ego inflation) on consumers’ responses to advertising about a hypothetical on-line job search portal. Study 1 involved the use
of a 2 x 2 between-subjects experiment of (1) Self-affirmation treatment versus a neutral control condition, by (2) High/low Need for Cognitive Closure.

Study 2 examined the impact of self-affirmation in conjunction with type of appeal (individualistic versus collectivistic). In a 3 x 2 x 2 between-subjects experiment, subjects were randomly assigned to one of the three treatment conditions (individualistic affirmation, collectivistic affirmation, or the control) where they viewed a prototype of a public service announcement promoting new types of energy-efficient vehicles and then provided reactions and attitudinal ratings. Results were analyzed by 3 treatment conditions (individualistic affirmation versus collectivistic affirmation versus control) X 2 (high versus low need for cognitive closure) X 2 (high versus low individualism/collectivism).

Results supported the hypotheses that affirmation affects open-mindedness and persuasion among certain groups of consumers. Individual difference variables of Need for Cognitive Closure and Individualism/Collectivism moderated the effects of self-affirmation on consumer reactions. Affirmation in advertising resulted in more open-mindedness only among individuals most likely to ordinarily rush to judgment (those high in Need for Cognitive Closure). It also influenced higher persuasion among individuals who a priori would be expected to be most resistant to advertising’s persuasive appeals—those high in Need for Cognitive Closure and who held low attitudes (high skepticism) about advertising in general. High individualists responded better to affirmations with an Individualistic appeal, while High Collectivists responded better to any type of affirmation (individualistic or collectivistic). Results support the usefulness of self-affirmation as a technique to reach consumers who are ordinarily highly resistant to advertising persuasion appeals, and the possibility of self-affirmation as a means to debias consumers’ processing of threatening information.
This research contributes to theoretical understanding in several ways. First, it expands what little is currently known about how self-affirmation works to influence consumer behavior. Second, it adds to both the persuasion literature and literature focusing on information processing in high involvement product categories. Finally, this research contributes to the understanding of the circumstances in which there is an opportunity for more unbiased consideration of products by considering the cognitive processing of the open-minded consumer. From a practical standpoint, this research will help advertisers understand how affirmation may be useful to communicate new and complex information for more unbiased consideration of benefits.
DEDICATION

For Don, Lauren, Jon and Madelyn
ACKNOWLEDGEMENTS

Among the many people who have influenced this work, the first person I must acknowledge is the late Dr. Ron Dornoff (Tiny). From my first meetings with Tiny, he was always a source of encouragement, and repeatedly through the years would ask, “Kohne, when are you coming back to get your doctorate?” He unfortunately is no longer here to see this, but his legacy lives on in the many people he recruited to the department. This leads me to acknowledge Bob Dwyer. A gentleman and scholar, Bob has always been a supporter. Bob’s call in late 2001 brought me back to teach at UC, which ultimately led me to pursue the Ph. D.

I especially want to acknowledge my committee. Frank Kardes has been an excellent teacher, role model, advisor, and supporter. Words cannot fully capture his knowledge, patience, and kindness. He has guided me during the entire process (from our first discussions about self-affirmation which led to my choosing to study it in a consumer behavior context as the dissertation topic) through the design and analysis of the experiments. I am hopeful that our relationship will continue and grow. James Kellaris was instrumental in my joining the doctoral program, and has constantly provided his expertise, insights and humor, through good and bad times. Ed Klein has been an excellent teacher and someone who has welcomed me into his research circle. I owe a debt of gratitude to each of my committee members for their time, attention, support and encouragement, during my doctoral program and this dissertation research.

In addition to my committee, I must acknowledge my friends L. F. (Rick) Noland, Dermot Hennessy, and the late Dr. G. James Short who took the time to read my original proposal and offer suggestions. Several other professors were very supportive in recruiting participants for this research. James Kellaris generously allowed me to conduct research on several occasions in his classes. Professors Constantine Polychroniou, Norm Bruvold, and Ric
Sweeney actively encouraged their students to participate in the second experiment using MediaLab. Without the support of these professors, the data collection for this research would have been more difficult.

My husband Don Kohne deserves special acknowledgement. He graciously sacrificed in many ways, so that I could pursue my doctorate and provided constant support for me to attain this goal.

Lastly, I must acknowledge my parents, William and Virginia Schlipf, for the loving foundation and work ethic they instilled in me from my birth. My self was constantly affirmed by their unconditional love and encouragement: that I could do whatever I put my mind to, and that I always needed to work hard, be honest, do the right things, and do my best. Perhaps my interest in self-affirmation originated with them. I hope to be such an affirmer of self to my children Lauren and Jon and granddaughter Madelyn.
# TABLE OF CONTENTS

| Chapter One  | Introduction .......................................................... | 2 |
| Chapter Two  | Background and Hypotheses Development .......................... | 5 |
| Chapter Three | Experiment 1  
Methodology .......................................................... | 22 |
|              | Results ........................................................................ | 25 |
|              | Discussion ..................................................................... | 30 |
| Chapter Four | Experiment 2  
Methodology .......................................................... | 32 |
|              | Results ........................................................................ | 37 |
|              | Discussion ..................................................................... | 45 |
| Chapter Five | General Discussion ....................................................... | 49 |
| References   | .................................................................................. | 56 |
| Appendices   | A -- Stimuli for Experiment 1 ......................................... | 60 |
|              | B -- Stimuli for Experiment 2 ......................................... | 61 |
|              | C -- Key Questionnaire Items for Experiment 1 .................. | 66 |
|              | D -- Questionnaire for Experiment 2 ............................... | 72 |
|              | E—Tables and Charts for Study 1...................................... | 76 |
|              | F—Tables and Charts for Study 2...................................... | 85 |
|              | G—Advertising Using Self-Affirmation Strategies................ | 102 |
CHAPTER ONE:

Introduction

Consumers often resist information that conflicts with their preexisting attitudes or beliefs (Sagarin, Cialdini, Rice & Serna 2002). Resistance to persuasive messages is common, even when the message contains important new information. This dissertation focuses on a new advertising technique called self-affirmation. This technique involves the advertiser specifically attempting to enhance consumers' self-perceptions. Interestingly, two new advertising campaigns which began in the summer of 2005—the Dove Campaign for Beauty and Nike sporting goods campaign—are using blatant self-affirming strategies to influence their targets. Another recent campaign in 2005 for Progressive Insurance used a more subtle form of self-affirmation combined with humor to communicate how their customers are given special treatment. A review of highly successful past advertising campaigns found that several used some form of self-affirmation in their messages. The Apple Computer “Think Different” campaign, Nike’s earlier “Just Do It” campaign, and the U.S. Army’s “Be All You Can Be” campaign were highly visible advertising approaches that affirmed the self of the audience.

Strategies using self-affirmations have attempted to reach consumers in several ways:

- Affirming unique destiny and free choice with “The only person you are destined to become is the person you decide to be.” (Nike)
- Affirming authenticity of self and body image: “Real women have real curves.” (Dove)
- Affirming genius and individual risk-taking: “Here’s to the crazy ones…the ones who see things differently… Because the people who are crazy enough to think they can change the world, are the ones who do.” (Apple Computer)
This study offers the first exploration of the effects of self-affirmation in advertising on consumer cognitions and behavior. While no marketing theory specifically addresses how self-affirmation works in advertising, social psychologist Claude Steele’s Self-affirmation Theory (1988) offers an explanation about how self-affirmation helps individuals cope with threats to self-image. Based on his theory, self-affirmation may work by reducing resistance to persuasion.

Psychological research has demonstrated how self-affirmation in one domain leads people to be more open-minded and acknowledge the merits of counterattitudinal messages they would otherwise reject (Correll, Spencer and Zanna 2004). Affirmation-induced openness to counterattitudinal information works because open-minded people are more objective (less biased) and more sensitive to argument strength, and thereby judge an argument on its merits.

Focusing on high-involvement product categories, this research explores the impact of self-affirmation on consumers’ open-mindedness to advertising messages and overall advertising effectiveness. Two experiments focus on advertising about high-involvement categories and life choices such as finding a job using an on-line job search portal and a public service announcement promoting energy conservation and adoption of alternative fuel vehicles. The research examines how self-affirmation in advertising affects consumers’ attitudes about these high-involvement products. It is hypothesized self-affirmation results in more open-mindedness and elaboration on information and ultimately persuasion about an advertised product.

**Potential Contribution:**

No research has been published within the marketing literature about self-affirmation and its effects on consumer cognitions and behavior. The present research contributes to theoretical understanding in several ways. First, it provides the first exploration about how self-affirmation
works to influence consumer behavior. Second, it adds to both the persuasion literature and literature focusing on information processing in high involvement product categories. Finally, this research contributes to the understanding of the circumstances in which there is an opportunity for more unbiased consideration of products by considering the cognitive processing of the open-minded consumer.

**Potential Impact:**

From a practical standpoint, this research helps advertisers understand how to engage consumers to consider messages more objectively. High involvement product categories often require an advertiser to communicate complex, new information that conflicts with a consumer’s prior attitudes or beliefs. Strong new arguments can pose more of a threat to a person’s sense of self-worth. If self-affirmation is shown to work as hypothesized, advertisers will understand how the use of this new technique can improve communication of complex information to consumers for more unbiased consideration of benefits.
CHAPTER 2:

Background and Hypotheses Development

Research on Resistance to Persuasion

Decades of research on social influence and marketing has studied what is persuasive. The study of persuasion, defined as attitude change resulting from exposure to information from others, is the one research topic within the attitude literature that has received the most attention (Olson & Zanna 1993). McGuire (1968) argued that persuasion requires both reception of the message (attention and comprehension) and accepting its conclusions. Jacks and O’Brien (2004) specifically declare that resistance is not a mirror image of acceptance, but consider it a “motivated state in which the goal is to withstand the effects of a persuasive communication.” Resistance takes many forms. Cognitive resistance often results in counter-argumentation, attitude bolstering, or source derogation. Affective resistance results in anger or irritation. Behavioral resistance leads to avoiding counter-attitudinal information. The Jacks and O’Brien definition specifically addresses the motivational component as essential in resistance, and stresses the person having preexisting strongly held attitudes as a precondition for resistance. This distinguishes resistance from a lack of persuasion resulting from apathy or ignorance.

A large body of evidence has accumulated that people resist the efforts of persuasive communications when the information presented is in conflict with strongly held beliefs or attitudes (Sagarin, Cialdini, Rice & Serna, 2002). An individual’s need to protect the self-concept when threatened serves as a key motivation for resistance to persuasion efforts (Jacks and Cameron 2003). Self-concept protection motivations result in individuals being highly motivated to resist persuasion attempts when threatened. Conversely, when a person’s self-esteem or concept is bolstered in some other way, motivation to resist persuasion is reduced.
The debate continues about what is effective and ineffective in creating permanent attitude change. Petty and Cacioppo (1996) conducted a review of numerous studies to conclude that cogent messages produce more persuasion under conditions of “high issue involvement,” while specious messages were less effective in high involvement conditions. They found that when people were motivated and able to process the information, they successfully discriminated between messages worthy of persuading them from those that needed to be rejected.

Sanbonmatsu and Kardes (1988) studied the effects of arousal on information processing and persuasion and found that argument strength affected persuasion only under conditions of moderate arousal, consistent with the Elaboration Likelihood Model (Petty & Cacioppo 1986).

Cronley (2000) reported on numerous persuasion studies showing:


A meta-analysis by Johnson & Eagly (1989) distinguished that “outcome-relevant involvement” (where the issue will affect the outcomes of the perceiver) had the effects described by Petty and Cacioppo, but that “value-relevant involvement” (where the subject is relevant to the person’s values) was associated with weaker persuasion. Fazio’s (1990) MODE model (Motivation and Opportunity as Determinants of the Processes through which attitudes influence behavior) delineates spontaneous (automatic) influences from controlled (deliberate).
Accessible attitudes automatically influence behavior. Consistency between attitudes and behavior are linked to high knowledge, elaboration, and confidence among consumers.

**Resistance to Persuasion:**

All persuasion implicitly attempts to overcome resistance. Resistance to persuasion can take several forms:

1. Resistance to the influence attempt (reactance)
2. Resistance to the proposal (skepticism)
3. Resistance to change (inertia)

McGuire (1964) developed the inoculation theory related to resisting persuasion. His model of persuasion states that a person must have two conditions in order to resist attempts at persuasion: the *motivation to resist* and the *ability to resist*. McGuire believed that people first had to be motivated by feelings of vulnerability to attend to reasons and arguments. McGuire called resistance “the ability to call on information and logic in repelling an attack” and dealt with cognitive aspects of resistance (such as “I don’t believe it”) more so than with affective (“I don’t like it) or behavioral (“I won’t do it). In a forthcoming chapter on strategies to overcome resistance to persuasion (Knowles & Riner, forthcoming), the authors delineate two distinct types of persuasion strategies):

1. Alpha Strategies—attempt to increase attractiveness of the offered alternative
2. Omega Strategies—decrease negative features of the alternative.

Alpha strategies are usually tried first, but Omega strategies have the potential to alter the way that consumers resist attempts at persuasion, by reducing, deactivating or diverting resistance efforts of consumers. (Knowles & Riner, forthcoming) Although self-affirmation is not mentioned in their chapter, indeed it may represent a new type of Omega Strategy, whereby
consumers have the motivation and ability to fully engage in evaluating information to make an unbiased decision.

**Self-affirmation as Social Influence**

In a broader sense, self-affirmation can also be considered as part of the larger group of social influence approaches which social psychologists and marketers have studied for over 50 years (Cialdini and Goldstein 2004). Self-affirmation most likely falls under the relatively unexplored resistance-inducing compliance-oriented techniques. Self-affirmation processes are often subtle, indirect, or nonconscious to the target of the influence attempt, as are many social influence processes. In social influence situations, message recipients who accurately interpret and respond to the request can obtain a bargain instead of being taken in. With most compliance-oriented techniques, the target recognizes that he or she is being encouraged to respond in a specific way by the source of the message. Ingratiation, where the influencer attempts to endear himself to the recipient, must be seem as genuine (not overt flattery) or it will backfire, as individuals do not like to be manipulated. Cialdini and Goldstein (2004) describe how various social influence techniques such as ingratiation, anxiety-then relief, disrupt-then reframe, foot-in-the-door, that’s not all and door-in-the-face can actually lead the recipient to make choices counter to objective, unbiased thinking. In contrast, self-affirmation has the potential to allow consumers to be less biased and more objective when confronted with influence attempts. Self-affirmation works as an Omega force drawing consumers away from compliance, while most other types of social influence strategies attempt to gain compliance. Self-affirmation may appear to be similar to ingratiation but goes a step further than merely attempting to provide flattery or praise. Beyond words of praise, self-affirmation also provides reminders to the target recipient of the message to be authentically true to oneself and one’s
goals and values. Indeed self-affirmation may be able to help explain why some of these techniques (such as door-in-the-face or foot-in-the-door) don’t always work as theorized. Door-in-the-face, the technique where a very large request is followed by a more reasonable one, works better for prosocial causes but can backfire otherwise. Foot-in-the-door is when a small request is followed by a much larger one. Consistent with self-affirmation, studies about foot-in-the-door have shown individuals who have been asked to focus on their self-worth, uniqueness and identity conformed less to others’ opinions in the social influence domain, while those threatened by deindividuation demonstrated higher levels of conformity to the group identity.

**Dual Processes—Information Processing:**

The duality of persuasion strategies is also matched by a duality reported in the literature about the processes people use in processing information. Two dual-process theories dominate the literature on persuasion: Elaboration-Likelihood Model (Petty & Cacioppo 1986) and Heuristic-Systematic Model (Chaiken 1987). Both dual-process theories propose that individuals process a message carefully when they have the motivation and ability to do so. The Elaboration Likelihood Model posits two distinct routes to persuasion: Central and Peripheral. The Central Route is when the message recipient uses a cognitively central or reasoned route, carefully paying attention to the information, and evaluating arguments on their merits by judging them against one’s own beliefs and experience. The Central Route results in reasoned evaluations that are more stable. Their Peripheral Route posits that indirect cues (other than the message), such as the attractiveness of the speaker, determine persuasion. Chaiken’s Heuristic-Systematic theory of persuasion suggests that cues, heuristics and other processes besides consideration of message arguments determine persuasiveness in certain circumstances;
systematic scrutiny of the message works in others. In both dual-process theories, higher elaboration is more likely for high involvement product categories where there is personal relevance or importance to the message recipient (Olson & Zanna 1993). Also, elaboration is enhanced when there is more complexity and higher risk associated with product evaluation and selection. However, in higher elaboration contexts, resistance is often heightened, as the message recipient is more likely to counterargue, disconfirm information or conduct a more thorough analysis of information. Paradoxically, this greater resistance may bring greater scrutiny and greater persuasion; if arguments are strong, there may be ultimately be more acceptance.

