THE EFFECTS OF CULTURE AND INDIVIDUAL DIFFERENCES
ON THE PERSUASIVENESS OF COMPARATIVE ADS

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ABSTRACT

Most comparative advertising studies are conducted within the U.S. Little is, thus, known regarding its persuasiveness in a cross-cultural setting. Even within the US, the impacts of comparative versus noncomparative (NC) ads are mixed. The inconsistencies in research findings suggest the need for further study regarding constructs that may influence the persuasiveness of these two types of ads. In this dissertation, an individual level culture factor: independent self-construal (INDSC) and an individual level personality factor: need for cognition (NFC) are hypothesized as two such constructs. Because INDSC emphasizes competition and confrontation, it is expected that comparative ads (NC ads) will be more persuasive for consumers high (low) in INDSC. However the persuasiveness of INDSC-congruent ad type is expected only for low NFC consumers because these consumers are likely to regard this consistency as a peripheral cue and thus form an ad evaluation based on this match. High NFC consumers, however, are not expected to be influenced by this congruity because they have a higher intrinsic motivation to process information. As a consequence, for high NFC consumers, comparative ads, which provide more factual information, will be more persuasive than NC ads, regardless of INDSC. An experiment employing a 2X2X2 factorial design was conducted. Ad formats (comparative vs. NC), INDSC (high vs. low) and NFC (high vs. low) were the three independent factors. Results indicate that NFC and INDSC influenced the persuasiveness of comparative vs. NC ads for utilitarian products. Hypotheses concerning high NFC consumers were supported. For high NFC consumers, comparative ads were more persuasive than NC ads regardless of consumers’ INDSC. Hypotheses regarding low NFC consumers, however, were not supported. Comparative
ads (vs. NC ads) were more persuasive for low NFC consumers with low INDSC while NC ads (vs. comparative ads) were more persuasive for low NFC consumers with high INDSC. The underlying premise that culture matters for this group of consumers was, however, supported. Higher involvement elicited by incongruity between INDSC and ad format appeared to be the psychological mediator underlying these effects for low NFC consumers.
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<tr>
<td>$A_{ad}$</td>
<td>Attitude toward Ad</td>
</tr>
<tr>
<td>$A_{b(n)}$</td>
<td>Attitude toward Brand (nonrelative measure)</td>
</tr>
<tr>
<td>$A_{b(r)}$</td>
<td>Attitude toward Brand (relative measure)</td>
</tr>
<tr>
<td>COL</td>
<td>Collectivism</td>
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<td>CP</td>
<td>Comparative Ad</td>
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<td>DC</td>
<td>Direct Comparative Ad</td>
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<td>IC</td>
<td>Indirect Comparative Ad</td>
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<td>IND</td>
<td>Individualism</td>
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<td>INDCOL</td>
<td>Individualism-Collectivism</td>
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<td>INDSC</td>
<td>Independent Self-Construal</td>
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<td>INTSC</td>
<td>Interdependent Self-Construal</td>
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<td>NC</td>
<td>Noncomparative Ad</td>
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<td>NFC</td>
<td>Need for Cognition Scale</td>
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<td>$PI_{(n)}$</td>
<td>Purchase Intention (nonrelative measure)</td>
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<td>$PI_{(r)}$</td>
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<td>MANOVA</td>
<td>Multivariate Analysis of Variance</td>
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<td>ANOVA</td>
<td>Analysis of Variance</td>
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<td>US</td>
<td>The United States of America</td>
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<td>CFI</td>
<td>Comparative Fit Index</td>
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<td>Abbreviation</td>
<td>Meaning</td>
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<tr>
<td>NFI</td>
<td>Normed Fit Index</td>
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<td>GFI</td>
<td>Goodness of Fit Index</td>
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<td>ELM</td>
<td>Elaboration Likelihood Model</td>
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<tr>
<td>SCS</td>
<td>Self-Construal Scale</td>
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<tr>
<td>PI</td>
<td>Purchase Intention</td>
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<td>$A_b$</td>
<td>Attitude toward Brand</td>
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CHAPTER 1

INTRODUCTION

Comparative advertising, which explicitly or implicitly mentions the name of a competitive brand, is widely used in the United States (Grewal et al. 1997); one study estimates that it accounts for 30% to 40% of all advertisements (Donthu 1992). In TV advertising, the percentage is substantially higher. Approximately 80% of all television commercials have been reported to include comparative content (Pechmann and Stewart 1990). Comparative advertising suggests the potential delivery of information which was not previously available to consumers (Wilkie and Farris 1975). The fact that comparative ads provide consumers with more and better information in a relative format assists consumers in making their choice and evaluation of products and services. One reason for the popularity of comparative advertising in the US comes from encouragement from the Federal Trade Commission (FTC) which believes that mentioning a competitor by name would help the consumer evaluate a claim of superiority (Wilkie and Farris 1975). In academics, comparative advertising is one of the most often studied ad execution elements (Pechmann and Stewart 1991).

Despite the common use of comparative advertising, its effectiveness is equivocal, mixed, or even conflicting (Donthu 1992). Literature in the field of comparative advertising provides inconsistent evidence on the issue of whether comparative ads are more effective than noncomparative ads or vice versa. A number of studies find comparative ads to be more effective than traditional noncomparative ads (e.g., Droge and Darmon 1987; Miniard et al. 1993; Pechmann and Ratneshwar 1991;
Rose et al. 1993). However, others find comparative ads to be no more effective or even less effective than traditional noncomparative ads (e.g., Belch 1981; Golden 1979; Goodwin and Etgar 1980; Swinyard 1981). In addition, many moderators appear to play a role, e.g., the intensity of comparative ads (Donthu 1992) and market share of the advertised brand (Pechmann and Stewart 1991). Inconsistency in the impact of comparative ads, nevertheless, does not discourage use of this format by consumer goods and services corporations (Grewal et al. 1997). Advertising practitioners continue to heavily employ this kind of ad despite uncertainty about effectiveness under varying conditions (Rogers and Williams 1989) and possible ethical and legal issues (e.g., deception or misrepresentation; Beck-Dudley and Williams 1988).

Although comparative ads are widely used in the US, they are rarely used or even illegal in several other countries (Donthu 1998). Yet the internationalization of American companies suggests the possible introduction or increased use of comparative ads in other countries. Furthermore, how consumers in those countries will react to comparative ads remains unclear given probable interactions with various cultural influences.

Despite an increasing interest in cross-cultural consumer behavior, little work has examined the differential effect of comparative versus noncomparative ads on persuasion in different cultures. Even though several recent studies have examined cross-cultural differences in advertising practices and their effectiveness (e.g., Aaker and William 1998; Han and Shavitt 1994), most of these studies investigate advertising in general and do not specifically examine the cross-cultural effectiveness of comparative ads. Relevant literature reveals only two studies that explicitly examine the cross-cultural
persuasiveness of comparative ads (Donthu 1998; Jeon and Beatty 2002). There could be several reasons for the lack of cross-cultural studies, including methodological complexities and an ethnocentric belief that psychological principles are universal (Maheswaran and Shavitt 2000).

The scarcity of research in this topic exists in spite of the extensive debate over globalization versus standardization of marketing practice (Levitt 1983). A growth of the global marketing strategy in general and the cross-cultural use of standardized ads in particular (Onkvisit and Shaw 1999) make this gap in the literature even more pronounced. It has been noted that virtually every consumer behavior theory is culturally bound to a Western conceptualization of the world (Cote and Tansuhaj 1989). Most consumer and advertising theories are based on evidence from Western cultures, primarily the US (Aaker and Maheswaran 1997). Since the US is the birthplace of these theories, it is thus not surprising that American cultural assumptions might be implicitly or explicitly included in such theories. In other words, American culture may have influenced the standard by which consumer behavior is measured and the basis for philosophies of how advertising works (Mooij 1997). As a consequence, future work to develop pan-cultural models of consumer behavior is obviously needed (McCarty 1989).

The fact that comparative ads are illegal in some countries suggests that comparative ads may not be a universally accepted advertising practice. The advertising community in these countries may adhere to an implicit notion that comparative ads will not be used. This underlying assumption implies that comparative ads are not effective
(Donthu 1998). However this assumption may or may not be true and, therefore warrants systematic verification.

This dissertation proposes that the cultural dimension of individualism-collectivism (INDCOL) (operationalized through independent vs. interdependent self-construal or INDSC vs. INTSC) has a potential to moderate the cross-cultural persuasiveness of comparative ads. In order to examine this potential influence, the study operationalizes self-construal (SC) at the individual rather than cultural level (e.g. Aaker and Lee 2001; Aaker and Schmitt 2001). Although INDCOL originated in the context of cross-cultural research which used culture or country as a unit of analysis, subsequent researchers have become more interested in individual-level manifestations (Dutta-Bergman and Wells 2002). As such, researchers have established that individuals within a culture vary on their levels of INDCOL (e.g., Cialdini et al. 1999; Singelis 1994).

Furthermore, unlike national level analysis, research using individual level differences focuses on the person’s individualist or collectivist tendencies (Yamaguchi, Kuhlman, and Sugimori 1995). In this dissertation, therefore, reaction to comparative ads of an individual within a culture is argued to be related to the extent to which the individual possesses such INDCOL tendencies.

Although culture is suggested to play an important role in the persuasiveness of comparative ads, certain individual difference personality factor may act as a moderator and thus set the boundary conditions to cultural influence. Need for cognition (NFC) is proposed here as such an individual difference moderator because different degrees of task involvement are reported to accentuate or attenuate cultural influence (Aaker 2000).
Given NFC's linkage to processing motivation (Cacioppo and Petty 1982), this construct seems likely to also moderate cultural influence in this context.

In sum, this dissertation seeks to demonstrate that an individual level culture factor (i.e., INDSC vs. INTSC) moderates the relative persuasiveness of comparative versus noncomparative ads. To date, such influences remain untested. Furthermore, by including an individual difference personality factor, need for cognition, this dissertation attempts to elucidate psychological mechanisms underlying comparative versus noncomparative ad persuasion effects. In other words, this dissertation addresses culture from an individual cognitive approach in order to understand the mechanism in processing persuasive messages.

The dissertation is structured as follows. First, literatures in comparative advertising, INDCOL and NFC are discussed. Next, hypotheses based on these discussions are offered and then empirically tested in a laboratory study. Subsequently, data from the experiment are analyzed. Finally, theoretical and managerial implications are provided and avenues for future research suggested.
CHAPTER 2

COMPARATIVE ADVERTISING

Definition of comparative advertising

Direct comparative (DC) ads make explicit reference by mentioning the name of a competitive brand. DC ads make the comparison of two or more competitors or comparison brands, usually in the same generic product or service class. DC ads usually make such comparisons concerning one or more specific product attributes and clearly state that the sponsoring brand is relatively superior to the comparison brand on the particular attribute(s) (Wilkie and Farris 1975). From this perspective, the format of DC ads is similar to comparison shopping because they provide information linkages from one brand to another (Droge 1989). Usually it is a relatively unknown brand that attempts to directly compare itself with a well-known marketing leader (Muehling, Stoltman, and Grossbart 1990), although not always necessary. Indirect comparative (IC) ads, on the other hand, do not mention any specific comparison brand(s) but compare the focal brand with other brands or the category in general; e.g., "our brand is better than any other brand" (Pechmann and Ratneshwar 1991). Most comparative ads are indirect since the competitor is simply implied rather than directly named (Walker and Anderson 1991). Noncomparative (NC) ads, in contrast, try to make an impression by conveying the information of the advertised brand without implicating how it fares against competitors (Manning et al. 2001).
Literature Review of Comparative Ads

Comparative advertising has attracted tremendous attention from researchers interested in several topics including cognition, affect, behavioral intention and behavior, as well as factors that moderate the relative effectiveness of comparative ads.

Cognition

The influence of comparative ads is studied using different cognitive measures including recall (e.g., Donthu 1992), involvement (e.g., Gotlieb and Sarel 1991), and nature of information processing (e.g., Johnson and Horne 1988; Pechmann and Ratneshwar 1991).

Recall is found to be in direct proportion to the comparative intensity (Donthu 1992). That is, recall increases as the comparative intensity of the ad increases. The researcher manipulates the intensity of the comparative ad using four dimensions including: (1) whether the ad explicitly names the competitor or did not refer to any competitor or simply referred to “leading brand”, (2) whether the ad makes overall comparisons or makes comparisons on one or more attribute(s), (3) whether the ad employs two-sided or one-sided comparisons, and (4) whether less than 50 percent or more than 50 percent of the time is spent on comparisons.

Results from Pechmann and Stewart (1991) also indicate that comparative ads generate more recall than NC ads. However this relationship is not straightforward because the recall level is also contingent on the market share of that particular brand (further discussion in the section of moderators of comparative ad effectiveness). On this
note, most recent studies have found superior recall for comparative ads, but earlier studies did not (Murphy and Amundsen 1981; Shimp and Dyer 1978).

Findings regarding involvement are also inconsistent. Although Muehling et al. (1990) finds that comparative ads elicit greater involvement than NC ads, Gotlieb and Sarel (1991) reports no main effect of ad type (comparative vs. NC) on involvement.

In terms of nature of information processing, Johnson and Horne (1988) use a contrast model of similarity (Tversky 1977) to study consumers' cognitive response to comparative ads. The model considers product similarity as a simple contrasting of common and distinctive features. According to the model, when two products have several common features, comparative ads should promote the similarity of the products. On the other hand, if the two products have more distinctive features, comparative ads should encourage differentiation. In general, comparative ads compare two brands from the same basic product categories. The two brands, by their nature, have more common than distinctive features. As a consequence, the overall result of exposure to comparative ads should be association rather than disassociation. Based on this hypothesis, Johnson and Horne (1988) report that the primary effect of comparative advertising is an association of the sponsoring brand with the comparison brand no matter what the ad appearance emphasizes (i.e., association with vs. differentiation from competitors). Their finding receives both replication and challenges from subsequent studies by other researchers. Drawing on theories in categorization and inferential process, Pechmann and Ratneshwar (1991) report that comparative ads enhance consumers' perceptions of the sponsoring brand by associating it with the comparison brand for the desirable
nonfeatured attributes. This study finds that the DC ad, which mentions that the unfamiliar sponsoring brand is superior to the comparison brand on a typical attribute, increases the perceived similarity between these two brands. However, differentiation also takes place because consumers differentiate between the two brands by lowering perceived attribute strength of the comparison brands (Pechmann and Ratneshwar 1991). The authors, thus, conclude that comparative ads can both associate the sponsoring and comparison brands on nonfeatured attributes and differentiate these brands on featured attributes. These effects need not be mutually exclusive. A more recent study (Manning et al. 2001), nevertheless, reports that differentiative comparative ads (comparative ads which discuss differences between the sponsoring brand and the comparison brand) produce more disassociative¹ rather than associative mental thoughts as previously suggested by Johnson and Horne (1988). Manning et al. (2001) operationalize associative thoughts as those that indicate that the sponsoring brand is similar to the competitor (e.g., “This toothpaste cleans plaque as effective as Oral B”) and disassociative thoughts as those that indicate that the sponsoring brand is different from the competitor (e.g., “This toothpaste works better than Crest”). In all three studies, none of the research participants exposed to DC ads list associative thoughts. That is, all relative thoughts (i.e., thoughts in which the sponsoring brand is held with respect to a comparison brand) are found to be disassociative in nature.

¹ The terms “disassociative” and “associative” thoughts used in comparative advertising literature refer to the thoughts that represent the similarities or dissimilarities between two brands. These terms, however, have different meanings in other fields. For example, in clinical psychology literature, disassociative thoughts refer to bizarre thoughts that are disassociated from reality (e.g., Nakaya et al. 2002). They are considered a primary symptom of schizophrenia. As a result, different definitions of these terms should be kept in mind by readers. In this dissertation, I am using terms as they are used in marketing research.
**Affect**

Attitude towards ad (A_{ad}) is one of the major constructs examined in numerous comparative advertising studies (e.g., Donthu 1992, 1998; Neese and Taylor 1994). Attitude towards the brand (A_{b}) is also investigated in several comparative advertising studies such as Putrevu and Lord (1994) and Neese and Taylor (1994). Neese and Taylor (1994) report that comparative ads, relative to NC ads, stimulate more positive A_{ad}. Many other studies, on the other hand, find comparative ads to be less effective in terms of A_{ad} than NC ads (e.g., Belch 1981; Gorn and Weinberg 1984). Pechmann and Ratneshwar (1991), nonetheless, find IC and DC ads to be similar in terms of ad likability.

Comparative ads are found to elicit more favorable A_{b} than NC ads (Miniard et al. 1994). However, Neese and Taylor (1994) do not find differences between comparative ads and NC ads in stimulating A_{b}. This suggests that moderators could exist. Putrevu and Lord (1994) hypothesize and find that the relative persuasiveness of comparative ads versus NC ads depends on the cognitive and affective involvement of each product (more discussion in the moderating variables section).

In general, comparative ads studies use ANOVA as a statistical tool to analyze data. Droge’s (1989) study is unique in the sense that the author uses structural equation modeling to investigate relationships among consequences of being exposed to NC versus DC ads. She finds differences in the relationship of attitude measures between these two types of ads. Only in the NC ads is A_{ad} a significant predictor of A_{b}. However, A_{b}-behavior consistency is higher for DC ads.


**Intentions and behaviors**

Purchase intention and purchase attract considerable attention from researchers as well; e.g., Putrevu and Lord (1994) and Neese and Taylor (1994). Findings in conative measures are largely similar to those of Ab. Some studies report that comparative ads elicit more favorable purchase intentions (PI) than NC ads (e.g., Miniard et al. 1994; Gotlieb and Sarel 1991). Some studies do not find comparative ads to be superior (e.g., Nesee and Taylor 1994). Some find an interaction effect of ad type with other moderators such as product characteristics (Putrevu and Lord 1994). More discussion of the moderating variables will follow shortly in the moderator section.