Other researchers have identified a duality of processes that people use in evaluating benefits and losses. Fundamental differences in processes for evaluating benefits and losses may even involve different parts of brain function. Behavioral Activation System (BAS) is sensitive to and activates action to obtain benefits or rewards from the environment. Behavioral Inhibition System (BIS) is attentive to danger and seems to be activated by punishments or absence of rewards. Higgins (2002) had postulated 2 fundamental orientations that people have toward regulating actions in the environment—“Promotive” (seeking benefits) versus “Preventative” (minimizing dangers), with differing emotional consequences. Failure to obtain benefits results in sadness while failure to avoid costs results in anger. Different cost benefit assessments for gains and losses with differences in affective reactions may result from these differences in brain function (Knowles & Riner, forthcoming).

Self-Affirmation & Persuasion

Importantly, research in psychology on self-affirmation’s effects on persuasion suggests that it offers the potential to allow more openness and more message elaboration (with less
resistance) and thereby bring about a more open-minded consideration of the facts. If so, this offers an important new avenue for future research for marketers. The psychological literature suggests that closed-mindedness can stem from an individual’s concern for self-regard; in effect, a person resists and rejects conflicting information to protect a sense of self-worth derived from their “right” beliefs and attitudes. Self-Affirmation Theory (Steele 1988; Steele, Spencer and Lynch 1993) suggests that every person strives for positive self-regard, and draws on personal successes within a constellation of domains for its achievement. One of its crucial tenets is that the ultimate goal of a defensive reaction is the security of the global sense of self-worth. Self-Affirmation research proposes that when the person experiences an affirmation of self it enhances their overall sense of self-worth, and thereby reduces defensive reactions or resistance to persuasive messages. In short, affirmation induces more openness to new or counterattitudinal information.

Two important psychological experiments -- Correll, Spencer and Zanna (2004) and McGregor et. al. (2001) -- offer particular insights into the phenomenon of self-affirmation and will be discussed in detail next.

The Correll, Spencer and Zanna experiment was designed to confirm objectivity as the mechanism underlying self-affirmation. Their between-subjects 2 (affirmed/not) x 2 (importance) x 2 (pro/counter-attitude) x 3 (argument strength) experiment was conducted among college students about a tuition increase. First they conducted a pre-collection attitude about tuition increase; then they exposed subjects to either an affirmation or control treatment condition and then to a debate about a tuition increase (where argument strength varied) and collected post measures on persuasiveness. Their findings were that affirmed subjects found strong counterattitudinal arguments more convincing and weak pro-attitudinal arguments less
convincing. These findings supported their hypothesis that affirmation led to more objective consideration of information. (Without affirmation, there was distorted perception of arguments.) The conclusion from this experiment was that self-affirmation led to people being more open-minded, who were more objective (less biased) and more sensitive to argument strength, and thereby able to judge an argument on its merits.

The next series of experiments (McGregor et. al. 2001) demonstrated that self-integrity threat caused people to go to extremes (via hardening of attitudes or exhibiting more intergroup bias), but that self-affirmation eliminated biases (because subjects no longer needed to defensively jump to conclusions) and allowed subjects to become more true to oneself. They proposed a model of spontaneous fluid compensation with affirmation whereby people who experience a threat to one aspect of the self can respond by reaffirming some other aspect of the self (being more true to one’s self). Their first study showed that when a participants’ self-integrity was threatened by deliberative mind-set induced uncertainty (they were asked to reflect on the conflicting values and possible selves associated with pros and cons of an important personal dilemma), subjects reacted to mask the uncertainty with more extreme conviction about social issues. When an affirmation was used to repair their integrity (subjects were asked to reflect on how their personal values, behaviors, and future plans were coherently integrated), it eliminated uncertainty and the compensatory conviction response. Their second experiment demonstrated that the same deliberative mind-set threat caused clarified values and more self-consistent personal goals when affirmed. Studies 3 and 4 replicated the effects using two other uncertainty-related threats, mortality salience and temporal discontinuity, which led to similar reactions—more extreme intergroup bias in Study 3 and more self-consistent personal goals and identifications with affirmations in Study 4. Their conclusion from the series of experiments was
that two modes of compensatory conviction—either going to extremes or becoming more true to oneself—are used to defend the self against personal uncertainty threats. Their explanation is that self-affirmation works to overcome threats to the self brought about through cognitive dissonance situations (when people are in a predicament of freely doing something which conflicts with their attitudes), and typically causes people to resolve the inconsistency by changing their attitudes. Self-affirmation theory offers a new perspective on the hundreds of cognitive dissonance experiments in Western cultures that have shown people will respond defensively to personal inconsistency; self-affirmation theory proposes that dissonance reduction is merely one type of “fluid compensation” process allowing a person to overcome threats to their self-esteem. In McGregor’s study, self-affirming “fluid compensations” such as focusing the subject on an important personal value, reminding them of their high self-esteem, or giving them self-affirming feedback, allowed subjects to overcome uncertainty-inducted threats. Rather than people’s attitudes being hardened (or more resistant) when threatened, self-affirmation allowed people to “feel no need to harden their attitudes.” Because self-affirmation served to remind people of who they are and what is important to them, self-affirmed individuals were enabled to be less rigid and less closed-minded.

McGregor et. al. (2001) demonstrated that self-affirmation influenced conviction about personal everyday goals, social issues, values, and in-group/out-group biases. Important pivotal life choices are the ultimate high-involvement decision. A subsequent focus on the self after a stress of experiencing personal uncertainty facilitated spontaneous construction of more integrated identities. Rather than causing people to harden attitudes (go to extremes), self-affirmation decreased defensive responses and caused people to become more authentically true to one’s self-identity.
Building on much psychological work on the self, Schimel et. al. (2004) found effects of self-affirmation were contingent on whether self-affirmations were intrinsic (focused on an individual’s valued intrinsic aspects of self such as unconditional relationships, core values, and freely choosing to pursue one’s own goals and interests) or extrinsic (focused on conditionally accepting relationships and socially imposed standards.) People deriving self-worth from intrinsic sources were significantly less vulnerable to threats to the self whereas those deriving their self-worth from extrinsic sources were more concerned with self-esteem maintenance and defense mechanisms, especially when threatened (Schimel et. al. 2004). Their experiments showed more openness among intrinsically self-affirmed and more defensiveness among extrinsically self-affirmed subjects. In conclusion, their experiments demonstrated how self-affirmation to the intrinsic self served to reduce defensive concerns and resulted in better performance on mathematics tasks, where threats to one’s extrinsic self led to anxiety and worsened task performance. In addition to performance on mathematics tasks, intrinsic self-affirmations also helped subjects overcome performance handicaps due to stereotype threat and reduced defensive concerns in threatening social situations.

Extrapolating these findings to the marketing domain, many attempts to persuade rely on advertising appeals either to improve one’s self (promotion) or avoid some negative outcome (prevention). Fear appeals are communications with threats of bodily harm, financial disasters, or negative social consequences, which attempt to elicit a fear response to avoid some undesirable outcome (LaTour & Rotfield 1997). Obviously, fear appeals can directly or indirectly threaten the person’s sense of self. Meta-analyses and studies of threats to the self have demonstrated a monotonic and positive relationship between the emotional responses of
fear or arousal and persuasion (LaTour & Rotfield 1997). In effect, the greater the fear activated by a communication, the higher the level of persuasion.

**Self-Affirmation Research in Social Psychology**

Beginning with Steele (1988), social psychologists have studied the effects of self-affirmation on how information is processed, cognitions, affect, and behavior. Experiments on effects of self-affirmation have first used threats to the self such as mortality salience, temporal discontinuity, heightening of personal uncertainty, deliberative mindset, and discrepant personal values and goals. Following the threat to self, separate self-affirmation treatments are then used to restore integrity of self. These self-integrity repair manipulations have been both overt and direct or subtle and indirect. Researchers have affirmed the self by having subjects reflect on their values or goals, asking subjects to consider situations when they behaved in congruence with values and goals, giving subjects positive feedback on task performance, having subjects don a white lab coat to affirm a scientific orientation, and exposing subjects to someone wearing a flag lapel pin to affirm patriotism. Unlike prior self-affirmation experiments in social psychology, this research uses advertising as the channel to deliver both the information to be processed and the affirmation as part of one communication. The advertising stimuli in this research represents a typical advertising situation where an advertiser attempts to persuade the target consumer with messages and appeals within the same ad that first describes a problem and then offers a solution.

Heretofore, no research has been published within the marketing literature about self-affirmation and its effects on consumer cognitions and behavior. Because advertising attempts to persuade consumers, it is expected that self-affirmation will offer a new process for communicating complex and potentially threatening information. The study deliberately focuses
attention of the effects of self-affirmation related to advertising about high-stakes and high involvement decisions (finding a job on an online portal or purchasing a car.) It is hypothesized that self-affirmation will result in more open-mindedness and elaboration on information about these advertised products, and ultimately to more persuasion. Therefore, the first hypotheses are as follows:

H1: Positive self-affirmation leads to more openness.

H2: More openness leads to more elaboration.

H3: More elaboration leads to more persuasion, provided that the message arguments are compelling.

**Individualistic appeals versus Collectivistic Appeals**

Marketers use a variety of different appeals to reach their target audiences. In some instances, an individualistic appeal (directed at one’s self) is used, while others employ collectivistic appeals (directed at one’s identified in-groups). Because of the personal nature of outcome relevance and importance, it is hypothesized that when the ad uses self-affirmation:

H4a: Individualistic appeals in general will be stronger than collectivistic appeals.

**Moderating Effects of Individual Differences in Individualism/Collectivism**

Moreover, individualism and collectivism are now recognized as multidimensional constructs at both the cultural and individual levels (Kim et. al. 1994; Triandis 1995; Lee 2000). A separate dimension related to culture was also deemed important to understanding effects on persuasion. For clarity of expression, the terms idiocentric and allocentric refer to an individual’s personal style, whereas individualism and collectivism refer to country classification. Vertical refers to cultures where status and hierarchy dominate; horizontal refers to cultures which are more connected on relationships and group norms.
Lee (2000) cites the warning of Schwartz (1990) that not all Individualistic or Idiocentric values distinguish idiocentrism; it is important to consider the values relevant to the behavior in question. Schwartz believed two important dimensions for producing differences in consumer behavior are horizontal idiocentrism (reflecting the independent self-concept’s need to be a unique individual on an equal level with others), and vertical allocentrism (reflecting the interdependent self-concept’s need to sacrifice for the in-group and acceptance of inequality (Schwartz, 1990 quoted in Lee, 2000).

Self-definitions, representing the way people see themselves in relation to the purchase of a product, are positively related to attitude toward the purchase. Markus and Kitayama (1991) identified two relatively stable self-construals that emphasize the degree to which people see themselves as separate from or connected to others. The individualist self is independent, with a “notion of the self as an entity containing significant dispositional attributes, and as detached from context.” The collectivist self is interdependent “with the surrounding context, [where] it is the ‘other’ or the ‘self-in-relation-to-other’ that is focal in individual experience.” The aspect of the self that is salient determines which form of influence is most likely in a situation.

Based on the importance of self-construals in how information is processed, the following hypothesis is developed related to how the individual difference of Individualism/Collectivism will moderate affects on how individualistic appeals (versus collectivistic appeals) are evaluated.

H4b: Individualism”/Collectivism will intensify persuasion: Individualistic affirmation appeals will increase persuasion (vs. Collectivistic appeals) among “Individualists”, and Collectivistic affirmation appeals will increase persuasion (vs. Individualistic appeals) among “Collectivists”.

17
Moderating Effects of Need for Cognitive Closure

Individual differences among consumers in Need for Cognitive Closure (Webster and Kruglanski 1994; Kruglanski and Webster 1996) may differentially affect consumers’ responses; people who have a strong Need for Cognitive Closure (NFCC) often will “seize” and “freeze” without elaborating on the full information available. The freezing aspect results in people with a high need for NFCC being closed-minded. NFCC is related to heuristic processing, heightened confidence, increased desire for consensus, stereotypic judgments, intergroup bias, and resistance to persuasion. Therefore, in this research, it is expected that NFCC will moderate the relationship between self-affirmation on open-mindedness and advertising effectiveness. The hypothesis is:

H5: Self-affirmation will increase persuasion for individuals low in need for cognitive closure, but not for individuals high in NFCC.

An unanswered question related to compensatory conviction (McGregor, Zanna, Holmes and Spencer 2001) is whether personal uncertainty is a situational factor inducing need for closure; if so, compensatory conviction might be viewed as another manifestation of need for nonspecific closure. Because compensatory conviction serves as a self-defense mechanism, the following hypotheses are proposed:

H5b: As the need for cognitive closure increases, individuals will be more extreme (higher or lower) in feelings of self-worth.

H5c: As the need for cognitive closure increases, defensiveness (closed-minded) will increase and elaborative processing on the advertising will decrease.
Summary of Hypotheses:

Through two experiments within high involvement categories, the effects of self-affirmation and its affects on open-mindedness, elaboration, and persuasion will be studied. These hypotheses are proposed:

H1: Self-affirmation will lead to more openness.

H2: More openness leads to more elaboration.

H3: More elaboration leads to more persuasion, provided that the message arguments are compelling.

H4a: Individualistic appeals in general will be stronger than collectivistic appeals.

H4b: “Individualism”/ “Collectivism” will intensify the results: Individualistic appeals will be stronger than Collectivistic appeals among “Individualists” (independents), and Collectivistic appeals will be stronger than Individualistic appeals among “Collectivists” (interdependents).

H5a: Self-affirmation will increase persuasion for people low in need for cognitive closure, but not for individuals high in NFCC.

H5b: As the need for cognitive closure increases, individuals will be more extreme (higher or lower) in feelings of self-worth.

H5c: As the need for cognitive closure increases, defensiveness (closed-mindedness) will increase and elaborative processing on the advertising will decrease.

General Research Design and Methodology

Through a sequence of experiments, research was conducted to test the effects of self-affirmation on consumers’ responses to advertising regarding high involvement products. Respondents were recruited to participate in an experiment about the effects of advertising
content on consumer elaboration, cognitions, and intentions. Subjects were randomly assigned to a treatment cell, received a disclosure sheet about the study, and then were asked to view an ad promoting a high involvement product. (The actual headings and phrases in the ad stimuli varied based on cell assignment).

Study 1 tests the impact of self-affirmation on consumers’ responses to advertising. A hypothetical on-line job search portal was selected as the advertised product representing high involvement categories. Study 1 involves the use of a 2 x 2 experimental design of:

(1) Treatment: Self-affirmation versus a neutral condition, by
(2) High/low Need for Cognitive Closure.

After viewing one ad, subjects were asked to simulate a job search by rating their interest in a series of job postings. Then they gave reactions to the advertising’s effectiveness and were asked a series of questions about their attitudes and beliefs.

Study 2 used a similar approach, but examined the impact of self-affirmation in conjunction with individualistic and collectivistic appeals. In a 3 x 2 x 2 between-subjects experiment as shown below, consumers reacted to a public service announcement advertising energy conservation and adoption of hybrid/alternative fuel vehicles:

(1) Treatment: Self-affirmation/appeal type (Individualistic affirmation versus Collectivistic affirmation versus control) by
(2) High/low Individualism/Collectivism by
(3) High/low Need for Cognitive Closure.

Subjects saw one public service announcement, which differed by treatment condition, and gave reactions to the advertising’s effectiveness and answered questions about their attitudes and
beliefs. Results were analyzed by individual difference variables of Individualism/Collectivism and Need for Cognitive Closure.

**Variables of Study:**

The following Independent variables were included in the Treatment conditions: Independent Variables of Treatment Condition (Affirmation/Control), and Appeal Type (Individualistic, Collectivistic). Possible mediating variables of Openness/Skepticism and Elaboration were assessed. The Key Dependent Variable was “Persuasion to Consider the Advertised Product.” Other Moderating Variables are the Individual Trait Differences related to Preference for Individualism/Collectivism and Individual Differences on Need for Cognitive Closure (NFCC). Another scale, measuring Beliefs about Advertising/Skepticism Scale (Obermiller and Spangenberg, 1998), is included as an exploratory variable and possible moderator.

Diagram 1 below shows the proposed relationship among variables. Analysis will be conducted using ANOVA/ANCOVA and special procedures to test for mediation/moderation as outlined in Baron and Kenny (1986).

**DIAGRAM 1: Relationship of Study Variables**

**Independent Variables:**

- **IV1: Affirmation/Control**
- **IV2: Individualistic/Collect. Appeal Type**

**Mediators:**

- Openness
- Elaboration

**Dependent Variable:**

- Persuasion/Product Advertised

**Moderators:** Individual Differences (Individualism, NFCC)
CHAPTER THREE

Experiment 1

The purpose of Experiment 1 was to explore the effects of self-affirmation and the need for cognitive closure on responses to a print advertising for a hypothetical online job search portal.

Method

Subjects

Subjects were 157 students (62% male; 38% female; median age of 21), recruited at a large Midwestern university to complete a paper-and-pencil questionnaire entitled “Advertising and Job Search Study,” in exchange for extra credit in an undergraduate marketing course.

Design and Stimuli

A 2 (affirmation treatment versus control) X 2 (high versus low need for cognitive closure) between-subjects design was used. Questionnaires were shuffled prior to their distribution so that subjects were randomly assigned to either the affirmation condition or the control. They were instructed to review the print advertisement (see Appendix A for stimuli) and provide their reactions and ratings as indicated. Whereas the headline of the affirmation condition print advertisement stated: “Smarter people find the best jobs with Career4You.com,” the control condition headline stated: “People find the best jobs with Career4You.com.”

After they read the print advertisement, they were asked to provide an open-ended thought listing of “any thoughts, ideas or reactions that went through your mind as you read the advertisement,” and then were asked to rate their attitudes:
• Rating scale on their Reaction to the Advertisement as an Index of Persuasion (5 items)
• Rating scale on their present states of mind as an Index of stimulus-induced Openness (10 items)
• Ranking and ratings regarding multiple simulated job search postings
• The Need for Closure Scale (42 items)
• The Beliefs about Advertising Scale (9 items)
• Demographic and classification questions.

Dependent Measures

Reaction to Advertising Index of Persuasion. Five items using a 7-point Likert scale, anchored Strongly Disagree to Strongly Agree, measured attitude toward the advertising. These items measured whether the overall impression about the advertised product was favorable, affect toward the advertised product, interest in learning more about the advertised product, how informative they found the ad, and intention to try the advertised product. (See the Appendix for the actual questions.)

Open State of Mind at the Present Time (Index of Stimulus-Induced Openness.) Ten items using a 7-point Likert scale, anchored Strongly Disagree to Strongly Agree, measured the present state of mind of the participants. Six items measured feelings of self-confidence, confidence about their abilities, openness to new experiences, eagerness to learn new information, liking to learn new information, and willingness to consider new information before forming a decision. Two reverse-scored items included skepticism about the product delivering the benefits promised and untrustworthiness of the advertising. Two other items asked their
interest in learning more about the details that are not fully explained and their interest in seeing a demonstration of how this really works.

**Percentage of Jobs Acceptable.** Actual ads from existing job search portals were used in creating the simulated job posting ads for the study. Each subject saw five job postings. Each job posting contained a short description of duties, requirements, and salary range. Subjects were then asked to evaluate their interest in each position, and to rank them, and indicate which ones were acceptable or rejected. The dependent variable percentage of jobs found acceptable was calculated from this exercise.

**Thought Characters.** Verbatim comments from the thought listing exercise were used to assess a respondent’s extent of elaboration, by calculating the number of characters written.

Individual difference scales were used as possible moderating variables:

**Need for Cognitive Closure.** Need for Cognitive Closure was assessed by Webster and Kruglanski’s full 42 item scale (Webster and Kruglanski 1994), using a 6-point Likert scale, labeled Strongly disagree, Moderately disagree, Slightly disagree, Slightly agree, Moderately agree, and Strongly agree.

**Beliefs about Advertising.** Pre-existing Beliefs about Advertising were measured using Obermiller and Spangenberg’s 9-item scale measuring consumer skepticism toward advertising (Obermiller & Spangenberg 1998). This scale uses a 5-point Likert scale, anchored Strongly disagree and Strongly agree. This variable was included as an exploratory variable.
Results

Scale Reliabilities

Reaction to the Advertising Index. The five-item index that was created to measure overall advertising effectiveness (persuasion) was judged to be reliable (alpha = .91).

Open State of Mind at the Present Time Index. Six items of the original ten were retained as the index, and judged to be reliable (alpha = .90).

Need for Cognitive Closure. Subjects were blocked into high versus low need for cognitive closure groups based on a median-split performed on their scores. (The overall Need for Cognitive Closure scale Median of 3.791 divided subjects into High and Low NFCC groups.)

Beliefs about Advertising. The 9-item Obermiller and Spangenberg scale was also judged to be reliable (alpha = .88). Subjects were blocked into high versus low need for cognitive closure groups based on a median-split performed on their scores. (The BA Median of 28 was used to divide subjects into High and Low BA Groups.)

Table 1-1 in the Appendix shows all mean ratings for the dependent variables by treatment condition.

Hypothesis 1:

Does Affirmation Lead to More Openness?

Open State of Mind at the Present Time (Index of Stimulus-Induced Openness). An analysis of variance performed on the openness state of mind index showed no significant main effect of affirmation treatment, but did reveal a significant two-way interaction of affirmation treatment by NFCC, F(6,145) = 4.79, p = .03. As shown in Table 1-2 and Chart 1-1 in the Appendix, the
affirmation treatment subjects in the high NFCC group (mean 5.79) scored significantly higher on openness versus the control (5.44), t= 2.69, p < .01. Conversely, among Low NFCC’s, affirmation actually backfired and resulted in marginally lower openness. Affirmed subjects in the low NFCC group (5.65) scored lower than the control (5.97), t=1.56, p< .10. This finding demonstrates that affirmation leads to more openness only among individuals with a High Need for Cognitive Closure, who ordinarily prefer to make decisions more hastily and closed-mindedly.

**Percentage of Jobs Acceptable.** A significant main effect was found for the affirmation condition in terms of percentage of jobs found to be acceptable. Affirmed subjects considered significantly fewer jobs to be acceptable (mean percentage 42.9%) versus the control (52.4%), F (6, 135), p = .006. More research is needed to understand this difference. It is possible that affirmed individuals are more attentive and selective in their search process. See Chart 1-2 in the Appendix.

**Hypothesis 2:**

**Does More Openness Lead to More Elaboration?**

**Thought Characters.**

An analysis of variance on the average amount of thoughts generated in the thought listing task showed no significant main effects by affirmation condition, by NFCC group or by the interaction of both. Therefore, the conclusion is that affirmation-induced openness did not lead to significantly more elaboration in terms of extent of writing in the thought listing.
Hypothesis 3:

Does More Elaboration Lead to More Persuasion?

Reaction to Advertising (Persuasion) Index. An analysis of variance performed on this persuasion index showed no significant main effects or two-way interactions with affirmation treatment condition, need for cognitive closure (NFCC) or the amount of elaboration (Median Split on Thought Listing).

Therefore, there is no support for the hypothesis that more elaboration leads to more persuasion.

Table 1-3 in the Appendix shows the means for the amount of thought characters, the openness index, the reaction to advertising persuasion index, and the percentage of jobs found to be acceptable, by treatment condition by NFCC Group.

Do Individual Difference Variables Moderate Persuasion Effects of Affirmation?

Hypothesis 5a: Does Self-affirmation increase persuasion for people low in need for cognitive closure, but not for individuals high in NFCC?

An analysis of variance performed on this persuasion index showed no significant main effects or two-way interactions with affirmation treatment condition, need for cognitive closure (NFCC) or individual difference trait beliefs about advertising (BA), but did reveal a significant three-way interaction of affirmation treatment by NFCC by BA, F(6,144) = 4.80, p = .03. Thus, the reaction to the advertising was contingent upon the affirmation condition, the individual’s need for cognitive closure and prior beliefs about advertising.

Among individuals who already are skeptical and hold advertising in low esteem (Low BA Group), affirmations result in marginally higher persuasion only among high NFCC people.
(4.06 affirmed versus 3.26 control, t=1.45, p < .10); in contrast, affirmations among people who are both low in NFCC and in the low BA group result in no significant difference in persuasion scores (3.21 affirmed versus 3.62 control, t= 1.03, ns.) Conversely, among individuals who already held higher beliefs a priori about advertising (High BA Group), the reverse effect occurred with an affirmation treatment. In this group, persuasion declined at a marginally significant level among High NFCC individuals (3.47 affirmed versus 4.04 control, t=1.52, p<.10). Again, affirmations did not significantly change persuasion among individuals who were also Low in Need for Cognitive Closure (3.80 affirmation versus 3.59 control, t= .46, ns). Table 1-4 in the Appendix shows the mean ratings by treatment condition, NFCC Group and BA Group. Chart 1-3 graphically depicts the 3-way interaction.

In conclusion, individual difference variables do moderate the persuasive effects of affirmation, but not as originally hypothesized. Individual differences about NFCC and Beliefs about Advertising are interacting in a more complex manner to moderate persuasion as described in the next section.

**When Does Affirmation Lead to Improved Persuasion?**

The original hypothesis 5a that NFCC would serve as a moderator is supported, but in a more complicated manner and opposite direction than originally proposed. The conclusion is that the moderator of NFCC resulted in an interaction effect in conjunction with BA: People high in NFCC and high in BA reacted negatively to affirmations; in contrast, people high in NFCC and low in BA responded more positively to affirmations. Interesting, affirmations served to improve persuasion among the group with hardened attitudes against advertising and who typically have a preference for faster decisions. Perhaps, affirmation manipulations have a stronger influence on individuals who are more closed-minded and negative towards advertising
in general, because there is more opportunity to increase open-mindedness with these
individuals.

**Hypothesis 5c: Are Individuals higher in NFCC more defensive**

*(closed-minded), elaborating less on the advertising?*

This hypothesis was not supported, based on the analysis of variance on elaboration
reported above.

**Hypothesis 5b: Are individuals who are high in NFCC either**

*extremely high or low in feelings of self-worth?*

For exploratory purposes, a small sample of individuals was administered both
Rosenberg’s Self-Esteem Scale (SES) (Rosenberg, 1965) and Rotter’s I-E Locus of Control
Scale (Rotter, 1966). Rosenberg’s Self-Esteem scale is a 10-item scale that is well-validated and
widely used in psychology. Rotter’s I-E Scale is another common personality scale which is
used to assess the extent to which individuals attribute outcomes of events to internal causes or
something outside of their control, such as luck or fate. The purpose of adding these two scales
was to yield insight into the psychological processes underlying how individuals respond to
affirmations, and when and why affirmations might work in certain circumstances and backfire
in others.

**NFCC and LOC.** Correlation analysis showed virtually zero order bivariate correlations
between NFCC average and the LOC average score with SES score. Appendix Table 1-5 shows
descriptive statistics about SES, NFCC, and LOC. Appendix Table 1-6 shows the correlation
matrix regarding the relationship between Average SES and NFCC.

Therefore, there is no support from these data of a relationship between feelings of self-
worth or locus of control and NFCC.
Discussion

Self-affirmation within the job search portal advertisement served to change how open-minded certain individuals were in processing the advertising, and to affect how persuasive they found the message. Affirmation worked to cause more open-mindedness only among the people most likely to rush to closure (those high in need for cognitive closure). Affirmation also influenced higher persuasion only among the individuals who a priori would be expected to be most resistant to advertising’s persuasive appeals—those who were high in need for cognitive closure and low in prior beliefs about advertising. Affirmations actually lowered persuasion directionally (albeit not always significantly) among people who were already more receptive to advertising (high in BA) and less closed-minded (low in NFCC). It could be that affirmations served to cause a more balanced view of the advertising content—people who are predisposed to not pay close attention or who resist the message become less so, while people who are less skeptical become more observant. Therefore, affirmation within the advertisement leads to less biased assimilation of other messages contained in the ad.

Elaboration does not seem to be operating as a mediator in Experiment 1. Instead, affirmation-induced openness (or enhanced skepticism) seemed to affect the consumers’ reactions to the advertising (persuasion index) without the intervention of elaboration.

From a theoretical perspective, these findings served to support Steele’s Self-Affirmation Theory and subsequent studies that demonstrated how affirmation induced more balanced openness (less resistance) to new information and that it served as a coping mechanism for threats to self-integrity. Individuals who are highest in need for cognitive closure and who hold negative attitudes about advertising in general may feel more threatened (than others) when they are confronted with a typical advertisement. Self-affirmation may serve to reduce their tendency
to avoid the message evaluation and may serve to allow them to consider content that otherwise would be resisted or denied. The practical implications of this are that affirmations offer the potential for advertisers to reach the most skeptical members of the audience and those who typically avoid taking the time to learn the message, and allow a fair hearing of the evidence and attitude change.

Moreover, this study used a new type of self-affirmation which was delivered in the text of a print advertisement. This approach differs from earlier affirmation experiments in two important ways. First, subjects in this research were affirmed by messages within the advertising itself and not by separate steps used in other affirmation experiments. Some of these earlier affirmation experiments used direct affirmations—asking subjects to focus on their own important personal values or goals, clarify their self-concept, or recall a time when their actions were consistent with their goals or values. Others were very subtle affirmations—exposing subjects to someone wearing a “flag” lapel pin to affirm patriotism or having them put on a white lab coat to affirm their scientific orientation. However, these earlier affirmation experiments involved affirming subjects as a separate discrete step apart from delivery of any persuasive appeal message. Secondly, although earlier affirmation experiments used various contexts, none included an affirmation in an advertisement context. This research offers a new affirmation method for use by marketers in future research.

Lastly, the topic of this research was a job search portal. Job searches, by their nature, are highly self-relevant and highly involving. Self-relevance was found to be an important pre-condition for self-affirmation effects in persuasion (Cohen et. al. 2006). Future research about effects of self-affirmation in persuasion for other self-relevant consumer behavior topics is needed.
CHAPTER FOUR

Experiment 2

The purpose of Experiment 2 was to explore the persuasive influence of self-affirmation, type of appeal (individualistic vs. collectivistic), and individual difference variables of Need for Cognitive Closure and Individualism-Collectivism, in response to a prototype of a televised public service announcement (PSA). The PSA promoted energy conservation and adoption of new fuel-efficient cars, such as hybrids or biodiesel fuel vehicles, to reduce dependence on oil.

Method

Subjects

A total of 165 students (54% male/46% female; median age of 21) at a large Midwestern university were recruited to participate in a computerized “Advertising Study,” in exchange for extra credit in an undergraduate marketing course. They were instructed that they would view a simulated public service announcement, and then would be asked to provide their reactions and ratings. The data collection was conducted as a computer-administered study on personal computers using Empirisoft’s MediaLab software.

Design and Stimuli

A 3 (affirmation treatment: individualistic appeal versus affirmation treatment: collectivistic appeal versus control) X 2 (high versus low need for cognitive closure) X 2 (high versus low individualism/collectivism) between-subjects design was used. Participants were randomly assigned to one of the three treatment conditions (individualistic affirmation, collectivistic affirmation, or control.) Subjects were instructed to view the prototype PSA (see Appendix B for stimuli) and provide their reactions and ratings as indicated. Subjects were
advised that the prototype was produced in PowerPoint as a conceptual rendering and that the final version would be produced with both audio and video. PSA’s were identical in content with the exception of the treatment language on one slide (slide 4) and the pronouns used on slide 7.

The individualistic affirmation condition slide of the PSA contained the headline, “How Does This Affect You?” with the following language:

- “You can work hard and do whatever it takes to overcome challenges and to accomplish your goals.
- You are smart. When faced with difficult and important decisions, you carefully analyze which choice is the right one for your unique situation.
- Your can make more informed decisions.
- You can act now to make a difference for your future.”