Because of this inconsistency in empirical evidence regarding the impact of comparative ads, identifying conditions under which comparative or NC ads have more advantages becomes a priority (Gotlieb and Sarel 1991) and several subsequent researchers have attempted to look at the variables which moderate the relative effectiveness of these two types of ads.

**Moderators of comparative ad effectiveness**

These moderators include the comparative intensity of the ad content (Manning et al. 2001; Donthu 1992), level of consumers’ knowledge (Cowley 1998), product-related cognitive and affective involvement (Putrevu and Lord 1994), types of persuasiveness measure (relative vs. nonrelative) (Miniard et al. 1993, 1994, 1998), source credibility (Gotlieb and Sarel 1991), typicality of featured attributes (Pechmann and Ratneshwar 1991), familiarity of the advertised brand (Pechmann and Ratneshwar 1991), and market share of the advertised brand (Pechmann and Stewart 1991).
Moderators of comparative versus NC ads effectiveness

In general, the comparative intensity of the ad content is found to increase recall (Donthu 1992). Comparative ads with higher comparative intensity generate more relative impressions than those with lower comparative intensity. However comparative ads with lower comparative intensity generate more nonrelative impressions (Manning et al. 2001).

Product characteristics in terms of cognitive versus affective involvement moderate the relative efficacy of comparative versus NC ads (Putrevu and Lord 1994). Cognitive involvement with a product is induced by functional or cognitive motives while affective involvement comes from value-expressive or affective motives (Park and Young 1986). Comparative ads elicit more favorable brand attitudes when the products are concurrently cognitive-involving and affective-involving (Putrevu and Lord 1994). However, NC ads produce more favorable brand attitudes when affective involvement alone is high rather than low. Gorn and Weinberg (1983) find a relative advantage of comparative ads over NC ads in provoking more favorable A6 for toothpaste but not golf balls. Although the authors do not offer an explanation for this inconsistency, it is possible that nature of product might account for the discrepancy. That is, comparative ads may be more persuasive than NC ads for products which are induced by functional motive such as toothpaste but not for products which are induced by value expressive or affective motive such as golf balls.

The use of relative versus nonrelative measures of comparative ad effectiveness is examined in a series of studies by Miniard and his colleagues (Miniard et al. 1993, 1994,
Since comparative ads present claims about the sponsoring brand relative to a competitor, they are likely to encourage consumer to process ad information using a relative encoding frame where information about the competitor is used as a reference point. This reference point, thus, becomes an integral part of the message since information about the sponsoring brand is encoded relative to that of the comparison brand (Miniard et al. 1994). In contrast, NC ads do not possess an explicit reference point because they present information focusing exclusively on the sponsoring brand. As a result, consumers are not likely to encode this information as relative to another brand (Walker, Swasy, and Rethans 1986). The post-message impressions are thus unlikely to be relative in nature (Miniard et al. 1994). Relative measures use response formats that incorporate some specific reference point in judgment making (e.g., “How likely is it that brand X is faster acting than brand Y?”). Nonrelative measures, on the other hand, do not contain an explicit reference point in their response frame (e.g., “How likely is it that brand X is fast acting?”) (Miniard et al. 1998).

A series of studies by Miniard et al. (1993, 1994, 1998) conclude that relative measures are more sensitive than nonrelative measures in detecting advantages of comparative ads over NC ads. More specifically, Miniard et al. (1994) re-examine ad stimuli previously found to be equivalent in persuasiveness in Pechmann and Stewart (1990). However Miniard et al. (1994) measure ad persuasiveness using relative measures; e.g., attitude towards Comet relative to Ajax. They find comparative ads more persuasive than NC ads. Nonrelative measures, however, are found to be superior to their relative counterparts for measuring the NC ads which are processed with a nonrelative
encoding frame (Miniard et al. 1998). The framing correspondence hypothesis is proposed to account for the findings (Miniard et al. 1998). The hypothesis posits that the ability of a persuasion measure to detect advertising effects depends on the extent of correspondence between an encoding frame used during ad processing (i.e., whether the ad to which subjects are exposed is comparative or NC) and the measure’s response frame (i.e., whether the persuasion measure is relative or nonrelative).

The source credibility of a comparative ad influences the effectiveness of comparative ads versus NC ads by activating a higher level of involvement (Gotlieb and Sarel 1991). Researchers find that when a high credibility source was included, comparative ads outperform NC ads in terms of purchase intention. However, with a low credibility source, no differences exist between the impact of comparative and NC ads. The findings suggest that this moderating effect occurs because high credibility sources increase involvement and comparative ads require a higher level of involvement than NC ads in order to be effective.

In advertising context, two-sided communication employs a message that consists of both positive and negative information about attributes of a product or service and this negative information is voluntarily included (Crowley and Hoyer 1994). Two studies specifically examine the impact of one- versus two-sidedness on comparative advertising (Belch 1981; Etgar and Goodwin 1982). Belch (1981) reports the lack of sidedness effect in his study. That is, there are no advantages of a two-sided message over a one-sided message for either comparative or NC ads. Etgar and Goodwin (1982), on the other
hand, report that two-sided comparative ads produce a more favorable A_b and a more favorable PI than one-sided comparative ads.

Moderators of DC versus IC ads effectiveness

Consumers' knowledge in terms of both objective knowledge (i.e., knowledge of existing brands and attributes) and subjective knowledge (i.e., experience and familiarity) is found to influence the accuracy of and confidence in the recognition of statements from ads (Cowley 1998). High knowledge consumers are more accurate in information retrieval with the IC ads than with DC ads. However, they are more confident about their memory with DC ads than with IC ones, especially when presented with incorrect information. Low knowledge consumers confuse brand more often when the ads are DC. However the type of ad (DC vs. IC) does not affect the level of confidence for these consumers.

The typicality of the featured attribute\(^2\) and the familiarity of the advertised brand are found to affect categorization and the inferential process elicited by DC versus IC ads (Pechmann and Ratneshwar 1991). For an unfamiliar brand, subjects exposed to DC (vs. IC) ads perceive the sponsoring and comparison brands as more similar in terms of the featured attributes when the featured attribute is typical. However, when the featured attribute is atypical, there is no difference in the impact of DC versus IC ads. There is, nevertheless, no interaction effect of ad type (DC vs. IC), attribute typicality and

\(^2\) The typicality of featured attributes provides an option for a product to achieve a unique selling proposition (USP). One option is to emphasize the brand's attribute which is commonly associated with the well-known or typical brands in that product category. Of course, by choosing this option, the product must insist its superiority over the competitors on that typical featured attribute. The other option of achieving USP is by focusing an attribute which is not typically associated with typical brands, but is nevertheless important to a usually small segment of the market (Pechmann and Ratneshwar 1991).
familiarity of the brand on ad believability and ad likability. For a familiar brand, subjects exposed to IC (vs. DC) ads perceive the sponsoring and comparison brands as less similar when the featured attribute is atypical. However, when the featured attribute is typical, there is no difference in the impact of DC versus IC ads. Similar to an unfamiliar brand, no significant differences are found in terms of the interaction of ad type, attribute typicality and brand familiarity on ad believability and ad likability.

Market share of the advertised brand is found to moderate the relative impact of comparative ads (Pechmann and Stewart 1991). For established brands with very low or very high market shares, DC ads are more effective than both IC and NC ads. However, for brands with moderate market share, there is no difference in the effectiveness of these 3 types of ads.

**Comparative advertising in cross-cultural context**

Although comparative advertising has been widely used in the US for several years, it is much less common in other countries. As a result, it is not surprising to find that most of the studies reviewed herein were conducted in the US with the exception of Cowley’s (1998) study which was conducted in Australia and Gorn and Weinberg’s (1983) study which was carried out in Canada. Even though these two studies are conducted outside the U.S., the role of cross-cultural differences is not a focal issue. Both Canadian and Australian cultures, in comparison with other cultures such as Asian or Latin American, are more or less similar to American culture on several cultural
dimensions (Hofstede 1990; Hall 1976). The impact of cultural dimensions in the effectiveness of comparative versus NC advertising remains largely unexplored.

Notable exceptions are the work by Donthu (1998) and Jeon and Beatty (2002). These are the first studies designed exclusively to examine comparative ad effectiveness across cultures. However, these two studies report conflicting results. Donthu (1998) investigates this topic in four different countries including the US (as a base since most of comparative advertising studies are conducted here), Canada (where comparative advertising is legal and widely used), the UK (where comparative advertising is legal but not widely used), and India (where comparative advertising is illegal and therefore is rarely used). Recall and $A_{\text{ad}}$ are the two measures of interest. He finds no difference in ad recall across countries. That is, comparative ads are better recalled in all four countries. Cross-cultural differences existed, however, on the persuasion measure. People from countries where comparative ads are not widely used have more negative attitude towards comparative advertising than people from countries where comparative ads are more common. The researcher attributes this finding to (1) mere exposure effects, (2) differences in national diffusion of innovation, and/or (3) differences in uncertainty avoidance. Mere exposure effects can explain the findings in this study by arguing that Americans and Canadians have had more exposure to comparative ads than have British or Indians. As a result, they may have developed a more positive attitude towards comparative ads. The second explanation suggests that consumers from countries with higher levels of national innovativeness would have a more positive attitude towards comparative advertising because comparative advertising is considered relatively novel.
Since the U.S. and Canada exhibit higher levels of measured innovativeness than either Britain or India (Lee 1990), it can be expected that American and Canadians will have a more positive attitude towards comparative advertising. The final explanation stems from national differences in levels of uncertainty avoidance. Hofstede (1990) classifies the US and Canada as cultures low in uncertainty avoidance and India as a culture high in uncertainty avoidance. Cultures with low uncertainty avoidance tend to be open to new things and behaviors whereas cultures with high uncertainty avoidance tend to be risk-averse, resistant to change, and low tolerant for ambiguity (Donthu 1998). Comparative ads may be considered novel, ambiguous, and risky. As a result, cultures low in uncertainty avoidance such as US and Canada may be more receptive to comparative advertising than cultures high in uncertainty avoidance such as India. Although the researcher offered three explanations, he did not actually test for the exploratory power of each. So it remains uncertain which argument really drives the research findings. In addition, a different prediction could be made based on the role of uncertainty avoidance. It could be possible that high uncertainty avoidance culture would prefer comparative ads to NC ads because the former provides more information regarding the sponsoring brand. As a result, uncertainty could be reduced by a larger extent through the use of comparative ads versus NC ads. Given this line of reasoning, it is inconclusive to argue that comparative ads are more ambiguous or riskier than NC ads.

Jeon and Beatty (2002) compare the persuasiveness of DC, IC, and NC ads between subjects in the US and Korea. The results show that, based on Aβ and PI, IC ads are the most persuasive within the US. In Korea, on the other hand, DC ads are the most
persuasive. The researchers attribute this differential effect to a novelty effect. In the US, consumers are familiar with DC ad format so it is not perceived as novel; as a consequence, the IC ads are more persuasive. For Korean consumers, DC ad format is considered very novel; as a result, DC ads are more persuasive. Direct evidence of novelty effects, nevertheless, is not reported. Jeon and Beatty's (2002) argument for a novelty effect, however, appears to be at odds with the explanation regarding the role of national uncertainty avoidance offered by Donthu (1998). Specifically, comparative ads are novel. Countries with high levels of uncertainty avoidance might regard novelty as risky and ambiguous. As a consequence, from Donthu's (1998) perspective, those with high levels of uncertainty avoidance (e.g., Indians) have less positive attitudes towards comparative ads versus NC ads. Jeon and Beatty (2002), on the other hand, suggest that Koreans, which are classified as high uncertainty avoidant according to Hofstede (1990), consider comparative ads (vs. NC ads) to be novel and thus develop more favorable attitudes towards comparative ads. From these two conflicting lines of reasoning it is possible to expect that a novelty effect could produce two different types of outcomes. However, the conditions under which each type is likely to occur remain unclear.

Inconsistencies exist even within these two cross-cultural studies of comparative ad persuasiveness. Donthu (1998) finds NC ads to be more persuasive in Asia (i.e. India) than comparative ads. Jeon and Beatty (2002) find just the opposite. There are some differences in the methods of these two studies however. The first difference is the use of persuasive measures. Donthu (1998) uses $A_{ad}$ while Jeon and Beatty (2002) employ $A_b$ and PI. To reconcile this conflict, one might hypothesize that Asians do not like
comparative ads but this dislike may not transform into $A_b$ and PI. However this speculation is subject to empirical verification. Another possible source of variation in results might derive from the use of different product categories. Donthu (1998) uses a variety of product categories including soft drink, cleanser, and cars to establish that product categories (e.g., hedonic vs. utilitarian) are not expected to influence the relative persuasiveness of comparative versus NC ads. Jeon and Beatty (2002) use a personal computer as a focal product. This category may be relatively more appropriate than many others for comparative ad use because consumers often do extensive search to compare attributes of each brand. Finally although these two studies position themselves as cross-cultural studies, neither measure cultural level influences at the individual level.

In summary (see Table 1 for detailed information), comparative ads, versus NC ads, generate more recall especially when the ads have high comparative intensity of the message content and when the sponsoring brands have either high or low market shares. Some studies, however, do not find the superiority of comparative ads over NC ads on recall. In terms of involvement, while some studies report that comparative ads, versus NC ads, generate more involvement, other studies do not find this advantage of comparative ads. Regarding the nature of information processing, comparative ads are found to produce associative and/or disassociative thoughts. Regarding $A_{ad}$, $A_b$ and PI, while some studies report comparative ads to be more persuasive than NC ads, some other studies do not. The comparative intensity of the ad content, level of consumers’ knowledge, product-related cognitive and affective involvement, the use of relative versus nonrelative persuasiveness measure, source credibility, one- versus two-sidedness,
typicality of featured attributes, familiarity of the advertised brand, and market share of the advertised brand moderate the effectiveness of comparative ads. The cross-cultural studies also yield conflicting results in terms of persuasiveness.

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Insert Table 1 about here

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Although many questions regarding antecedents and consequences of comparative advertising remain unanswered in Western cultures, there are substantially less theories regarding cross-cultural influences on comparative versus NC advertising effectiveness. This is the case even though culture is known to shape consumer behavior (Mahesawaran and Shavitt 2000). Thus, the extent to which predictions based on comparative advertising theoretical frameworks and empirical findings from the West will be valid in diverse cultural settings remains uncertain (Gorn 1997). The primary objective of this dissertation is to assess the cross-cultural generalizability of comparative advertising persuasiveness. To initiate a program of research on such advertising in a comparative context, this dissertation will examine the potential impacts of a key individual level culture factor: independent versus interdependent self-construal (Markus and Kitayama 1991; Singelis 1994) and an individual difference personality factor: need for cognition (Cacioppo and Petty 1982). Self-construal is expected to influence comparative ad persuasiveness because different self-construals have different attitudes towards competition and confrontation. Furthermore, the impact of self-construal is expected to be further qualified by need for cognition because recent research has shown that when
consumers have high motivation to process ad message, the role of culture is attenuated (Aaker 2000). Figure 1 exhibits a nomological framework of variables and their relationships examined in this dissertation.

Insert Figure 1 about here
CHAPTER 3
SELF-CONSTRUALS IN COLLECTIVIST AND INDIVIDUALIST CULTURES

Hofstede’s (1980; 1990) seminal work examines work-related values and perceptions. Using factor analysis, he identifies four cultural dimensions including individualism-collectivism (INDCOL), power distance, uncertainty avoidance, and masculinity-femininity. These four cultural-level variables provide a great deal of insight on how culture may influence marketing practices. INDCOL itself appears to be the most powerful dimension of the four (Hofstede 1980). In his study, this dimension and power distance explain most of the variance. Similar findings emerge from Mezei’s (1974) work. The researcher uses an individual-level factor analysis and finds that individualism is the most important factor in the factor analysis of Kluckhohn and Strodtbech’s (1961) value measures. Findings in the marketing and advertising literatures reveal similar results. A review of more than 75 articles and books by Taylor, Miracle and Wilson (1997) shows that INDCOL and high-low context culture are the two most prominent dimensions used to predict cross-cultural differences.

Hofstede’s (1980) study reveals that North American (i.e., the U.S. and Canada), Western European (e.g., Britain and Germany), Australian and New Zealand cultures are highly individualist. Asian (e.g., Japan, Hong Kong, and Taiwan), African and Latin American cultures, in contrast, are considered collectivist cultures.

The meaning of the self, the structure of goals, behavior as function of norm versus attitude, and the needs of ingroup versus social exchange are the four attributes used to define the cultural dimension of INDCOL (Triandis 1995). The self in collectivist
cultures is interdependent with the group while it is autonomous or independent of groups in individualist cultures (Markus and Kitayama 1991). As a result, groups are, in general, the units of self-construal (SC) in collectivist cultures whereas individuals are the unit in individualist cultures (Triandis 1996). When there is a conflict between personal goals and group goals, collectivists subordinate personal goals to group goals while the reverse is true for individualists (Schwartz 1990). Collectivists consider norms as more important than their own attitudes in guiding their behavior while the opposite is true for individualists (Triandis 1996). Communal versus exchange relations (Mills and Clark 1982) also distinguish collectivist from individualist cultures. This concept involves a number of contrasts between communal versus exchange relations including: (1) lack of clarity versus clarity concerning what is to be exchanged, (2) concerns for other persons’ needs versus concerns about equity, (3) importance of maintaining equality of affect versus emotional detachment, and (4) inequality versus equality or equity bases of benefits exchanged (Triandis 1989). Collectivists follow a communal relationship pattern whereas individualists engage in exchange relationships (Triandis 1996).