The collectivistic affirmation condition contained the headline “How Does This Affect Us?” with the following language:

- “We Americans work hard and we do whatever it takes to overcome challenges and accomplish our goals.
- Americans are smart. When faced with difficult and important decisions, we carefully analyze which choice is the right one for our unique situation.
- We can make more informed decisions.
- We can act now to make a difference for our future.”

The control condition contained the headline “How Does This Affect You?” with no other messages.
After they viewed the PSA, they were asked to provide an open-ended thought listing of “any thoughts, ideas or reactions that went through your mind as you read the advertisement,” and then were asked a series of ratings:

- Rating scale on their Reaction to the Advertising as an Index of Persuasion (5 items)
- Rating scale on their present state of mind as an Index of stimulus-induced Openness (10 items)
- Attitude Ratings regarding hybrid vehicles, biodiesel fuel vehicles, and the sponsor of this message (3 items)
- Ratings about their interest in and willingness to pay a premium to buy hybrids and biodiesel fuel vehicles (4 items)
- Average fuel economy (MPG) sought on next car bought (1 item)
- The Need for Closure Scale (42 items)
- The Individualism-Collectivism Scale (32 items)
- Self-Esteem Scale (10 items)
- The Beliefs about Advertising Scale (9 items)
- Demographic and classification questions.

The actual questions used in Study 2 are included in Appendix D.

**Dependent Measures**

**Reaction to the Advertising Index of Persuasion.** Five items using a 7-point Likert scale, anchored Strongly Disagree to Strongly Agree, measured attitude toward the public service announcement advertising. These items measured whether the overall impression about the
advertisement was favorable, affect toward the advertised products, interest in learning more about the advertised products, how informative they found the ad, and intention to follow the recommendations made in the advertisement. (See Appendix D for the actual questions.)

**Additional Dependent Variables**

Eight additional dependent variables measured attitude, interest and purchase intentions:

- Rate your attitude about hybrid vehicles.
- Rate your attitude about biodiesel fuel vehicles.
- Rate your attitude about the sponsor of this message.
- I am interested in considering a hybrid vehicle when buying my next car.
- How much more would you be willing to pay to purchase a hybrid vehicle instead of a traditional car?
- I am interested in considering a biodiesel fuel vehicle when buying my next car.
- How much more would you be willing to pay to purchase a biodiesel fuel vehicle instead of a traditional car?
- What is the average fuel economy (miles per gallon) you would seek to have on your next new car?

**Open State of Mind at the Present Time (Index of Stimulus-Induced Openness.)** Ten items using a 7-point Likert scale, anchored Strongly Disagree to Strongly Agree, measured the present state of mind of the participants. Six items measured feelings of self-confidence, confidence about their abilities, openness to new experiences, eagerness to learn new information, liking to learn new information, and willingness to consider new information before forming a decision. Two reverse-scored items included skepticism about the product delivering the benefits promised and untrustworthiness of the advertising. Two other items asked their
interest in learning more about the details that are not fully explained and their interest in seeing a demonstration of how this really works.

**Thought Listing Elaboration.** The total amount of time in milliseconds (measured by MediaLab) that subjects spent elaborating on the thought listing exercise was used to assess extent of elaboration.

**Need for Cognitive Closure.** Need for Cognitive Closure was assessed by Webster and Kruglanski’s full 42 item scale (Webster and Kruglanski 1994), using a 6-point Likert scale, labeled Strongly disagree, Moderately disagree, Slightly disagree, Slightly agree, Moderately agree, and Strongly agree. The median split on NFCC scores was used to block subjects into high and low groups.

**Beliefs about Advertising.** Pre-existing Beliefs about Advertising (BA) were measured using Obermiller and Spangenberg’s 9-item scale (Obermiller and Spangenberg 1998), using the 5-point Likert scale, anchored Strongly disagree and Strongly agree. Subjects were blocked into high versus low groups based on a median-split performed on their BA scores.

**Individualism-Collectivism Scale.** The individual difference trait Individualism-Collectivism (Singelis et. al. 1995) 32-item Scale (ICS) measured the extent to which a person is an individualist or collectivist. Sixteen items were summed to create an Individualism score and a Collectivism score. Median splits divided subjects into high versus low categories.

**Self-Esteem Scale.** Rosenberg’s 10-item scale (Rosenberg 1965) was used as an individual difference measure to determine the person’s degree of self-esteem. Items were measured with a 4-point scale, and summed to produce an overall score; a median split divided the sample into high versus low groups.
Results

Scale Reliabilities

Reaction to the Advertising Index. The five-item index that was created to measure overall advertising effectiveness (persuasion) were judged to be reliable (alpha = .78).

Attitude about Hybrids and Biodiesels. Two items were combined to measure attitude toward the products promoted in the public service announcement. The alpha for the 2-item measure (alpha = .70) was acceptable.

Open State of Mind at the Present Time Index. Six items of the original ten were retained as the index, and judged to be reliable (alpha = .87).

Beliefs about Advertising. The 9-item Obermiller and Spangenberg scale was also judged to be reliable (alpha = .85). The Median score of 26 divided subjects into High and Low BA Groups.

Need for Cognitive Closure. The overall Need for Cognitive Closure scale Median of 3.796 was used to divide subjects into High and Low NFCC groups.

Individualism-Collectivism Scale. The scale reliabilities for the Individualism scale (alpha = .75) and the Collectivism scale (alpha = .74) were judged acceptable. The Median split used to divide subjects into high versus low groups on Individualism was 82 and Collectivism was 79.

Self-Esteem Scale. Rosenberg’s Self-Esteem Scale reliability assessment (alpha = .83) was judged acceptable. The median of 33 was used to separate subjects into high versus low groups.

Table 2-1 in the Appendix shows all mean ratings for the dependent variables by treatment condition.
Hypothesis 1:
Do Affirmations with Individualist/Collectivist Appeals Lead to More Openness?

Open State of Mind at the Present Time (Index of Stimulus-Induced Openness). An analysis of variance performed on the openness state of mind index showed no significant main effect of affirmation treatment, no significant two-way interactions of affirmation treatment by NFCC or affirmation by Individualism Group, and no 3-way interactions of affirmation by NFCC by either High/Low Individualism or Collectivism Groups. There was a marginally significant main effect for Individualism (F (6, 153) = 3.047, p=.083). High individualists were marginally more open (6.29) than low individualists (6.06), t=1.88, p=.06), regardless of affirmation treatment condition. Appendix Tables 2-3 and 2-4 display key measures, by affirmation treatment and high/low individualism groups and by high/low collectivism groups. Chart 2-1A and 2-1B in the Appendix depict the Openness Index by treatment condition and high/low individualists and high/low collectivists, respectively.

Based on these data related to the openness index in this experiment, it is concluded that there is no difference in effect of affirmation treatment on openness.

Hypothesis 2:
Does More Openness Lead to More Elaboration?

Mean Time Spent (milliseconds) on Thought Listing.

An analysis of variance showed no significant differences by treatment condition terms of the amount of time spent in milliseconds during the thought listing. Appendix Table 2-2 displays elaboration by treatment condition and by high/low individualism and high/low collectivism groups.
Do Certain Types of Affirmation Appeals Lead to More Elaboration among Certain Individuals?

Individualism Group Analysis by Treatment/Appeal Type

Mean Time Spent (milliseconds) on Thought Listing.

An analysis of variance on the average amount of milliseconds spent during the thought listing exercise showed no significant main effects by treatment condition, by NFCC group, or Individualism Group, but it did have one significant two-way interaction effect (treatment condition by Individualism Group, F= 3.43, p = .04). High Individualists who saw the Collectivistic affirmation appeal spent significantly more time listing thoughts (220,010 versus 157,615 among Low Individualists, t = 2.50, p < .01.) Chart 2-2A in the Appendix depicts these relationships of elaboration by treatment and high/low individualism.

Collectivism Analysis by Treatment/Appeal Type.

Conversely, the analysis of variance showed the opposite pattern among the High/Low Collectivist Groups; analysis of variance on the average amount of milliseconds spent during the thought listing exercise showed no significant main effects by treatment condition, by NFCC group, or Collectivism Group, but it did have one significant two-way interaction effect (treatment condition by Collectivism Group, F= 3.69, p = .03). High Collectivists showed spent significantly more time during the thought listing when they were affirmed with an individualist appeal (220,237 versus 155,424 for Low Collectivists, t = 1.83, p < .05). Also, High Collectivists spent significantly less time on the thought listing exercise when they did not receive any affirmation (151,485 versus 197, 925 among the Low Collectivists, t = 1.93, p < .05). Table 2-2 and Chart 2-2B in the Appendix show these relationships. Therefore, the conclusion is that affirmations induced significantly more elaboration in terms of extent of writing in the
thought listing when the appeal is opposite to the individual’s trait (i.e. Collectivist appeals led to more time spent among High Individualistic individuals, while Individualist appeals led to more time spent among High Collectivist individuals.)

**Hypothesis 3: Did More Elaboration Lead to Higher Persuasion?**

**Persuasion Index (Reaction to Advertising)**

An analysis of variance on the persuasion index showed no significant differences by treatment condition, by high versus low amount of time spent elaborating, or by high versus low need for cognitive closure group. No two-way or three-way interactions were significant. Appendix Table 2-6 shows the Reaction to Advertising Persuasion Index by treatment condition, high/low elaboration group, high/low individualism, and high/low collectivism groups. Therefore, the conclusion is that no difference was found on the reaction to advertising persuasion index.

**Other Dependent Variables regarding Persuasion**

Analyses of variances were run on attitude about hybrid vehicles, attitude about biodiesel fuel vehicles, attitude about the sponsor of the public service announcement, and purchase intent measures for both hybrids and biodiesels. For any of these dependent variables related to persuasion, no significant main effects were found by treatment condition, by high/low elaboration groups, or by high/low need for closure groups, and no two-way or three-way interaction effects were found.

One dependent variable--miles per gallon expected in next new car—showed a significant main effect for only one variable, high versus low need for cognitive closure; no effects were found by treatment or extent of elaboration, or any two-way or three-way interactions. Individuals lower in need for cognitive closure rated the expected number of miles
per gallon on their next car (43.7 mpg) significantly greater than those who were high in need for
cognitive closure (38.7 mpg, t=2.165, p=.03).

Therefore, the conclusion is that more elaboration time did not lead to higher persuasion.

**Hypothesis 4a: Are individualistic appeals generally
more persuasive than collectivistic?**

**Persuasion Index**

An analysis of variance of on the persuasion index by treatment condition, high/low need
for cognitive closure and high/low individualism groups was performed to determine if certain
types of appeals were more effective. In general, no main effects were found by type of
affirmation / appeal, so I would conclude that individualistic affirmations *per se* are not more
effective overall.

**Hypothesis 4b: Are Individualistic appeals stronger than Collectivistic
appeals among high “Individualists”?**

**Persuasion Index By Type of Affirmation/Appeal Type by High/Low Individualism**

While, in general, the individualistic appeals are not stronger, there is one specific
instance when individualistic appeals are better. A marginally significant two-way interaction
was found (F (6,149) = 2.67, p=.073), with highly individualistic individuals and affirmation
treatment. High individualists who were given an individualistic appeal had significantly higher
persuasion scores (5.38) than low individualistic people (4.68, t=2.57, p<.01). Appendix Table
2-3 shows key measures by treatment condition and high/low individualism group, and Chart 2-
3A depicts the relationship between individualistic affirmation appeal type and high/low individualism on the persuasion index. The conclusion is that individualistic appeals were stronger than collectivistic appeals only among highly individualistic people who were reacting to an individualistic affirmation treatment condition.

**Hypothesis 4b: Are Collectivistic appeals stronger than Individualistic appeals among high “Collectivists”?**

**Persuasion Index By Type of Affirmation/Appeal Type by High/Low Collectivism**

A marginally significant main effect (F (6,153) = 3.226, p = .073) was found by high/low collectivism on persuasion, with high collectivists scoring higher persuasion when affirmed with either an individualistic appeal (5.27 high collectivists versus 4.68 among low collectivists) or collectivistic appeal (5.36 high collectivists versus 4.85 low collectivists). Appendix Table 2-4 shows key measures by treatment condition and high/low collectivism, and Chart 2-3B depicts this relationship of collectivism group on persuasion by affirmation/appeal type.

In conclusion, high collectivists responded higher to either an individualistic or collectivistic type affirmation appeal versus no affirmation.

**Hypothesis 5a: Did self-affirmation increase persuasion among people low in need for cognitive closure but not high in NFCC?**

Analysis of variance did not show any main effects, two-way interactions, or three-way interactions between affirmation/appeal type, high/low need for cognitive closure groups and high/low individualism/collectivism groups. Therefore, self-affirmation did not increase persuasion among people low in need for cognitive closure in this experiment. Appendix Table
2-5 shows key measures by treatment condition and high/low NFCC group. Appendix Table 2-7 shows reaction to advertising persuasion index by treatment condition, by high/low NFCC group, and by high/low elaboration groups.

**Hypothesis 5b: As the need for cognitive closure increases, are individuals more extreme (higher or lower) in feelings of self-worth?**

Correlation analysis showed a zero order correlation between need for cognitive closure scale and self-esteem. Appendix Tables 2-8 and 2-9 show the correlation matrix comparing need for cognitive closure with other key measures. Therefore, no support was found for this hypothesis.

**Hypothesis 5c: As the need for cognitive closure increases, does defensiveness (closed-mindedness) increase and elaboration decrease?**

No support was found for these proposed relationships between openness and elaboration and need for cognitive closure.

**Openness Index.** A marginally significant main effect ($F (2, 155) = 2.74, p=.10$) for NFCC showed higher openness among the high NFCC group (6.27 among high versus 6.07 among Low NFCC) in this experiment. Therefore, since the direction of this finding is opposite of what was hypothesized, it is not supported (that as NFCC increases, defensiveness increases). Appendix Table 2-6 shows the openness index and elaboration by affirmation treatment condition and high and low need for cognitive closure.

**Elaboration.** An analysis of variance related to elaboration did not reveal any significant main effects and it did not reveal any two-way interaction for affirmation/appeal type and low/high
NFCC. Appendix Table 2-7 shows the persuasion index by affirmation treatment condition by high/low elaboration groups and by high and low need for cognitive closure.

Therefore, the hypotheses that NFCC reduces openness and decreases elaboration are not supported in this experiment.
Discussion

In experiment 2, support was found for the matching hypothesis that an individualistic affirmation treatment would be more effective among high individualists. The companion hypothesis, that collectivistic affirmation appeals would be more persuasive among high collectivists, was supported with one catch: high collectivists responded well to either affirmation (individualistic or collectivistic) condition. Aaker and Lee (2001) showed that goals associated with approach and avoidance needs along with the accessibility of self-views (independent or interdependent) moderated how information was processed and whether persuasion occurred. Individuals who had a more accessible interdependent self-view were more persuaded by prevention-focused appeals, consistent with an avoidance goal (“we” avoid pain or loss.) They found that individuals with highly independent self-views responded better to promotion-focused information (seeking benefits or gain). Aaker and Lee argued that greater recall of message content, more discernment of argument strength, and higher persuasion were all outcomes of matching the type of message appeal with an individual’s predominant self-view. More work is needed to understand why collectivists were more responsive to both individualistic and collectivistic appeals, but one possible explanation is that a high collectivist is more open to affirmations of any kind, and may be more flexibly adaptable to seek personal benefits when approached with a “me” message or to seek pain prevention when addressed with a “we” appeal. Future research will need to explore the extent to which promotion or prevention goals relate to the impact of self-affirmation with individualistic and collectivistic.

Experiment 2’s finding relating elaboration to persuasion was consistent with the findings of Experiment 1: persuasion was not affected by the mediating process of elaboration.
Unlike Experiment 1, affirmation’s effects on openness and persuasion were not as pronounced. Like Study 1, affirmation induced marginally higher openness only among individuals high in NFCC. However, this did not translate into higher persuasion. One possible explanation for the lack of affirmation effects on persuasion in Experiment 2 relates to the type and topic of the advertisement used—a public service announcement promoting energy efficient vehicles in Experiment 2. Perhaps a public service announcement does not generate as much resistance as a typical commercial advertisement. Perhaps the message contained in the PSA in Experiment 2 delivered a “easy sell” message that did not invite as much resistance or counterarguing, or the timing was right for such a message that was equally well received in all treatment conditions (affirmation or not). Future research using a “difficult sell” may yield more differences in the impact of NFCC on openness and persuasion by affirmation condition.

An alternate explanation for the lack of detectable effects in this experiment is a possible ceiling effect on the demand for hybrid vehicles and alternative fuel cars resulting from the oil and gas crisis in the past 12 months. The federal government’s Department of Energy reported that average costs for regular gas increased 79.4 cents per gallon in the state of Ohio in the past year, heightening interest and demand for energy-efficient vehicles. Car manufacturers reported increased sales for smaller fuel-efficient and hybrid vehicles and declines for larger cars and trucks during the time period when the data collection for Study 2 was conducted. Because this research was designed and approved prior to gas price escalation (but was executed after the gas prices rose), the impact of this environmental phenomenon is believed to have affected results.

Several theoretical implications emerge from Experiment 2. The first implication is that additional work is needed to understand source characteristics of mass-media persuasive appeals with self-affirmation. Are public service announcements regarded as more credible (less
threatening) than traditional advertisements to the message recipient, with or without affirmation? The second implication calls for further study of the situational context or product category for which affirmations may be effective in advertising. Are affirmations only effective in certain extreme advertising contexts, where information communicated is particularly susceptible to being assimilated in a biased way, due to the nature of its claims? Are affirmations only effective in high involvement product categories or will self-affirmation also be effective in certain other low-involvement categories that are highly self-relevant? The third implication is that people who are most resistant to learning new information in advertising may be the only ones for whom affirmation has a positive effect on openness and persuasion. This deserves additional study, as proneness to self-affirmation may be an individual difference. The next implication is that use of specific types of appeals in conjunction with an affirmation strategy deserves further study. This study demonstrated that individualistic affirmation appeals worked equally well among both high individualists and high collectivists. Will affirmation be more effective in conjunction with certain other appeal types (such as fear appeals or authority appeals) that heighten threat to self-integrity?

Experiment 2 used affirmation as part of the advertising content in a prototype television public service announcement advertisement, just as Experiment 1 included affirmation as part of print ad text. Both experiments in this research used affirmations embedded within advertisements, in contrast to earlier research in self-affirmation which involved a separate affirmation step to allow self-integrity repair following a threat condition.

The topics advertised in Experiment 2 (energy conservation and adoption of alternative fuel vehicles) were deliberately selected as ones that would be relevant to consumers. However, their relevance to self may not be as strong as Experiment 1’s job search. Perhaps the relevance
of Experiment 2’s topics to consumers is more of an economic consequence rather than self-relevance. Self-relevance has been an important pre-condition for effects of self-affirmation in earlier social psychological research (Cohen et. al. 2006). Future research will need to determine the extent to which relevance versus self-relevance influences the effects of self-affirmation in advertising persuasion.

On a practical level, affirmations offer the potential for advertisers to attempt to reach certain groups that are not in the typical target audience for advertising. People who are already polarized in their attitudes and resistant to new information may be the ones who are influenced by affirmation to seek and fairly weigh new evidence rather than avoiding or denying it.
CHAPTER FIVE

Discussion

In both experiments, an affirmation strategy in the advertisement induced more openness among the individuals who are typically most closed-minded. This research offers the first evidence that affirmation works to induce openness and more balanced weighing of messages in an advertising venue in a similar fashion as did the earlier affirmations in social psychology experiments (which generated more objective consideration of potentially threatening information). However, this benefit comes with a risk: self-affirmation appeals backfired for consumers who were initially less resistant to persuasion. Therefore, self-affirmation in advertising deserves further study to better understand its mechanisms and potential application for debiasing assimilation of threatening information in marketing contexts.

Experiment 1’s affirmation in the advertisement related to job searching (which is a highly self-relevant personal topic central to the identity of the person) yielded significant effects on persuasion, but again only among the individuals who are most resistant to influence (people who held advertising in low esteem and who were high in NFCC). No significant affirmation effects on persuasion were found in Experiment 2 (which contained a softer sell message of a public service announcement with explicit rational appeals about the need for more energy efficient vehicles such as hybrids or alternative fuel cars); this message content may be less tied to the subject’s self-identity and more tied to economic or rational motives. Cohen (2006) demonstrated that self-identity related topics are crucial to achieving effects of self-affirmation on information processing and persuasion. Jacks and Cameron (2004) demonstrated that personal importance of topics predicted attitude change (and resisting of influence). In future
research, explicit assessments of both the degree to which the topic is linked to the subject’s self-
identity and the importance of the research topics to the consumer will be useful measurements.
For example, in Experiment 2, rising fuel prices may be seen as a threat to their self or a
nuisance. To the extent that consumers perceive rising fuel prices as both a self-threat and an
important topic, then self-affirmation effects will be possible.

An important implication for future research is the need for further study to understand
the boundary conditions of when self-affirmation in advertising does and doesn’t work to induce
openness and improve persuasion. In an unpublished manuscript, Cohen (2006) studied self-
affirmation and closed-mindedness in the context of interpersonal negotiations among polarized
groups. They concluded that self-affirmation serves to reduce closed-mindedness and to
eliminate biased assimilation of information only when the individual threat to self is related to
the person’s self-identity. Ironically, affirmation did not work in conjunction with a rationality
salience condition (when subjects were affirmed and focused on their own ability to think
rationally during the experiment); the researchers explained this phenomenon by theorizing that
self-affirmation is operating as an emotional self-defense leading to spontaneous inference
formation (such that the affirmed consumer is not engaging in deliberative, conscious
information processing.) Deliberative and systematic processing may preclude self-affirmation’s
effects on openness and persuasion.

Findings of Cohen (2006) both support and extend the earlier findings from social
psychology, and merit study within a consumer behavior context. Specifically, does heightening
the salience of rationality with self-affirmation in advertising diminish openness and rational
weighing of evidence? Does heightening the salience of self-identity in conjunction with self-
affirmation in advertising reduce resistance and allow unbiased assimilation of messages? This
implication calls to studying certain product category contexts (especially those with high self-identity linkages) among certain individuals (most resistant to new information or to advertisements or with highly polarized attitudes) using certain advertising appeals (individualistic or fear appeals) and motives (emotional versus rational; promotion versus prevention). Follow-up studies are planned with affirmations embedded in the advertising where the self is affirmed with personal values (Cohen 2006) versus a rationality salience treatment to determine effects on open-mindedness and persuasion. Measurement of personal importance of topic, linkage to self-identity, and extent of effortful processing will be obtained. These additional experiments will aid in understanding how and when self-affirmations work and don’t work within advertising.

Limitations of this research include several methodological issues. The thought listing method may not be the appropriate technique for assessing elaboration (or resistance to the message). If the process underlying self-affirmation operates as emotional self-defense mechanism and at an unconscious level, then asking respondents to write their thoughts and feelings about the advertisement will only serve to elicit a constructed explanation accessible at their conscious level of thinking and feeling. Moreover, if resistance to the advertisement stems from an unconscious and emotionally motivated self-defense process, it will be especially difficult to elicit valid information with a thought listing exercise which pressures respondents to provide their rational motivations.

Likewise the openness index did yield significant findings, but additional measures to assess extent of openness (perhaps tapping into emotional motivations such as approach and avoidance) may be fruitful. Future research to demonstrate when resistance to the advertising is heightened and minimized would offer a contribution to theory.
Because Experiment 1 in this research demonstrated that affirmation could lead to more openness and improved persuasion, but only worked among people who were *a priori* most resistant to advertising (people high in skepticism about advertising and who were high in need for cognitive closure), future research with a variety of high involvement and low involvement products as well as easy and hard sell situations may serve to show if affirmation works differently in certain contexts. Other individual difference variables that may moderate the effects of affirmation on openness and persuasion will also be studied in the future, since individual differences were important moderators in both experiments. Other individual difference variables which may moderate effects of self-affirmation are age, education level, social class, culture, level of product knowledge, level of prior commitment, and orientations about promotion/prevention focus (Higgins 2002), and self-monitoring (Snyder 1974). It is expected that prevention-minded people should be more responsive to threat appeals, and that self-affirmations may be more effective with them. Low self-monitoring people are more concerned with their identity than with how others see them, and likewise may respond better to self-affirmations.

This research only focused on high-involvement product categories. Future directions will include assessing effects of self-affirmation in advertising in other product categories. Obvious future contexts of study are specifically “hard sell” high involvement contexts related to self-identity such as military recruitment, anti-consumption (smoking cessation, weight loss), and healthy lifestyle products. There have been no studies of attempts to influence attitude change using advertising as the self-affirming medium around polarized issues heretofore. Therefore, future research is needed to address the impact of self-affirmation in advertising about important polarized issues.
Jacks and O’Brien (2004) have suggested the stronger that pre-existing attitudes are held, the stronger the motivation to resist. Therefore, the more highly involved and strongly committed to attitudes that a consumer is (even to the point of being polarized), the more likely that self-affirmation has the potential to serve as a resistance reducer and debiaser. In self-affirmation experiments related to how health risk information is processed, Reed and Aspinwall (1998) found a self-affirmation manipulation of having subjects endorse and recall their own good qualities on a dimension unrelated to health increased openness to health-risk information among women in a high-risk behavior group. Reed and Aspinwall concluded that self-affirmation served to facilitate unbiased processing of relevant negative information. Affirmed subjects spent more time reading risk-disconfirming messages and rated them as more convincing, resulting in their being more receptive to negative information whereas the non-affirmed control group engaged in biased processing in favor of information supportive of their current beliefs and behaviors. Reed and Aspinwall’s findings lend further support to self-affirmation serving as a mechanism for more openness and unbiased processing of useful negative information. Taking into account these results of resistance research by Jacks and O’Brien (2004) and self-affirmation experiments by Reed and Aspinwall (1998), future research on the effects of self-affirmation in advertising should specifically focus on how highly self-relevant negative information is processed. Extreme cases, where consumers are most likely to be resistant to arguments in conflict with pre-existing beliefs and behaviors, offer an ideal platform to explore self-affirmation’s effects on openness and persuasion.

Other low involvement categories related to self-identity (Dove beauty, sporting goods, food/beverage, and entertainment) may also positively respond to the use of self-affirmation in
advertising. Again, no studies of the effects of self-affirmation in advertising about products related to self-identity have been reported. Future research will be needed to address this gap.

An additional marketing question relates to the source of affirmation: Advertising versus public relations (news story, research report) vs. word-of-mouth. Are certain vehicles more credible in delivering information using the self-affirmation technique?

Do certain source and/or message characteristics such as the use of an authority figure or fear appeals intensify effects? Can the self-affirmation technique be used to increase resistance to spurious claims and lower resistance to valid ones? Is ingratiation an important component of self-affirmation effects in advertising persuasion?

More work is needed to understand how the framing of an affirmation appeal (individualistic or collectivistic) affects the consumers’ reactions to advertising. Preliminary evidence from Experiment 2 suggests that individualistic appeals are equally effective to persuade both highly individualistic and highly collectivistic people. Jacks and Cameron (2003) found that personal importance was found to be a significant predictor of attitude change; individuals for whom the subject matter was of high importance were more resistant to persuasion attempts than people for whom the subjects were less important. High collectivists may be prone to respond to any type of affirmation appeal because they find appeals directed at “me” and “we” equally important (what’s good for me, is good for all; and what’s good for all, is good for me). As Aaker and Lee (2001) found, matching the communication appeal to the motivation of the message recipient led to central processing and higher persuasion. Future research is needed to understand why all affirmation appeals were more effective among high collectivists. One possible explanation of this phenomenon is higher adaptability and flexibility in responses to any affirmation among high collectivists. Perhaps, high collectivists can activate
either a “me” or “we” self depending on the situation, whereas high individualists are only responsive to “me” messages.) Additional work to understand this phenomenon may be fruitful.

Future research should also include larger sample sizes of respondents to allow analysis of multiple moderating variables and interaction effects of affirmation simultaneously.

The most important practical implication of this research is that these experiments offered the first demonstration of self-affirmation working in the context of one advertising message. This simultaneous communication of a persuasive message with an affirmation is important to marketers who would have difficulty applying the results of earlier demonstrations within social psychology, which required a multi-step process (threatening the self of the subject followed by a separate self-integrity repair task.) Other practical implications for marketers relate to further study of the circumstances when the technique of self-affirmation will most likely be beneficial. Will self-affirmation in advertising be most effective in product categories tied to self-identity? Can other strategies (such as using individualistic appeals or identity-salience appeals) boost its effectiveness? Are new target audiences who have heretofore been most resistant to advertising (such as trier-rejectors, non-believers, or non-users) now open to influence using this technique? Is self-affirmation most useful in communicating negative information? Future research about self-affirmation’s effects in advertising can address these important questions which are highly relevant to marketers.

In conclusion, self-affirmation in advertising offers the possibility of reaching consumers who are highly resistant to persuasive appeals, by encouraging them to be more open to information they would normally reject. A clearer understanding of this technique will enable advertisers to match messages to consumers more effectively. Using self-affirmation effectively in advertising will encourage consumers to process information in a more objective manner.
REFERENCES


Appendix A: Stimuli for Study 1—Print Advertisements

Affirmation Treatment Condition

Smarter People Find the Best Jobs with Career4You.Com

You’re smarter than most other job seekers. You know that you have more to offer an employer than other applicants. You know that not all job services are alike. You choose Career4You.Com because it delivers the best service for smarter applicants.

This new service is specially tailored for college graduates. Its postings are sorted from entry-level jobs to postings for senior executive positions.

Career4You.com is Your Smart Choice for Jobs

Control Condition

People Find the Best Jobs with Career4You.Com

Career4You.Com delivers the best service for job applicants. This new service is specially tailored for college graduates. Its postings are sorted from entry-level jobs to postings for senior executive positions.

Career4You.com is Your Choice for Jobs
APPENDIX B—Stimuli for Study 2
Prototype of Public Service Announcement
Each Subject Saw 7 Slides; Slides 4 and 7 varied by treatment condition.

Slide 1:

The world’s supply of fossil fuel is rapidly being used up.

Slide 2:

Experts warn current fuel sources will be depleted by 2025.

- Oil will become more expensive and less available.
- This will be especially painful in industrialized countries which have become totally dependent upon oil.
Currently only 5 Middle Eastern countries dominate the supply of oil.

- Saudi Arabia
- Kuwait
- Iraq
- Iran
- Abu Dhabi

Instead of long-term dependence on these foreign oil sources, the US is exploring domestic, renewable alternatives to gasoline and diesel fuels.

How does this affect you?

- You can work hard and do whatever it takes to overcome challenges and to accomplish your goals.
- You are smart. When faced with difficult and important decisions, you carefully analyze which choice is the right one for your unique situation.
- Your can make more informed decisions.
- You can act now to make a difference for your future.
APPENDIX B—Stimuli for Study 2

Slide 4: Collectivist Affirmation Treatment only

How does this affect us?

- We Americans work hard and we do whatever it takes to overcome challenges and accomplish our goals.
- Americans are smart. When faced with difficult and important decisions, we carefully analyze which choice is the right one for our unique situation.
- We can make more informed decisions.
- We can act now to make a difference for our future.

Slide 4: Control Condition only

How does this affect you?
APPENDIX B—Stimuli for Study 2

Slide 5:

What choices are needed?

- As the inevitable energy crisis threatens economies around the globe, expert Ron Swenson calls for conservation and adoption of renewable energy substitutes.

Source: www.energycrisis.com

Slide 6:

One solution is the adoption of new types of fuel-efficient cars that reduce dependence on oil.

- Such as:
  - Hybrid cars
  - Biodiesel-fueled vehicles
APPENDIX B—Stimuli for Study 2

Slide 7: Individualistic Affirmation Treatment & Control Conditions

You are faced with a difficult challenge.

- Choose new fuel-efficient and renewable energy alternatives when buying a new car.

This message was brought to you by the Center for the Public Interest and the Ad Council.

---

Slide 7: Collectivistic Affirmation Only

We are faced with a difficult challenge.