While Triandis (1989) uses the above 4 features to define the INDCOL construct, other researchers employ several other features to characterize individualist versus collectivist cultures. A meta-analysis by Oyserman, Coon, and Kemmelmeier (2002) documents “sense of duty to group,” “relatedness to others,” “seeking others’ advice,” “harmony,” “working in groups,” “sense of belonging to a group,” “contextual self,” and “valuing hierarchy” as features defining collectivism. “Valuing personal independence,” “personal achievement,” “self-knowledge,” “uniqueness,” “privacy,” “clear
communication,” and “competition,” on the other hand, are defining features of individualism used by various studies (Oyserman et al. 2002). As a result, it is obvious that INDCOL is a multidimensional construct. Oyserman et al. (2002) suggest that a few central dimensions of INDCOL that provide a powerful explanatory tool for the understanding of variation in the behaviors of people in INDCOL cultures appear to be necessary. Responding to the need for a tighter operationalization of INDCOL in order that the potential influence of this cultural construct can be examined more accurately, this dissertation concentrates on self-construal (SC), rather than other features, as the focal facet of INDCOL for several reasons. First, self is one major element of subjective culture and it is shared by members of a culture (Triandis 1989). Moreover, the concept of self is central to an individual’s perception and is argued to be strongly linked to cultural norms and values (Triandis 1989; Singelis et al. 1999). As a result, it is expected that SC will represent a dominant INDCOL feature. In addition, the selection of SC as the focal feature is in line with several consumer studies (e.g., Aaker 2000; Aaker and Schmidt 2001) where SC is measured and argued to be used as an indicator of INDCOL. Furthermore, several empirical studies support the contention that independent self-construal (INDSC) predominates in individualistic cultures whereas interdependent self-construal (INTSC) predominates in collectivistic cultures (e.g., Aaker and Sengupta 2000; Bocher 1994; Cousins 1989; Singelis et al. 1999).

For example, Singelis et al. (1999) report that collectivism is significantly associated with stronger INTSC and weaker INDSC. Similar findings are also reported in consumer literature. A series of studies by Aaker and colleagues (e.g., Aaker 2000; Aaker and
Sengupta 2000) employ SC scale (Singelis 1994) as a manipulation check for INDCOL and consistently report that American research participants receive higher INDSC scores and lower INTSC scores than do Asian participants, which is consistent with Hofstede (1990). As a consequence INDCOL will be approached through an individual level culture factor: INDSC versus INTSC.

**Nature of Self-Construals**

The self is an active agent which stimulates differential sampling, processing and evaluation of information from the environment, and, as a consequence, leads to differences in social behavior (Triandis 1989). SC refers to a group of thoughts, feelings, and actions concerning an individual’s relationships to others as well as the self as distinct from others (Singelis 1994).

INDSC versus INTSC is argued to have direct implications for attention, cognition, emotion, motivation, and behavior (Markus and Kitayama 1991; Eckhardt and Houston 1998). A seminal paper by Markus and Kitayama (1991) compares and contrasts INDSC versus INTSC on several aspects. INDSC is defined by a separation from social context. As a result, the structure is bounded, unitary, and stable. In contrast, INTSC is defined by a connectedness with social context, and consequently possesses a flexible and variable structure. Internal and private abilities, thoughts, and feelings are important features of INDSC while external or public features including statuses, roles, and relationships are important for INTSC. The normative expectations of people with
INDSC are to be unique, to express oneself, to realize internal attributes, to promote one’s own goals and to be direct in communication (e.g. by “saying what’s on one’s mind”). People with INTSC, on the contrary, are expected to belong or fit-in, to occupy one’s proper place, to engage in appropriate actions, to promote others’ goals and to be indirect in communication (e.g., read others’ minds). Self-evaluation represents the role of others for people with INDSC. That is, others are important as a benchmark or social comparison which reflects appraisal. However, for people with INTSC, the role of others is for self-definition which means relationships with others in specific contexts define the self. The basis for self-esteem or self-satisfaction is also different between these two SCs. While ability to express self and validate internal attributes is crucial for INDSC, ability to adjust, restrain self, and maintain harmony with social ingroups is critical for INTSC (Markus and Kitayama 1991).

Different cultures encourage different selves. Those in Western cultures especially Western European and American middle-class cultures are more motivated to discover and identify valued internal attributes of the self, express them in public, confirm them in private, and develop various social psychological processes that enable them to maintain their self-esteem (Kitayama et al. 1997). As a result, Western Europeans and Americans tend to exhibit more INDSC. In contrast, many Asian cultures including Chinese, Japanese, and Korean do not emphasize the explicit separation of each individual. These cultures promote the fundamental connectedness among people within ingroups. As a consequence, the self is made meaningful primarily in reference to its social relationships. Asians are generally encouraged to adjust and fit themselves into
their social ingroup relationships (Kitayama et al. 1997). As a result, it is not surprising that INTSC is more common in Asian cultures. Markus and Kitayama’s (1991) INDSC and INTSC are similar to Triandis’s (1989) private and collective selves, respectively (Webster and Beatty 1997).

INDCOL and INDSC versus INTSC are major constructs investigated in a cross-cultural consumer context. These constructs offer a valuable theoretical basis for the investigation of cultural differences (Shavitt, Nelson, and Yuan 1997). Numerous studies find that these two different cultures or selves are related to differences in a variety of marketing-related outcomes (e.g., Aaker and Lee 2001; Aaker and Maheswaran 1997).

**INDCOL and SC in marketing research in general**

INDCOL and/or SC influence the way consumption is used as a means of self-presentation, the process by which an individual tries to manage the impressions that other persons form of him/her (Eckhardts and Houston 1998). Using a qualitative approach, Eckhardts and Houston (1998) find that self-representation through consumption is more widespread in a collectivist culture (China) than in an individualist culture (the US). In addition, this study finds that many product categories typically not associated with symbolic elements contain those elements in collectivist cultures. In a subsequent study (Eckhardts and Houston 2001), the researchers find that, in China where INTSC is emphasized, possessions’ meanings are almost wholly related to the representation, maintenance, and enhancement of relationships with significant others. For example, when research participants list a tangible object as their most important
object, the meaning of this object is strongly related to the social ties and relationships that the object represents or sustains (Eckhardts and Houston 2001). This finding is different from what is found in a culture where INDSC is promoted. In the U.S., important possession meaning could come from multiple sources, including: utilitarian value, enjoyment, self-expression, and appearance-related aspects of that possession (Richins 1994). The conclusion of these contrasting findings is that, in collectivist cultures, objects are not valued for personal enjoyment, hedonic pleasure or self-expression of personal traits, but rather for harmonization with significant others (Eckhardts and Houston 2001).

Several studies explore how INDCOL influences materialism in different cultures. Individualism is found to be positively correlated with materialism while collectivism is found to be negatively correlated with materialism (Wong 1997). Webster and Beatty (1997) study the nature of relationships between U.S. versus Thai consumers' public/private selves and importance of conspicuous possessions (i.e., jewelry, car, home, clothing, etc.). They find that U.S (vs. Thai) consumers place more importance on possessions that reflect the private self. In contrast, Thai consumers place more importance on possessions that reflect the public self.

Other studies report marketing-related differences associated with INDCOL cultures. For example, in the area of sales promotions, a study by Huff and Alden (1998) conducted in three collectivist countries (Thailand, Taiwan and Malaysia) found that social normative factors have a stronger direct influence on consumer attitudes towards coupons and sweepstakes than the findings documented in previous research conducted
in individualist cultures. Using Triandis’s (1994) model of subjective culture and social behavior relations to investigate consumer behavior, Lee (2000) finds that referent influences have stronger influence on purchase intentions for allocentrics (Triandis’s term for the individual level of collectivism) than for idiocentrics (Triandis’s term for the individual level of individualism). However, attitude towards the purchase has a greater influence on purchase intention for idiocentrics than allocentrics.

INDCOL and SC in advertising research

In terms of cognitive responses to ads, Americans focus more on product-related claims, while the Taiwanese are more influenced by their “ad evaluation” thoughts about the appropriateness of the ads than by their product-related thoughts (Shavitt et al. 1997). The authors hypothesize that these results may be due to differences in processing style: the feel-do-learn (affective, conative, cognitive) hierarchy of effects model of persuasion for collectivists versus the learn-feel-do (cognitive, affective, conative) model for individualists.

Regarding the effect of culture on advertising persuasion, the majority of studies report that greater consistency between ad content and culture contributes to stronger persuasiveness. For example, Han and Shavitt (1994) find that Koreans, whose culture falls at the collectivist end of the spectrum (Hofstede 1990), evaluate ads that use collectivist appeals (e.g., appeals about family integrity, concerns about others) more favorably. In contrast, Americans, whose culture falls at the individualist end of the
spectrum (Hofstede 1990), find ads with individualist appeals (e.g., independence, self-reliance) more favorable.

Commercial brands, as one of the consumption symbols, are found to be related to INDCOL and SC. Specifically, Aaker, Benet-Martinez, and Garolera (2001) report that, while the US and Japan possess a number of common brand personality dimensions, culture-specific dimensions exist: Japanese peacefulness and American ruggedness. The emergence of the peacefulness dimension in Japanese is suggested to be attributable to the preference towards harmony and cooperation, the subjective assessments of one’s happiness which covary with perceptions of harmony in one’s relationships, and preference for conflict strategy which involve mutual coordination of feelings. All three of these characteristics appear to belong to collectivist cultures. Ruggedness, on the other hand, seems to represent the US’s value endorsement of self-assertion and individualism as opposed to egalitarian commitment. Aaker and Schmitt (2001) examine how differences in SC influence preferences for consumption symbols through the process of self-expression. Specifically, their study 1 reports that consumers with dominant INDSC tend to prefer the brand which is advertised in a differentiation frame (e.g., emphasizing individuality, personal goals) rather than a assimilation frame (e.g., emphasizing support for the group, belonging), while the opposite is true for consumers with dominant INTSC.

Using the connectedness-separateness theory to derive hypotheses, Wang and Chan (2001) find that print ads in China (vs. the U.S.) use more connectedness, individual-in-relation-to-other, “fit-in,” mutual reliance, symbiotic relationship, collective achievement, and family or group enjoyment themes. Conversely print ads in the US (vs.
China) used more separateness, uniqueness, “standing out,” independence, competitiveness, personal enhancement, and self-centered pleasure themes. Finally, Alden, Hoyer, and Lee (1993), report in a four-country study of humor in advertising the existence of significantly more collectivist (individualist) themes in Thailand and Korea (the US and Germany).

In general, the two different cultures (INDCOL) or selves (INDSC vs. INTSC) are found to be related to differences in a variety of marketing-related outcomes including consumption as a means of self-presentation, possessions’ meanings, materialism, attitude towards coupons and sweepstakes, attitude and purchase intention, cognitive response to ads, advertising persuasion, and humor (see Table 2 for detailed summary). Overall, these studies suggest the influence of culture and/or SC in the sense that collectivists and/or consumers with INTSC appear to be more influenced by the collectives. Individualists and/or consumers with INDSC appear to be less so.

Hypotheses

The literature reviewed herein suggests that members of individualist societies will hold more favorable attitudes in general towards differentiation, uniqueness and competition. Members of collectivist societies, on the other hand, should hold more favorable attitudes towards building relationships and maintaining connections.
In the US, where INDSC predominates, assertive and competitive themes are commonly used to create strong claims concerning an advertised product or brand (Wang and Chan 2001). However, this is not the case for collectivist cultures. Because maintaining closeness and harmony with others is emphasized, “showing-off” or self-expressiveness is not viewed as original but rather as immature (Markus and Kitayama 1991). Direct confrontation as in the case with comparative advertising is supposed to be avoided in collectivist cultures including those in Asia. Supporting evidence comes from two streams of research: various content analyses of advertising and research in conflict management styles.

A large number of studies employing content-analytic approaches consistently find that ads in Western cultures tend to use themes related to individualism, individual control of one’s action or destiny, competitiveness, and comparisons between brands. However, ads in Asian cultures, in contrast, tend to use status symbols, emotional appeals and indirect expression. For example, Mueller (1987) finds few Japanese ads contain comparative messages. In Japan the emphasis of the sponsored brand’s superiority over other brands is rare. The comparative approach, if used at all, is softened in such a way that the names of competitive brands are not mentioned; i.e., indirect comparison. In contrast, comparative advertising is quite common in the US. Given cultural values associated with collectivism, it may be that Japanese brand managers are reluctant to cause a competitive brand to lose “face.” “Face” refers to the projected image of one’s self in a relational situation (Gudykunst 1998). Face is a vulnerable identity and can be threatened in any social situation (Ting-Toomey and Kurogi 1998). In a comparative
advertising context, a sponsoring brand of a comparative ad can be considered as
attacking the “face” of a comparison brand when the sponsoring brand claims its
superiority over the comparison brand. Face-losing or the deterioration of one’s face is a
critical issue in collectivist cultures because face is fundamentally a social self and
associated with respect, honor, status, reputation, credibility, competence, connection,
and trust (Ting-Toomey and Kurogi 1998). In other words, the fact that external or public
features such as status, role, and relationship are critical in collectivist cultures where
interdependent self predominates (Markus and Kitayama 1991) makes the concept of
“face” important in such cultures. In a study five years after her first (1987-1992),
Mueller (1992) reports that comparative advertising is still uncommon in Japan. The fact
that Japanese ads do not feature comparisons does not imply that comparative advertising
is illegal in Japan. It is legal (Donthu 1998). The Japanese advertising code simply states,
“Let us avoid slandering, defaming, and attacking others” (Hong, Muderrisoglu, and
Zinkhan 1987, p. 60). However this code, when considered with the value of avoiding
confrontation, discourages the use of comparative advertising. Results from the
advertising content analyses outlined here are similar to findings from the conflict
management style literature.

Conflict management styles refer to the typical mode of managing conflict in
different situations (Ting-Toomey 1988). The roles of INDCOL and SC on conflict
management styles are extensively examined in several academic disciplines including
communication (e.g., Oetzel 1998a, 1998b), organizational behavior (e.g., Morris et al.
1998), and social psychology (e.g., Leung et al. 1992).
The majority of researchers use the INDCOL dimension when they link culture and conflict management style together (Morris et al. 1998). Ting-Toomey (1994) argues that collectivists prefer conflicts to be handled without direct confrontation. She suggests the reason for collectivists’ preference for nonconfrontation styles of conflict management is that relationships can be more easily maintained. Several empirical studies support this argument. For example, Ting-Toomey et al. (1991) and Trubisky, Ting-Toomey, and Lin (1991) report more usage of obliging and conflict avoidance by Asian samples (Chinese and Taiwanese) than by European Americans in dealing with acquaintance conflicts. In addition, researchers find that European Americans use a more dominating conflict style than Asians. Morris et al. (1998) report similar findings. Chinese managers have a stronger tendency to avoid conflict while American managers have a stronger tendency towards a competing style (Morris et al. 1998). Leung et al. (1992) report Asians’ preference for avoidance and third-party mediation styles to deal with conflict issues. European Americans, on the other hand, express preference for an upfront and solution-oriented style. Even when the unit of study is ethnicity instead of country, the findings are similar to the cross-national studies. For example, Ting-Toomey et al. (2000) report that Asian Americans use conflict avoidance more than European Americans.

Chua and Gudykunst (1987) report similar findings although the researchers base their hypothesis on a high-low context culture rather than INDCOL. “A high-context communication or message is one in which most of the information is either in the physical context or internalized in the person, while very little is in the coded, explicit,
transmitted part of the message. A low-context communication is just the opposite; i.e., the mass of the information is vested in the explicit code” (Hall 1976, p.91). Members from low-context cultures (e.g., those from the US, Canada, and Western Europe) are found to use solution-oriented conflict resolution style more than members from high-context cultures (e.g., those from Latin American and Asian countries). The authors also find that members from high-context cultures use nonconfrontational conflict resolution more than members of low-context cultures. Although this study bases its hypothesis on high-low context instead of INDCOL, it is reasonable to hypothesize extension of findings from the former dimension to the latter dimension. This is because the dimensions of high-low context culture and INDCOL are argued to be isomorphic (Gudykunst and Ting-Toomey 1988).

Findings from studies employing SC mirror the findings of INDCOL. For example, Oetzel (1998b) find that INDSC is positively correlated with a dominating conflict style. INTSC, on the other hand, is positively correlated with avoiding, obliging, and compromising. A similar finding also emerges in the decision-making context. In a decision making activity, groups consisting of members with high INDSC are more likely to use competitive tactics and less likely to use cooperative tactics than groups consisting of members with low INDSC (Oetzel 1998a). Ting-Toomey, Oetzel, and Yee-Jung (2001) report that individuals with dominant INDSC tend to use direct, solution-oriented

3 Hall (1976) identifies the US, Germany, Scandinavian countries, and Switzerland as low-context. All these cultures appear to be individualist given Hofstede’s (1990) scores on INDCOL dimension. Japanese, Korean, and Chinese cultures, on the other hand, are at the high-context end of the continuum (Hall 1976). These countries, again, appear to be collectivist according to Hofstede’s (1990) scores on INDCOL. As a consequence, it appears that low- and high-context communications are the predominant forms of communication in individualist and collectivist cultures, respectively (Gudykunst and Ting-Toomey 1988).
conflict styles more than other types. On the other hand, those with dominant INTSC are
found by researchers to use styles that avoid direct confrontation such as third-party
mediation.