- Choose new fuel-efficient and renewable energy alternatives when buying new cars.

This message was brought to you by the Center for the Public Interest and the Ad Council.
APPENDIX C: Key Questionnaire Items in Study 1

Persuasion Index Items

REACTION TO THIS ADVERTISING

Please rate your reactions to the advertisement you just viewed on the following scale, where 1 means you strongly disagree and 7 means you strongly agree. Give each statement any number between 1 and 7 to indicate your level of agreement or disagreement.

A. My overall impression of the advertised product is very favorable.
   Strongly Disagree  1  2  3  4  5  6  7  Strongly Agree

B. I like the advertised product very much.
   Strongly Disagree  1  2  3  4  5  6  7  Strongly Agree

C. I am interested in learning more about the advertised product.
   Strongly Disagree  1  2  3  4  5  6  7  Strongly Agree

D. I found the ad to be informative.
   Strongly Disagree  1  2  3  4  5  6  7  Strongly Agree

E. I intend to try the advertised product.
   Strongly Disagree  1  2  3  4  5  6  7  Strongly Agree
APPENDIX C: Key Questionnaire Items in Study 1

Openness Index Items
YOUR PRESENT STATE OF MIND:

Please rate your state of mind at the present time, by indicating the extent to which you agree or disagree with each statement.

I feel self-confident.
Strongly Disagree 1 2 3 4 5 6 7 Strongly Agree

I am confident of my abilities.
Strongly Disagree 1 2 3 4 5 6 7 Strongly Agree

I am open to new experiences.
Strongly Disagree 1 2 3 4 5 6 7 Strongly Agree

I am eager to learn new information.
Strongly Disagree 1 2 3 4 5 6 7 Strongly Agree

I like to learn new information.
Strongly Disagree 1 2 3 4 5 6 7 Strongly Agree

I am willing to consider new information before forming a decision.
Strongly Disagree 1 2 3 4 5 6 7 Strongly Agree

I question whether this product can deliver the benefits promised.
Strongly Disagree 1 2 3 4 5 6 7 Strongly Agree

I think this advertising is not trustworthy.
Strongly Disagree 1 2 3 4 5 6 7 Strongly Agree

I would like to learn more about the details that are not fully explained.
Strongly Disagree 1 2 3 4 5 6 7 Strongly Agree

I would like to see a demonstration of how this really works.
Strongly Disagree 1 2 3 4 5 6 7 Strongly Agree
APPENDIX C: Key Questionnaire Items in Study 1

NFCC Scale

YOUR ATTITUDES, BELIEFS, AND EXPERIENCES

Read each of the following statements and decide how much you agree with each according to your beliefs and experiences. Please respond according to the following scale. Choose any number between 1 and 6 for each item.

1 Strongly disagree  2 Moderately disagree  3 Slightly disagree  4 Slightly agree  5 Moderately agree  6 Strongly agree

1. I think that having clear rules and order at work is essential for success.
2. Even after I’ve made up my mind about something, I am always eager to consider a different opinion.
3. I don’t like situations that are uncertain.
4. I dislike questions which could be answered in many different ways.
5. I like to have friends who are unpredictable.
6. I find that a well ordered life with regular hours suits my temperament.
7. When dining out, I like to go places where I have been before so I know what to expect.
8. I feel uncomfortable when I don’t understand the reason why an event occurred in my life.
9. I feel irritated when one person disagrees with what everyone else in a group believes.
10. I hate to change my plans at the last minute.
11. I don’t like to go into a situation without knowing what I can expect from it.
12. When I go shopping, I have difficulty deciding exactly what it is that I want.
13. When faced with a problem I usually see the one best solution very quickly.
14. When I am confused about an important issue, I feel very upset.
15. I tend to put off making important decisions until the last possible moment.
16. I usually make important decisions quickly and confidently.
17. I would describe myself as indecisive.
18. I think it is fun to change my plans at the last moment.
19. I enjoy the uncertainty of going into a new situation without knowing what might happen.
20. My personal space is usually messy and disorganized.
21. In most social conflicts, I can easily see which side is right and which is wrong.
22. I tend to struggle with most decisions.
23. I believe that orderliness and organization are among the most important characteristics of a good student.
24. When considering most conflict situations, I can usually see how both sides could be right.
25. I don’t like to be with people who are capable of unexpected actions.
26. I prefer to socialize with familiar friends because I know what to expect from them.
27. I think that I would learn best in a class that lacks clearly stated objectives and requirements.
28. When thinking about a problem, I consider as many different opinions on the issue as possible.
29. I like to know what people are thinking all the time.
30. I dislike it when a person’s statement could mean many different things.
31. It’s annoying to listen to someone who cannot seem to make up his or her mind.
32. I find that establishing a consistent routine enables me to enjoy life more.
33. I enjoy having a clear and structured mode of life.
34. I prefer interacting with people whose opinions are very different from my own.
35. I like to have a place for everything and everything in its place.
36. I feel uncomfortable when someone’s meaning or intention is unclear to me.
37. When trying to solve a problem I often see so many possible options that it’s confusing.
38. I always see many possible solutions to problems I face.
39. I’d rather know bad news than stay in a state of uncertainty.
40. I do not usually consult many different opinions before forming my own view.
41. I dislike unpredictable situations.
42. I dislike the routine aspects of my work (studies).
APPENDIX C: Key Questionnaire Items in Study 1

SELF-ESTEEM SCALE

Below is a list of statements dealing with your general feelings about yourself. Please rate how much you agree with each statement, using the scale of strongly agree, agree, disagree or strongly disagree.

STRONGLY AGREE
AGREE
DISAGREE
STRONGLY DISAGREE

1. I feel that I'm a person of worth, at least on an equal plane with others.
2. I feel that I have a number of good qualities.
3. All in all, I am inclined to feel that I am a failure.
4. I am able to do things as well as most other people.
5. I feel I do not have much to be proud of.
6. I take a positive attitude toward myself.
7. On the whole, I am satisfied with myself.
8. I wish I could have more respect for myself.
9. I certainly feel useless at times.
10. At times I think I am no good at all.
APPENDIX C: Key Questionnaire Items in Study 1

Beliefs about Advertising in General

Please indicate the extent to which you agree or disagree with each statement below about advertising in general.

1. We can depend on getting the truth in most advertising.
   Strongly disagree 1 2 3 4 5 Strongly agree

2. Advertising’s aim is to inform the consumer.
   Strongly disagree 1 2 3 4 5 Strongly agree

3. I believe advertising is informative.
   Strongly disagree 1 2 3 4 5 Strongly agree

4. Advertising is generally truthful.
   Strongly disagree 1 2 3 4 5 Strongly agree

5. Advertising is a reliable source of information about the quality and performance of products.
   Strongly disagree 1 2 3 4 5 Strongly agree

6. Advertising is truth well told.
   Strongly disagree 1 2 3 4 5 Strongly agree

7. In general, advertising presents a true picture of the product being advertised.
   Strongly disagree 1 2 3 4 5 Strongly agree

8. I feel I’ve been accurately informed after viewing most advertisements.
   Strongly disagree 1 2 3 4 5 Strongly agree

9. Most advertising provides consumers with essential information.
   Strongly disagree 1 2 3 4 5 Strongly agree
APPENDIX D: Study 2 Questions used in MediaLab

Please review the advertisement that follows and then provide your reactions and ratings as indicated. The advertisement is a prototype of a public service announcement that will be produced with audio and video. This is a conceptual rendering for your evaluation.

[View Powerpoint PSA prototype]

Please type in any thoughts, feelings or reactions you had as you viewed the advertisement. Include 1 idea or thought in each answer. You will be asked to provide 4 separate ideas or thoughts.

My overall impression of the advertisement is very favorable.
I found the ad to be informative.
I like the ideas presented in the advertisement very much.
I am interested in learning more about the ideas presented in the advertisement.
I intend to follow the recommendations made in the advertisement.
Rate your attitude about hybrid vehicles.
Rate your attitude about biodiesel fuel vehicles.
Rate your attitude about the sponsor of this message.
I am interested in considering a hybrid vehicle when buying my next car.
How much more would you be willing to pay to purchase a hybrid vehicle instead of a traditional car?
I am interested in considering a biodiesel fuel vehicle when buying my next car.
How much more would you be willing to pay to purchase a biodiesel fuel vehicle instead of a traditional car?
What is the average fuel economy (miles per gallon) you would seek to have on your next new car?

YOUR PRESENT STATE OF MIND:
Please rate your state of mind at the present time, by indicating the extent to which you agree or disagree with each statement.

I feel self-confident.
I am confident of my abilities.
I am open to new experiences.
I am eager to learn new information.
I like to learn new information.
I am willing to consider new information before forming a decision.
I question whether the information presented is believable.
I think this advertising is not trustworthy.
I would like to learn more about the details that are not fully explained.
I would like to see demonstrations of the features and benefits of these new vehicles.
APPENDIX D: Study 2 Questions used in MediaLab (Continued)

YOUR ATTITUDES, BELIEFS, AND EXPERIENCES
Read each of the following statements and decide how much you agree with each according to your beliefs and experiences. Please respond according to the following scale. Choose any number between 1 and 6 for each item.

1 Strongly disagree  
2 Moderately disagree  
3 Slightly disagree  
4 Slightly agree  
5 Moderately agree  
6 Strongly agree

1. I think that having clear rules and order at work is essential for success.
2. Even after I've made up my mind about something, I am always eager to consider a different opinion.
3. I don't like situations that are uncertain.
4. I dislike questions which could be answered in many different ways.
5. I like to have friends who are unpredictable.
6. I find that a well ordered life with regular hours suits my temperament.
7. When dining out, I like to go places where I have been before so I know what to expect.
8. I feel uncomfortable when I don't understand the reason why an event occurred in my life.
9. I feel irritated when one person disagrees with what everyone else in a group believes.
10. I hate to change my plans at the last minute.
11. I don't like to go into a situation without knowing what I can expect from it.
12. When I go shopping, I have difficulty deciding exactly what it is that I want
13. When faced with a problem I usually see the one best solution very quickly.
14. When I am confused about an important issue, I feel very upset.
15. I tend to put off making important decisions until the last possible moment.
16. I usually make important decisions quickly and confidently.
17. I would describe myself as indecisive.
18. I think it is fun to change my plans at the last moment.
19. I enjoy the uncertainty of going into a new situation without knowing what might happen.
20. My personal space is usually messy and disorganized.
21. In most social conflicts, I can easily see which side is right and which is wrong.
22. I tend to struggle with most decisions.
23. I believe that orderliness and organization are among the most important characteristics of a good student.
24. When considering most conflict situations, I can usually see how both sides could be right.
25. I don't like to be with people who are capable of unexpected actions.
26. I prefer to socialize with familiar friends because I know what to expect from them.
27. I think that I would learn best in a class that lacks clearly stated objectives and requirements.
28. When thinking about a problem, I consider as many different opinions on the issue as possible.
29. I like to know what people are thinking all the time.
APPENDIX D: Study 2 Questions used in MediaLab (Continued)

30. I dislike it when a person's statement could mean many different things.
31. It's annoying to listen to someone who cannot seem to make up his or her mind.
32. I find that establishing a consistent routine enables me to enjoy life more.
33. I enjoy having a clear and structured mode of life.
34. I prefer interacting with people whose opinions are very different from my own.
35. I like to have a place for everything and everything in its place.
36. I feel uncomfortable when someone's meaning or intention is unclear to me.
37. When trying to solve a problem I often see so many possible options that it's confusing.
38. I always see many possible solutions to problems I face.
39. I'd rather know bad news than stay in a state of uncertainty.
40. I do not usually consult many different opinions before forming my own view.
41. I dislike unpredictable situations.
42. I dislike the routine aspects of my work (studies).

We want to know if you strongly agree or disagree with some statements using the scale shown, where 1=Strongly disagree and 7=Strongly agree. There are no right or wrong answers. If you strongly agree, enter a 7 in the blank space. If you strongly disagree, enter a 1 in that space. If you are unsure, enter a 4 next to the statement. Please try your best to use the entire range of answers from 1 to 7, and not only 1, 7 or 4, or only a few numbers.

I often "do my own thing".
The well-being of my co-workers or classmates is important to me.
It annoys me when other people perform better than I do.
I would sacrifice an activity I enjoy very much if my family did not approve of it.
One should live one's life independently of others.
If a co-worker or classmate gets a prize, I would feel proud.
Competition is the law of nature.
I would do what would please my family, even if I detested that activity.
I like my privacy.
If a relative were in financial difficulty, I would help within my means.
When another person does better than I do, I get tense and aroused.
Before taking a major trip, I consult with most members of my family and many friends.
I prefer to be direct and forthright when I talk to people.
It is important for me to maintain harmony within my group.
Without competition it is not possible to have a good society.
I usually sacrifice my self-interest for the benefit of my group.
I am a unique individual.
I like sharing little things with my neighbors.
Winning is everything.
Children should be taught to place duty before pleasure.
I enjoy being unique and different from others in many ways.
I feel good when I cooperate with others.
It is important to me that I do my job better than others.
I hate to disagree with others in my group.
When I succeed it is usually because of my abilities.
APPENDIX D: Study 2 Questions used in MediaLab (Continued)

My happiness depends very much on the happiness of those around me.
I enjoy working in situations involving competition with others.
We should keep our aging parents with us at home.
What happens to me is my own doing.
To me, pleasure is spending time with others.
Some people emphasize winning; I am not one of them.
Children should feel honored if their parents receive a distinguished award.

Below is a list of statements dealing with your general feelings about yourself. Please rate how much you agree with each statement, using the scale of strongly agree, agree, disagree or strongly disagree.

I feel that I'm a person of worth, at least on an equal plane with others.
I feel that I have a number of good qualities.
All in all, I am inclined to feel that I am a failure.
I am able to do things as well as most other people.
I feel I do not have much to be proud of.
I take a positive attitude toward myself.
On the whole, I am satisfied with myself.
I wish I could have more respect for myself.
I certainly feel useless at times.
At times I think I am no good at all.
Beliefs about Advertising in General

Please indicate the extent to which you agree or disagree with each statement below about advertising in general.

We can depend on getting the truth in most advertising.
Advertising's aim is to inform the consumer.
I believe advertising is informative.
Advertising is generally truthful.
Advertising is a reliable source of information about the quality and performance of products.
Advertising is truth well told.
In general, advertising presents a true picture of the product being advertised.
I feel I've been accurately informed after viewing most advertisements.
Most advertising provides consumers with essential information.

Demographics

These last questions are to classify individuals into groups.
Are you a male or a female?
What is your age?
### TABLE 1-1

**EXPERIMENT 1**  
Dependent Variables by Treatment Condition

<table>
<thead>
<tr>
<th>Measures</th>
<th>Treatment:</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Affirmation</td>
<td>Control</td>
<td></td>
</tr>
<tr>
<td>Reaction to Advertising Index (Mean)</td>
<td>3.57</td>
<td>3.69</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(n=70)</td>
<td>(n=82)</td>
<td></td>
</tr>
<tr>
<td>Openness Index (Mean)</td>
<td>5.74</td>
<td>5.76</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(n=70)</td>
<td>(n=82)</td>
<td></td>
</tr>
<tr>
<td>Thought Listing: Average Characters</td>
<td>112.3</td>
<td>97.4</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(n=70)</td>
<td>(n=82)</td>
<td></td>
</tr>
<tr>
<td>Percentage of Jobs Judged Acceptable</td>
<td>42.9%</td>
<td>52.4%*</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(n=63)</td>
<td>(n=79)</td>
<td></td>
</tr>
</tbody>
</table>

*Significant difference between affirmation and control at p < .01.
### TABLE 1-2

**EXPERIMENT 1**
Openness Index Mean Ratings by Affirmation Treatment & High/Low Need for Cognitive Closure

<table>
<thead>
<tr>
<th>Measure</th>
<th>Openness Index (Mean)</th>
<th>Treatment:</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Affirmation</td>
<td>Control</td>
</tr>
<tr>
<td><strong>NFCC Group</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Low NFCC</td>
<td>5.65</td>
<td>5.97</td>
<td>(n=35)</td>
</tr>
<tr>
<td></td>
<td>(n=35)</td>
<td>(n=41)</td>
<td></td>
</tr>
<tr>
<td>High NFCC</td>
<td>5.79</td>
<td>5.44</td>
<td>(n=36)</td>
</tr>
<tr>
<td></td>
<td>(n=36)</td>
<td>(n=41)</td>
<td></td>
</tr>
</tbody>
</table>
### TABLE 1-3

**EXPERIMENT 1**

Openness Index and Elaboration (Thought Characters) Mean Ratings 
By Affirmation Treatment & High/Low Need for Cognitive Closure

<table>
<thead>
<tr>
<th></th>
<th>Affirmation</th>
<th></th>
<th>Control</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Low NFCC</td>
<td>High NFCC</td>
<td>Low NFCC</td>
<td>High NFCC</td>
</tr>
<tr>
<td>Group:</td>
<td>(n=35)</td>
<td>(n=36)</td>
<td>(n=41)</td>
<td>(n=41)</td>
</tr>
<tr>
<td>Openness Index</td>
<td>5.65</td>
<td>5.79</td>
<td>5.97</td>
<td>5.44</td>
</tr>
<tr>
<td>Elaboration (Mean Thought Characters)</td>
<td>117.4</td>
<td>101.6</td>
<td>98.6</td>
<td>97.3</td>
</tr>
<tr>
<td>Reaction to Advertising Index (Persuasion)</td>
<td>3.50</td>
<td>3.64</td>
<td>3.61</td>
<td>3.70</td>
</tr>
<tr>
<td>Percentage of Jobs Acceptable</td>
<td>42.8%</td>
<td>42.9%</td>
<td>50.7%</td>
<td>54.2%</td>
</tr>
</tbody>
</table>
### TABLE 1-4

**EXPERIMENT 1**

Reaction to Advertising Index Mean Ratings by Affirmation Treatment & High/Low Need for Cognitive Closure & High/Low BA Group

<table>
<thead>
<tr>
<th>Treatment:</th>
<th>Affirmation</th>
<th>Control</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Low NFCC</td>
<td>High NFCC</td>
</tr>
<tr>
<td>Group:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Higher BA Group:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reaction to Advertising Index (Persuasion)</td>
<td>3.80 (n=17)</td>
<td>3.47 (n=25)</td>
</tr>
<tr>
<td>Lower BA Group:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reaction to Advertising Index (Persuasion)</td>
<td>3.21 (n=18)</td>
<td>4.06 (n=10)</td>
</tr>
</tbody>
</table>
TABLE 1-5
EXPERIMENT 1
Average Self-Esteem Scale (SES) Mean Ratings by & High/Low Need for Cognitive Closure & High/Low Locus of Control Group

<table>
<thead>
<tr>
<th>Group:</th>
<th>Low NFCC</th>
<th>High NFCC</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>High LOC Group:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Average SES</td>
<td>3.30</td>
<td>3.39</td>
</tr>
<tr>
<td>(n=12)</td>
<td>(n=20)</td>
<td></td>
</tr>
<tr>
<td><strong>Low LOC Group:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Average SES</td>
<td>3.35</td>
<td>3.48</td>
</tr>
<tr>
<td>(n=16)</td>
<td>(n=9)</td>
<td></td>
</tr>
</tbody>
</table>
TABLE 1-6

EXPERIMENT 1

Correlation Matrix of Need for Closure, Self-Esteem, and Locus of Control

<table>
<thead>
<tr>
<th>Study 1--Supplemental</th>
<th>NFCAVG</th>
<th>AVGSES</th>
<th>LOCSCORE</th>
</tr>
</thead>
<tbody>
<tr>
<td>NFCAVG</td>
<td>Pearson Correlation</td>
<td>1</td>
<td>.047</td>
</tr>
<tr>
<td></td>
<td>Sig. (2-tailed)</td>
<td></td>
<td>.728</td>
</tr>
<tr>
<td></td>
<td>N</td>
<td>57</td>
<td>57</td>
</tr>
<tr>
<td>AVGSES</td>
<td>Pearson Correlation</td>
<td>.047</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Sig. (2-tailed)</td>
<td>.728</td>
<td>.</td>
</tr>
<tr>
<td></td>
<td>N</td>
<td>57</td>
<td>57</td>
</tr>
<tr>
<td>LOCSCORE</td>
<td>Pearson Correlation</td>
<td>.093</td>
<td>-.096</td>
</tr>
<tr>
<td></td>
<td>Sig. (2-tailed)</td>
<td>.493</td>
<td>.478</td>
</tr>
<tr>
<td></td>
<td>N</td>
<td>57</td>
<td>57</td>
</tr>
</tbody>
</table>
EXPERIMENT 1

Chart 1-1: Openness State of Mind Index by High/Low Need for Cognitive Closure
EXPERIMENT 1

Chart 1-2: Percentage of Jobs Found to be Acceptable by Treatment

Dependent Variable: Average %

Acceptable Jobs

<table>
<thead>
<tr>
<th>Ad Treatment</th>
<th>Affirmation</th>
<th>Control</th>
</tr>
</thead>
<tbody>
<tr>
<td>Affirmation</td>
<td>43%</td>
<td>52%</td>
</tr>
<tr>
<td>Control</td>
<td>52%</td>
<td>52%</td>
</tr>
</tbody>
</table>
EXPERIMENT 1

Chart 1-3: Persuasion Index by Treatment and NFCC Group Among individuals with Low/High Beliefs about Advertising

- **Mean Reaction to Advertising Index**
  - At Beliefs about Advertising = Low

- **Mean Reaction to Advertising Index**
  - At Beliefs about Advertising = High

Ad Treatment
### TABLE 2-1

**EXPERIMENT 2**  
Dependent Variables by Treatment Condition

<table>
<thead>
<tr>
<th>Measures</th>
<th>Affirmation Treatment:</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Individualistic</td>
<td>Collectivistic</td>
<td>Control</td>
<td></td>
</tr>
<tr>
<td>Openness Index (Mean)</td>
<td>6.21 (n=54)</td>
<td>6.12 (n=52)</td>
<td>6.18 (n=55)</td>
<td></td>
</tr>
<tr>
<td>Thought Listing: Average ms Elaboration</td>
<td>180,320 (n=54)</td>
<td>186,413 (n=52)</td>
<td>173,439 (n=55)</td>
<td></td>
</tr>
<tr>
<td>Reaction to Advertising Index (Mean)</td>
<td>5.02 (n=54)</td>
<td>5.00 (n=52)</td>
<td>5.10 (n=55)</td>
<td></td>
</tr>
<tr>
<td>Attitude about Hybrids</td>
<td>5.44 (n=54)</td>
<td>5.42 (n=52)</td>
<td>5.24 (n=55)</td>
<td></td>
</tr>
<tr>
<td>Attitude about Biodiesels</td>
<td>5.13 (n=54)</td>
<td>5.21 (n=52)</td>
<td>5.18 (n=55)</td>
<td></td>
</tr>
<tr>
<td>Attitude about Sponsor</td>
<td>4.96 (n=54)</td>
<td>4.88 (n=52)</td>
<td>4.84 (n=55)</td>
<td></td>
</tr>
<tr>
<td>Purchase Intent: Hybrids</td>
<td>25.63 (n=54)</td>
<td>27.33 (n=52)</td>
<td>23.55 (n=55)</td>
<td></td>
</tr>
<tr>
<td>Purchase Intent: Biodiesels</td>
<td>18.81 (n=54)</td>
<td>20.77 (n=52)</td>
<td>18.47 (n=55)</td>
<td></td>
</tr>
<tr>
<td>Purchase Intent: Combined</td>
<td>44.44 (n=54)</td>
<td>48.10 (n=52)</td>
<td>42.02 (n=55)</td>
<td></td>
</tr>
<tr>
<td>Hybrids &amp; Biodiesels</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Average MPG Sought Next Car</td>
<td>41.76 (n=54)</td>
<td>41.73 (n=52)</td>
<td>40.10 (n=55)</td>
<td></td>
</tr>
</tbody>
</table>
### TABLE 2-2

**EXPERIMENT 2**

Elaboration Mean Ratings (Milliseconds during Thought Listing) By Affirmation Treatment & High/Low Individualism/Collectivism Groups

<table>
<thead>
<tr>
<th>Group</th>
<th>Affirmation Treatment/Appeal Type:</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Individualistic</td>
<td>Collectivistic</td>
<td>Control</td>
</tr>
<tr>
<td><strong>Individualism Group:</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Low Individualism</td>
<td>189,157 (n=29)</td>
<td>157,615 (n=28)</td>
<td>180,898 (n=23)</td>
</tr>
<tr>
<td>High Individualism</td>
<td>170,069 (n=25)</td>
<td>220,010 (n=24)</td>
<td>168,078 (n=32)</td>
</tr>
<tr>
<td><strong>Collectivism Group:</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Low Collectivism</td>
<td>155,424 (n=24)</td>
<td>186,168 (n=29)</td>
<td>197,925 (n=26)</td>
</tr>
<tr>
<td>High Collectivism</td>
<td>220,237 (n=30)</td>
<td>186,721 (n=23)</td>
<td>151,485 (n=29)</td>
</tr>
</tbody>
</table>
## TABLE 2-3

### EXPERIMENT 2

**Key Measures Summary of Mean Ratings**

By Affirmation Treatment Condition & High/Low Individualism Group

<table>
<thead>
<tr>
<th>Group</th>
<th>Treatment: Individualistic</th>
<th>Affirmation Treatment/Appeal Type</th>
<th>Control</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Low (n=30)</td>
<td>Low (n=28)</td>
<td>Low (n=28)</td>
</tr>
<tr>
<td></td>
<td>High (n=25)</td>
<td>High (n=26)</td>
<td>High (n=28)</td>
</tr>
<tr>
<td></td>
<td>Low (n=28)</td>
<td>Low (n=28)</td>
<td>Low (n=33)</td>
</tr>
<tr>
<td></td>
<td>High (n=26)</td>
<td>High (n=28)</td>
<td>High (n=33)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Key Measures</th>
<th>Individualistic (n=30)</th>
<th>Low (n=25)</th>
<th>High (n=28)</th>
<th>Low (n=26)</th>
<th>High (n=28)</th>
<th>Low (n=28)</th>
<th>High (n=33)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Openness Index</td>
<td>6.17</td>
<td>6.24</td>
<td>5.98</td>
<td>6.32</td>
<td>6.02</td>
<td>6.31</td>
<td></td>
</tr>
<tr>
<td>Elaboration (milliseconds)</td>
<td>189,157</td>
<td>170,069</td>
<td>157,615</td>
<td>220,010</td>
<td>180,898</td>
<td>168,077</td>
<td></td>
</tr>
<tr>
<td>Persuasion Index: React. Ad.</td>
<td>4.68</td>
<td>5.38</td>
<td>4.97</td>
<td>5.03</td>
<td>5.18</td>
<td>5.04</td>
<td></td>
</tr>
<tr>
<td>Attitude about Hybrids</td>
<td>5.41</td>
<td>5.48</td>
<td>5.61</td>
<td>5.21</td>
<td>5.22</td>
<td>5.25</td>
<td></td>
</tr>
<tr>
<td>Attitude about Biodiesels</td>
<td>4.79</td>
<td>5.52</td>
<td>5.39</td>
<td>5.00</td>
<td>5.17</td>
<td>5.19</td>
<td></td>
</tr>
<tr>
<td>Attitude about Products</td>
<td>10.21</td>
<td>11.00</td>
<td>11.00</td>
<td>10.21</td>
<td>10.39</td>
<td>10.44</td>
<td></td>
</tr>
<tr>
<td>Attitude about Sponsor</td>
<td>4.69</td>
<td>5.28</td>
<td>4.64</td>
<td>5.17</td>
<td>4.83</td>
<td>4.84</td>
<td></td>
</tr>
<tr>
<td>Purchase Intent: Biodiesels</td>
<td>21.34</td>
<td>15.88</td>
<td>23.18</td>
<td>17.96</td>
<td>19.30</td>
<td>17.88</td>
<td></td>
</tr>
<tr>
<td>Purchase Intent: Combined Hybrids &amp; Biodiesels</td>
<td>47.97</td>
<td>40.36</td>
<td>52.86</td>
<td>42.54</td>
<td>41.09</td>
<td>42.69</td>
<td></td>
</tr>
<tr>
<td>Average MPG Sought Next</td>
<td>44.83</td>
<td>38.20</td>
<td>44.11</td>
<td>38.96</td>
<td>41.74</td>
<td>38.91</td>
<td></td>
</tr>
</tbody>
</table>
TABLE 2-4

EXPERIMENT 2
Key Measures Summary of Mean Ratings
By Affirmation Treatment Condition & High/Low Collectivism Group

<table>
<thead>
<tr>
<th>Group</th>
<th>Treatment: Affirmation Treatment/Appeal Type</th>
<th>Collectivistic</th>
<th>Control</th>
</tr>
</thead>
<tbody>
<tr>
<td>Collectivism Group:</td>
<td>Individualistic</td>
<td>Collectivistic</td>
<td>Control</td>
</tr>
<tr>
<td>Low</td>
<td>High</td>
<td>Low</td>
<td>High</td>
</tr>
<tr>
<td>(n=24)</td>
<td>(n=30)</td>
<td>(n=29)</td>
<td>(n=23)</td>
</tr>
<tr>
<td>Key Measures</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Openness Index</td>
<td>6.11</td>
<td>6.29</td>
<td>5.99</td>
</tr>
<tr>
<td>Elaboration (milliseconds)</td>
<td>155,424</td>
<td>220,237</td>
<td>186,168</td>
</tr>
<tr>
<td>Persuasion Index: React. Ad.</td>
<td>4.68</td>
<td>5.27</td>
<td>4.85</td>
</tr>
<tr>
<td>Attitude about Hybrids</td>
<td>5.25</td>
<td>5.60</td>
<td>5.38</td>
</tr>
<tr>
<td>Attitude about Biodiesels</td>
<td>5.00</td>
<td>5.23</td>
<td>5.34</td>
</tr>
<tr>
<td>Attitude about Products</td>
<td>10.25</td>
<td>10.83</td>
<td>10.72</td>
</tr>
<tr>
<td>Attitude about Sponsor</td>
<td>4.46</td>
<td>5.37</td>
<td>4.66</td>
</tr>
<tr>
<td>Purchase Intent: Hybrids</td>
<td>25.96</td>
<td>25.37</td>
<td>30.17</td>
</tr>
<tr>
<td>Purchase Intent: Combined Hybrids &amp; Biodiesels</td>
<td>43.67</td>
<td>45.07</td>
<td>54.66</td>
</tr>
<tr>
<td>Average MPG Sought Next</td>
<td>43.13</td>
<td>40.67</td>
<td>42.59</td>
</tr>
</tbody>
</table>
## TABLE 2-5

### EXPERIMENT 2

**Key Measures Summary of Mean Ratings**  
**By Affirmation Treatment Condition & High/Low Need for Cognitive Closure Group**

<table>
<thead>
<tr>
<th>Group</th>
<th>Affirmation Treatment/Appeal Type:</th>
<th>Treatment:</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Individualistic</td>
<td>Collectivistic</td>
<td>Control</td>
</tr>
<tr>
<td><strong>NFCC Group:</strong></td>
<td>Low (n=27)</td>
<td>High (n=27)</td>
<td>Low (n=25)</td>
</tr>
<tr>
<td><strong>Key Measures</strong></td>
<td>Openness Index 6.20</td>
<td>6.21</td>
<td>5.97</td>
</tr>
<tr>
<td></td>
<td>Elaboration (milliseconds) 185,780</td>
<td>174,859</td>
<td>192,081</td>
</tr>
<tr>
<td></td>
<td>Reaction to Advertising Index (Persuasion) 5.04</td>
<td>4.99</td>
<td>4.92</td>
</tr>
<tr>
<td></td>
<td>Attitude about Hybrids 5.56</td>
<td>5.33</td>
<td>5.52</td>
</tr>
<tr>
<td></td>
<td>Attitude about Biodiesels 5.30</td>
<td>4.96</td>
<td>5.07</td>
</tr>
<tr>
<td></td>
<td>Attitude about Products 10.85</td>
<td>10.30</td>
<td>10.59</td>
</tr>
<tr>
<td></td>
<td>Attitude about Sponsor 4.81</td>
<td>5.11</td>
<td>4.89</td>
</tr>
<tr>
<td></td>
<td>Purchase Intent: Hybrids 25.70</td>
<td>25.56</td>
<td>30.56</td>
</tr>
<tr>
<td></td>
<td>Purchase Intent: Combined Hybrids &amp; Biodiesels 46.85</td>
<td>42.04</td>
<td>52.63</td>
</tr>
<tr>
<td></td>
<td>Average MPG Sought Next 43.52</td>
<td>40.00</td>
<td>45.19</td>
</tr>
</tbody>
</table>
### TABLE 2-6