Individualists are more likely to believe that they have more control over and
more responsibility for their own lives. With these cultural characteristics, competition is
encouraged and frontal attack is considered as a matter of course in an advertising context
(Hong et al. 1987). Generally American ads have long been created in such a way that the
sponsoring product is differentiated from its major competitors (Taylor, Wislon, and
Miracle 1994). Comparative advertising is one way to achieve this goal. However, in
collectivist cultures, cooperation is a traditional value and face-to-face competition is
discouraged. Comparative advertising is considered a confrontational communication
approach (Lin 1993). This is because the sponsoring brand is compared, whether
explicitly or implicitly, with another brand. Yum (1987) suggests that the tendency to
avoid confrontation in communications may have implications for advertising.

Based on these empirical findings and conceptualization of SC/INDCOL and the
characteristics of comparative ads, several hypotheses are offered. A consumer who is
exposed to a specific culture becomes committed to that culture’s style of thinking and
feeling. Value systems, attitudes and even perception processes are all culturally
influenced (Hong et al.1987). In addition, it is likely that those who attempt to persuade
others will “select approaches consistent with their own past experience within the
cultures to which they belong, and that they are selected, in part, on the basis of their
ability to handle a style congruent with the culture” (Han and Shavitt 1994, p. 329).
Numerous studies demonstrate that the congruity between ad appeal and cultural values leads to more favorable evaluations (e.g., Han and Shavitt 1994; Gregory and Munch 1997; Taylor et al. 1997; Zhang and Gelb 1996). As a consequence, it can be assumed that the prevalence of comparative ads in individualist cultures and the relative scarcity in collectivist cultures as documented in the literature reflect the managers’ hypotheses regarding the probable persuasiveness of comparative advertising. This applied wisdom, coupled with academic theory and research results reviewed previously, suggests that INDCOL or SC as its operationalization will impact the persuasiveness of comparative ads. Given the characteristics of the INDCOL-associated SC and the empirical evidence from the conflict management literature and cross-cultural content analysis of advertising, it is hypothesized that comparative ads will be more persuasive than NC ads for consumers with INDSC while NC ads will be more persuasive than comparative ads for consumers with INTSC.

**H1: Comparative ads (NC ads) will be more persuasive for consumers with INDSC (INTSC).**

The inconsistencies in the previous findings of comparative ad persuasiveness in a cross-cultural context (c.f., Jeon and Beatty 2002; Donthu 1998) urge the need for investigating the existence of other moderating variables. As a consequence, although the individual level culture factor, SC, is hypothesized to influence the persuasiveness of comparative advertising, there may be other individual difference personality factors that
moderate its impact. One possible individual difference personality factor which could interact with SC is “need for cognition” (Petty and Cacioppo 1982).
CHAPTER 4

NEED FOR COGNITION

The Elaboration Likelihood Model (ELM) explains processes underlying changes in judgments of objects, the variables that influence these processes, and the strength of the judgments derived from these processes (Petty and Cacioppo 1986). The ELM distinguishes central-route from peripheral-route processing. When elaboration likelihood is high, people use a central route to arrive at their attitude change by effortfully and extensively assessing all available object-relevant information. In contrast, when elaboration likelihood is low, people are more inclined to use peripheral processing. Information scrutiny is reduced and attitude change tends to result from a number of less resource demanding processes that do not require extensive evaluation of the object-relevant information (Petty and Cacioppo 1984). The number of arguments, the attractiveness of the source of message, the expertise of source of message, message length, overheard audience reactions, and consensus information are some examples of heuristic cues used in the peripheral route (Petty, Unnava, and Strathman 1991). Attitude changes derived from central route processing exhibit greater temporal persistence, better prediction of behavior, and greater resistance to counter persuasion (Petty, Haugtvedt, and Smith 1995).

A key construct in the ELM is the elaboration likelihood continuum (Petty and Wegener 1998). This continuum is determined by the degree of ability, motivation, and opportunity people have to assess the central merit of the message. When people have
ability (knowledge), motivation, and opportunity, the elaboration likelihood is high but when they do not possess ability, motivation, and opportunity, the elaboration likelihood is low (Petty and Cacioppo 1984). The motivation to process issue-relevant arguments can be influenced by both situational and individual factors (Petty and Wegener). The perceived personal relevance of the communication is perhaps the most important situational variable affecting a person’s motivation (Petty et al. 1991). When the personal importance of the message is high, people are motivated to use the central route and scrutinize the argument (Petty and Cacioppo 1990). On the other hand, when the personal importance of the message is low, consumers tend to follow the peripheral route to arrive at the attitude formation (Petty and Cacioppo 1990).

An individual difference personality factor affecting motivation is need for cognition (NFC) or the tendency to engage in and enjoy effortful thinking (Cacioppo and Petty 1982). Individuals high in NFC intrinsically enjoy thinking while those low in NFC try to avoid effortful cognitive tasks (Haugtvedt, Petty and Cacioppo 1992). In general, NFC is found to have an impact on the effectiveness of persuasive messages (Cacioppo et al. 1986). High NFC individuals devote more effort to processing information and base their evaluations on the quality of message arguments. Low NFC individuals, in contrast, tend to rely more on peripheral cues such as source attractiveness rather than the strength of the arguments (Cacioppo, Petty, and Morris 1983). A comprehensive review of the NFC literature (Cacioppo et al. 1996) indicates that high versus low NFC individuals exhibit a variety of differences.
Relations of NFC with other individual differences

NFC exhibits significant positive correlations with several constructs, in particular, those related to cognitive activities, abilities, or tendencies (e.g., Osberg 1987; Fletcher et al. 1986; Berzonsky and Sullivan 1992). Furthermore, academic or intellectual measures such as ACT scores (e.g., Petty and Jarvis 1996), intelligence (Cacioppo et al. 1986), number of years in school (Spott 1994) are also found to be positively correlated with NFC (see Table 3 for details).

Insert Table 3 about here

In contrast, NFC exhibits negative correlations with uncertainty-related constructs (e.g., Weary and Edwards 1994), anxiety (e.g., Buhr and Pryor 1988), and tendencies to avoid cognitive tasks (e.g., Venkatraman et al. 1990) (see Table 4 for details).

Insert Table 4 about here

Overall, findings from numerous studies support the convergent and discriminant validity of NFC (Cacioppo et al. 1996). The fact that NFC exhibits significant relationships with ability to devote attention (Osberg 1987), attributional complexity (Fletcher et al. 1986), intrinsic motivation to work (Amabile et al. 1994), objectivism (Leary et al. 1986), and simplification (Venkatraman et al. 1990) suggests the possibility
that high NFC versus low NFC individuals may respond differently to advertising stimuli.

**The Effects of NFC on Dependent Measures**

In general, it is found that high versus low NFC individuals have better recall of information (e.g., Kassin, Reddy, and Tulloch 1990), are more responsive to message quality (e.g., Cacioppo et al. 1986), are less responsive to peripheral cues (e.g., Petty and Cacioppo 1984), generate more issue-related thoughts (e.g., Lassiter, Briggs, and Slaw 1991), exhibit stronger linkages between thoughts and judgments (e.g., Verplanken 1989), and possess greater attitudinal persistence (Verplanken 1991). High versus Low NFC individuals also exhibit differences in the extent of objective/biased information processing (cf., Petty et al. 1993). Table 5 provides detailed information on the impacts on NFC on these dependent measures.

Insert Table 5 about here

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NFC and Consumer Behavior Research in General

Consumer researchers examine NFC in several contexts including advertising (e.g., Haugtvedt, Petty and Cacioppo 1992; Zhang 1996), country-of-origin effect (Zhang 1997), information search (Schmidt and Spreng 1996), information processing (Luna and Peracchio 2002; Mantel and Kardes 1999), sales promotion (Inman, McAlister, and Hoyer 1990; Ailawadi, Neslin, and Gedenk 2001), consumer's feedback (Ofir and
Simonson 2001), product analogy (Roehm and Sternhal 2001), and consumer choice (Kivetz and Simonson 2000). In addition, several studies include NFC as a covariate (e.g., Darley and Smith 1993, 1995; Kopalle and Lehmann 2001) or a moderator. For example, the country-of-origin effect is found to be moderated by NFC (Zhang 1997). In particular, low NFC persons appear to be more strongly influenced by country-of-origin effects.

Schmidt and Spreng (1996) suggest that NFC is an antecedent of motivation to search. The authors propose that higher levels of NFC would produce stronger motivation to externally search for information. Findings from Condra (1992) support this proposition. Specifically, high NFC individuals are more likely to use the media to gather information than low NFC individuals.

The effectiveness of sales promotion is also found to be contingent on the level of NFC. Inman et al. (1990) find that for low NFC consumers, the presence of a promotion signal alone is sufficient to change the consumer’s choice towards the promoted brand regardless of whether there is a real price reduction or not. However, for high NFC consumers, the promotion signal has to be accompanied by considerable price reductions before an effect is observed. Ailawadi et al. (2001) suggest that NFC is related to thinking cost and thus should affect the use of in-store versus out-of-store promotion. Using a survey approach, the authors find that NFC is negatively correlated with the use of out-of-store promotion. However the relation of NFC and in-store promotion use is not significant.
NFC has a main effect on product/service quality evaluation and a moderating effect on anticipation of evaluation. Ofir and Simonson (2001) report that high NFC (vs. low NFC) consumers tend to provide more negative evaluations of the product/service quality, particularly when consumers know before the consumption that they will be asked to evaluate the products. The authors conclude that a consumer's inclination to engage in and enjoy effortful thinking, combined with the expectation of having to evaluate, accentuates the overweighing of negative aspects of the consumption experience.