#### EXPERIMENT 2

Reaction to Advertising by Affirmation Treatment by Time Spent Elaborating & High/Low Individualism or Collectivism

<table>
<thead>
<tr>
<th>Reaction to Advertising</th>
<th>Treatment: Affirmation Treatment/Appeal Type: Individualist</th>
<th>Collectivist</th>
<th>Control</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Low Time Spent Elaborating</td>
<td>High Time Spent Elaborating</td>
<td>Low Time Spent Elaborating</td>
</tr>
<tr>
<td>Total:</td>
<td>(n=27) (n=27)</td>
<td>(n=23) (n=29)</td>
<td>(n=34) (n=21)</td>
</tr>
<tr>
<td>Reaction to Advertising</td>
<td>5.07 4.97</td>
<td>4.86 5.10</td>
<td>5.17 4.97</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Low Individualism Group</th>
<th>(n=13) (n=16)</th>
<th>(n=17) (n=11)</th>
<th>(n=14) (n=9)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reaction to Advertising</td>
<td>4.98 4.49</td>
<td>4.79 5.25</td>
<td>5.09 5.33</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>High Individualism Group</th>
<th>(n=14) (n=11)</th>
<th>(n=6) (n=18)</th>
<th>(n=20) (n=12)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reaction to Advertising</td>
<td>5.14 5.67</td>
<td>5.07 5.01</td>
<td>5.24 4.70</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Low Collectivism Group:</th>
<th>(n=13) (n=11)</th>
<th>(n=12) (n=17)</th>
<th>(n=13) (n=13)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reaction to Advertising</td>
<td>4.91 4.60</td>
<td>4.63 4.93</td>
<td>5.48 4.83</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>High Collectivism Group:</th>
<th>(n=14) (n=16)</th>
<th>(n=11) (n=12)</th>
<th>(n=21) (n=8)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reaction to Advertising</td>
<td>5.21 5.23</td>
<td>5.11 5.35</td>
<td>4.99 5.20</td>
</tr>
</tbody>
</table>
### TABLE 2-7

#### EXPERIMENT 2

Reaction to Advertising Persuasion Index Mean Ratings by Affirmation Treatment by Time Spent Elaborating & High/Low Need for Cognitive Closure Group

<table>
<thead>
<tr>
<th>Persuasion Index Mean</th>
<th>Treatment: Affirmation Treatment/Appeal Type:</th>
<th>Individualist</th>
<th>Collectivist</th>
<th>Control</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Total:</td>
<td>Low</td>
<td>High</td>
<td>Low</td>
</tr>
<tr>
<td></td>
<td>Low     High</td>
<td>(n=27)</td>
<td>(n=27)</td>
<td>(n=23)</td>
</tr>
<tr>
<td>Reaction to Advertising Index (Persuasion)</td>
<td>5.07    4.97</td>
<td>4.86</td>
<td>5.10</td>
<td>5.17</td>
</tr>
<tr>
<td></td>
<td>Low NFCC Group</td>
<td>(n=12)</td>
<td>(n=15)</td>
<td>(n=10)</td>
</tr>
<tr>
<td>Reaction to Advertising Index (Persuasion)</td>
<td>5.13    4.97</td>
<td>4.68</td>
<td>5.06</td>
<td>5.24</td>
</tr>
<tr>
<td></td>
<td>High NFCC Group</td>
<td>(n=15)</td>
<td>(n=12)</td>
<td>(n=13)</td>
</tr>
<tr>
<td>Reaction to Advertising Index (Persuasion)</td>
<td>5.01    4.97</td>
<td>5.00</td>
<td>5.17</td>
<td>5.13</td>
</tr>
</tbody>
</table>
### TABLE 2-8

**EXPERIMENT 2**

Correlation Matrix of Key Variables with Need for Cognitive Closure

<table>
<thead>
<tr>
<th>Correlations</th>
<th>ADRE1TO5</th>
<th>OP16MN</th>
<th>Time Spent on Thought Listings in Total</th>
<th>SESTOTAL</th>
<th>TOTALNFC</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>ADRE1TO5</strong></td>
<td>1</td>
<td>1.20</td>
<td>.000</td>
<td>.086</td>
<td>-.002</td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td></td>
<td>.129</td>
<td>.998</td>
<td>.278</td>
<td>.979</td>
</tr>
<tr>
<td>N</td>
<td>161</td>
<td>161</td>
<td>161</td>
<td>161</td>
<td>161</td>
</tr>
<tr>
<td><strong>OP16MN</strong></td>
<td>.120</td>
<td>1</td>
<td>.143</td>
<td>.393**</td>
<td>-.074</td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td>.129</td>
<td>.071</td>
<td>.000</td>
<td>.350</td>
<td>.350</td>
</tr>
<tr>
<td>N</td>
<td>161</td>
<td>161</td>
<td>161</td>
<td>161</td>
<td>161</td>
</tr>
<tr>
<td><strong>Time Spent on Thought Listings in Total</strong></td>
<td>.000</td>
<td>.143</td>
<td>1</td>
<td>-.029</td>
<td>-.128</td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td>.998</td>
<td>.071</td>
<td>.716</td>
<td>.105</td>
<td>.105</td>
</tr>
<tr>
<td>N</td>
<td>161</td>
<td>161</td>
<td>161</td>
<td>161</td>
<td>161</td>
</tr>
<tr>
<td><strong>SESTOTAL</strong></td>
<td>.086</td>
<td>.393**</td>
<td>-.029</td>
<td>1</td>
<td>-.088</td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td>.278</td>
<td>.000</td>
<td>.716</td>
<td>.264</td>
<td>.264</td>
</tr>
<tr>
<td>N</td>
<td>161</td>
<td>161</td>
<td>161</td>
<td>161</td>
<td>161</td>
</tr>
<tr>
<td><strong>TOTALNFC</strong></td>
<td>-.002</td>
<td>-.074</td>
<td>-.128</td>
<td>-.088</td>
<td>1</td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td>.979</td>
<td>.350</td>
<td>.105</td>
<td>.264</td>
<td>.264</td>
</tr>
<tr>
<td>N</td>
<td>161</td>
<td>161</td>
<td>161</td>
<td>161</td>
<td>161</td>
</tr>
</tbody>
</table>

**Note:** Correlation is significant at the 0.01 level (2-tailed).
TABLE 2-9

EXPERIMENT 2

Correlation Matrix of Key Variables

<table>
<thead>
<tr>
<th>Beliefs about Advertising Summation</th>
<th>Elaboration Time Spent on Thought Listings in Total</th>
<th>ICS Individualism Scale</th>
<th>ICS Collectivism Scale</th>
<th>Openness</th>
<th>Self-Esteem Scale</th>
<th>Need for Cognitive Closure</th>
<th>Reaction to Advertising Persuasion Index</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pearson Correlation</td>
<td>.181(*)</td>
<td>.077</td>
<td>.005</td>
<td>-.141</td>
<td>.076</td>
<td>.094</td>
<td></td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td>.072</td>
<td>.722</td>
<td>.326</td>
<td>.952</td>
<td>.072</td>
<td>.331</td>
<td>.232</td>
</tr>
<tr>
<td>N</td>
<td>165</td>
<td>163</td>
<td>165</td>
<td>165</td>
<td>165</td>
<td>165</td>
<td>165</td>
</tr>
<tr>
<td>Pearson Correlation</td>
<td>-.028</td>
<td>1</td>
<td>-.059</td>
<td>-.052</td>
<td>.079</td>
<td>-.104</td>
<td>-.011</td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td>.722</td>
<td>.455</td>
<td>.512</td>
<td>.313</td>
<td>.187</td>
<td>.886</td>
<td>.430</td>
</tr>
<tr>
<td>N</td>
<td>163</td>
<td>163</td>
<td>163</td>
<td>163</td>
<td>163</td>
<td>163</td>
<td>163</td>
</tr>
<tr>
<td>ICSIND</td>
<td>.077</td>
<td>-.059</td>
<td>1</td>
<td>.200(*)</td>
<td>.202(**)</td>
<td>.070</td>
<td>.151</td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td>.326</td>
<td>.455</td>
<td>.010</td>
<td>.009</td>
<td>.374</td>
<td>.053</td>
<td>.369</td>
</tr>
<tr>
<td>N</td>
<td>165</td>
<td>163</td>
<td>165</td>
<td>165</td>
<td>165</td>
<td>165</td>
<td>165</td>
</tr>
<tr>
<td>ICSCOLL</td>
<td>.181(*)</td>
<td>-.052</td>
<td>.200(*)</td>
<td>.073</td>
<td>.273(**)</td>
<td>.218(**)</td>
<td></td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td>.020</td>
<td>.512</td>
<td>.010</td>
<td>.934</td>
<td>.353</td>
<td>.000</td>
<td>.005</td>
</tr>
<tr>
<td>N</td>
<td>165</td>
<td>163</td>
<td>165</td>
<td>165</td>
<td>165</td>
<td>165</td>
<td>165</td>
</tr>
<tr>
<td>OPEN1TO6</td>
<td>.005</td>
<td>.079</td>
<td>.202(**)</td>
<td>.007</td>
<td>1</td>
<td>.397(**)</td>
<td>-.072</td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td>.952</td>
<td>.313</td>
<td>.009</td>
<td>.934</td>
<td>.000</td>
<td>.360</td>
<td>.157</td>
</tr>
<tr>
<td>N</td>
<td>165</td>
<td>163</td>
<td>165</td>
<td>165</td>
<td>165</td>
<td>165</td>
<td>165</td>
</tr>
<tr>
<td>SESTOTAL</td>
<td>-.141</td>
<td>-.104</td>
<td>.070</td>
<td>-.073</td>
<td>.397(**)</td>
<td>1</td>
<td>-.096</td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td>.072</td>
<td>.187</td>
<td>.374</td>
<td>.353</td>
<td>.000</td>
<td>.221</td>
<td>.337</td>
</tr>
<tr>
<td>N</td>
<td>165</td>
<td>163</td>
<td>165</td>
<td>165</td>
<td>165</td>
<td>165</td>
<td>165</td>
</tr>
<tr>
<td>TOTALNFC</td>
<td>.076</td>
<td>-.011</td>
<td>.151</td>
<td>.273(**)</td>
<td>-.072</td>
<td>-.096</td>
<td>1</td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td>.331</td>
<td>.886</td>
<td>.053</td>
<td>.000</td>
<td>.360</td>
<td>.221</td>
<td>.975</td>
</tr>
<tr>
<td>N</td>
<td>165</td>
<td>163</td>
<td>165</td>
<td>165</td>
<td>165</td>
<td>165</td>
<td>165</td>
</tr>
<tr>
<td>ADRE1TO5</td>
<td>.094</td>
<td>.062</td>
<td>.070</td>
<td>.218(**)</td>
<td>.111</td>
<td>.075</td>
<td>.002</td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td>.232</td>
<td>.430</td>
<td>.369</td>
<td>.005</td>
<td>.157</td>
<td>.337</td>
<td>.975</td>
</tr>
<tr>
<td>N</td>
<td>165</td>
<td>163</td>
<td>165</td>
<td>165</td>
<td>165</td>
<td>165</td>
<td>165</td>
</tr>
</tbody>
</table>

* Correlation is significant at the 0.05 level (2-tailed).
** Correlation is significant at the 0.01 level (2-tailed).
EXPERIMENT 2

Chart 2-1A: Openness State of Mind Index by Treatment and High/Low Individualism

<table>
<thead>
<tr>
<th>Treatment Condition</th>
<th>Control</th>
<th>Collectivist Affirm</th>
<th>Individualist Affirm</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean Openness 1 to 6 Index</td>
<td>6.4</td>
<td>6.3</td>
<td>6.2</td>
</tr>
<tr>
<td></td>
<td>6.1</td>
<td>6.0</td>
<td>5.9</td>
</tr>
</tbody>
</table>

INDGROUP: .00 1.00

Chart 2-1B: Openness State of Mind Index by Treatment and High/Low Collectivism

<table>
<thead>
<tr>
<th>Treatment Condition</th>
<th>Control</th>
<th>Collectivist Affirm</th>
<th>Individualist Affirm</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean Openness 1 to 6 Index</td>
<td>6.4</td>
<td>6.3</td>
<td>6.2</td>
</tr>
<tr>
<td></td>
<td>6.1</td>
<td>6.0</td>
<td>5.9</td>
</tr>
</tbody>
</table>

COLLGRP: .00 1.00
EXPERIMENT 2

Chart 2-2A: Mean Milliseconds Spent of Thought Listing by Treatment and Individualism Group

Treatment by Individualism Group 2-way interaction Significant p=.04

Chart 2-2B: Mean Milliseconds Spent of Thought Listing by Treatment and Collectivism Group

95
EXPERIMENT 2

Chart 2-3A: Ad Reaction Index by Treatment and High/Low Individualism Groups

Means of ADRE1TO5

Marginaly significant 2-way interaction Treatment x High/Low Individualism, p=.07
EXPERIMENT 2

Chart 2-3B: Ad Reaction Index by Treatment and High/Low Collectivism Groups

Collectivism Group Main Effect Marginally Significant $p = .08$
EXPERIMENT 2

Chart 2-4: Persuasion Index by Treatment and High/Low Elaboration

Persuasion Index ADRE1TO5

Time Spent: Thought
- Low
- High

Treatment Condition
EXPERIMENT 2

Chart 2-5A: Elaboration (Thought Listing Time) by Treatment and Individualism/Collectivism Groups—By Individualism Groups

![Individualism Groups Chart]

Chart 2-5B: Elaboration (Thought Listing Time) by Treatment and Individualism/Collectivism Groups—By Collectivism Groups

![Collectivism Groups Chart]
EXPERIMENT 2

Chart 2-6A: Persuasion Index by Elaboration Time Group and Individualism Group

AMONG LOW INDIVIDUALISTS

Chart 2-6B: Persuasion Index by Elaboration Time Group and Individualism Group

AMONG HIGH INDIVIDUALISTS
EXPERIMENT 2

Exhibit 2-7A: Persuasion Index by Elaboration Time Group and Collectivism Group
AMONG LOW COLLECTIVISTS

Exhibit 2-7B: Persuasion Index by Elaboration Time Group and Collectivism Group
AMONG HIGH COLLECTIVISTS
Apple Computer: Think Different

"Here's to the crazy ones. The misfits. The rebels. The trouble-makers. The round pegs in the square holes. The ones who see things differently. They're not fond of rules, and they have no respect for the status-quo. You can quote them, disagree with them, glorify, or vilify them. But the only thing you can't do is ignore them. Because they change things. They push the human race forward. And while some may see them as the crazy ones, we see genius. Because the people who are crazy enough to think they can change the world, are the ones who do."

Apple
Be All You Can Be

Dove Campaign for Beauty
Nike “Just Do It”

YOU DO NOT HAVE TO BE YOUR MOTHER UNLESS SHE IS WHO YOU WANT TO BE. YOU DO NOT HAVE TO BE YOUR MOTHER'S MOTHER, OR YOUR MOTHER’S MOTHER’S MOTHER, OR EVEN YOUR GRANDMOTHER’S MOTHER ON YOUR FATHER’S SIDE. YOU MAY INHERIT THEIR CHRES OR THEIR FLAWS OR THEIR LIVES, BUT YOU ARE NOT DESTINED TO BECOME THE WOMEN WHO CAME BEFORE YOU. YOU ARE NOT DESTINED TO LIVE THEIR LIVES. SO IF YOU INHERIT SOMETHING, INHERIT THEIR STRENGTH. IF YOU INHERIT SOMETHING, INHERIT THEIR RESILIENCE. BECAUSE THE ONLY PERSON YOU ARE DESTINED TO BECOME IS THE PERSON YOU DECIDE TO BE.