**NFC and Advertising Research**

Huagtvedt et al. (1992) are among the first researchers to specifically examine NFC in an advertising context. Their findings are consistent with those found in the psychology literature. High NFC consumers base their attitudes more on an evaluation of product attributes than their low NFC counterparts. On the other hand, low NFC consumers base their attitudes more often on simple peripheral cues than high NFC counterparts. These results are in line with those found by Zhang (1996) who finds that humorous advertising is more persuasive for low NFC consumers than high NFC consumers. His conclusion is that humor is used as a peripheral cue by low NFC consumers to a greater degree than by high NFC consumers. NFC is also found to have a moderating role in message framing (Zhang and Buda 1999). Specifically, high NFC consumers are less susceptible to message framing effects than low NFC consumers.
A number of studies examine how NFC impacts information processing. NFC moderates the effectiveness of first-language versus second-language conceptual processing of ad messages (Luna and Peracchio 2002). More specifically, for low NFC consumers, recognition of ad claims in their first language is superior to those in their second language. However there is no difference in first- versus second-language processing for high NFC consumers. Direction-of-comparison effect is also moderated by level of NFC (Mantel and Kardes 1999). The effect is observed for high NFC consumers (who are more likely to use attribute-based processing) but not for low NFC consumers (who are more likely to use attitude-based processing).

The persuasiveness of new product appeals containing an analogy is found to be subject to the level of consumers’ NFC (Roehm and Sternthal 2001). High NFC consumers who are knowledgeable about the product evaluate the product more favorably than do low NFC consumers who are not knowledgeable. Differences in evaluation are found to derive from differences in comprehension. High NFC consumers with product expertise have a better understanding of the analogy in the ad than low NFC consumers without product expertise.

NFC is found to moderate the impact of missing information. Using choice as the dependent measure, Kivetz and Simonson (2000) report that the purchase decisions of high NFC consumers are less susceptible to the influence of missing information.
NFC as a Covariate in Advertising Studies

In a number of advertising studies, NFC is not considered as a focal construct but rather a covariate. Darley and Smith (1993) use NFC as a covariate to study the influence of claim objectivity and type of media on ad effectiveness. Darley and Smith (1995) include NFC as a covariate in a study of gender differences in the information processing of ad claim objectivity and perceived product risk. NFC is used as a covariate in the study of disconfirmation sensitivity and perfectionism (Kopalle and Lehmann 2001). Examining the use of advertising alliances for new product introductions, Samu, Krishnan, and Smith (1999) include NFC as a covariate as they model interactions between product complementarity and promotional strategies.

NFC in cross-cultural context

Most studies identified in this literature review examine NFC using American research participants. Nevertheless a number of studies administer the NFC scale with participants from other countries including Australia (Forsterlee and Ho 1999), Canada (Thompson and Zanna 1995), the Netherlands (e.g., Pieters, Verplanken, and Modde 1987; Verplanken 1989, 1991), Sweden (Dornic, Ekehammar, and Laaksonen 1991; Westerberg, Singh, and Hackner 1997) and Turkey (Gulgoz 2001: Gulgoz and Sadowski 1995).

Thompson and Zanna (1995) find the reliability of NFC scale within Canadian subjects ranging from .65 to .78. However the factor structure is not reported. Studies of
NFC with Dutch subjects, in general, report high reliability ranging from .74 to .85. In all of these studies, a dominant first factor emerged (Pieters et al. 1987; Verplanken 1989, 1991, 1993; Verplanken, Hazenberg, and Palenewen 1992). Westerberg et al. (1997) selected 7 items from the original NFC scale and administered this abbreviated version with Swedish subjects. They find modest reliability: .44. The factor structure is not reported. Gulgoz and Sadowski (1995) report that the translated NFC scale has an acceptable level of test-retest reliability and internal consistency (reliability = .69-.78) in Turkey. In terms of exploratory factor analysis, 16 out of 18 items load on the first factor while the other two items (item 7 and 16) load on separate factors. A subsequent study by Gulgoz (2001) produces similar results. Internal consistency is high (reliability = .88). All items except 16 and 17 load on one factor and the two remaining items load on separate factors. Gulgoz (2001) reports no gender differences in the NFC scores.\(^4\) In addition, Golgoz (2001) finds NFC to be a significant predictor of verbal scores and the general aptitude scores for university entrance examinations in Turkey. It also correlates significantly with scores on a study skill scale. Such relationships between academic performance and NFC are consistent with what has been found also in the US (e.g., Olson et al. 1984; Petty and Jarvis 1996). The author concludes that, based on the given evidence, there is support for the cross-cultural validity of the NFC scale as well as for the construct itself (Gulgoz 2001).

Forsterlee and Ho’s (1999) first study, using exploratory factor-analysis with an Australian sample, report that 2 factors emerged from the NFC scale. Factor 1 is

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\(^4\) The finding that NFC is gender-neutral is consistent with several studies conducted in the US (e.g., Tanaka et al. 1986, 1988; Waters and Zakrajsek 1990).
composed of all nine-positively worded items (Cronbach’s alpha = .80) and factor 2 is composed of all nine negatively worded items (Cronbach’s alpha = .81). The two factors are highly correlated (r = -.524). Because of the inherent weakness of exploratory factor analysis in distinguishing between competing factor structures, the researchers conduct a second study in Australia employing confirmatory factor analysis. This time they find that, based on conventional fit indices such as NFI, CFI, and GFI, a single-factor model, which includes the correlated uniqueness among residual variance for the negatively worded items, is better than: (1) a 2-factor model with positive items and negative items loaded on two different factors, or (2) a single-factor model without the correlated uniqueness among residual variance for the negatively worded items. As a result, the researchers conclude that the factor structure of the NFC scale is similar to those found in the US. That is, their work provides evidence of the NFC scale’s validity as a measurement tool in Australia.

A potential cross-cultural impact of negatively worded items in the NFC scale is observed in another culture. Wong, Rindfleisch, and Burroughs (2003) administered the NFC scale in the US and two Asian countries—Thailand and Japan. Cronbach alphas of .89, .57, and .82 are reported for each country, respectively. Although fit indices for the 3-factor model are still below the conventional standard, it substantially outperformed the 1-factor model. The Normed Fit Index (NFI) improves from .54 in the 1-factor model to .75 in the 3-factor model. The 3-factor model is composed of a trait-based factor and two separate method-based (i.e., positively-worded and negatively-worded) factors. Each item is specified to load on a single trait factor and either a positively or negatively-worded
method factor, according to the direction of the wording of each item. Wong et al. (2003), after using several techniques to analyze the data, conclude that this cross-cultural measurement problem partly derives from substantive cultural differences in the religious belief systems underlying Eastern versus Western cultures rather than translation errors or cross-cultural response biases (e.g., acquiescence or disacquiescence biases).

In general, results from the above studies suggest that the NFC construct and scale possess validity are valid in cultures outside the US. However, methodological issues, such as the use of negatively-worded items, could hinder cross-cultural applications and indicate the need for caution in applying it to certain consumer populations, e.g., East Asians (Thais and Japanese).

**Hypotheses**

The inconsistencies of previous findings in the persuasiveness of comparative ads especially those in a cross-cultural context (c.f., Jeon and Beatty 2002; Donthu 1998), as previously discussed, reflect the necessity of investigating the existence of other moderating variables including NFC. In fact, NFC, when used as an approximate indicator of consumers’ involvement, may shed light on some of these inconsistencies in the literature. Specifically, while Jeon and Beatty (2002) use a high-involvement product (PC), Donthu (1998) employs two low-involvement products (cleanser and soft drink) and one high-involvement product (car). Given different levels of involvement, it is not surprising that these two studies report different results. Simply put, it is possible to
regard Jeon and Beatty’s study as relatively higher-involved in which high NFC consumers might exhibit a similar pattern of result and Donthu’s study as relatively lower-involved in which low NFC consumers might exhibit similar behaviors. As a consequence, it is expected that NFC will moderate the influence of SC on the persuasiveness of comparative advertising.

NFC reflects intrinsic motivation to process information. As a result, it is likely to moderate the role of SC and ad content. That is, for low NFC consumers, SC is more likely to play a role in persuasion. For these individuals, an ad style that is congruent (vs. incongruent) with the SC of the consumer should be more persuasive. Support for this hypothesized relationship comes from the concept of accessibility (Aaker 2000). Communication content that is more congruent with SC should be more accessible than content that is incongruent. Two studies (Aaker 2000; Han and Shavitt 1994) provide support for this argument. Aaker (2000) reports that high culture-distinct dimensions lead to more favorable attitudes for individuals in the target culture as compared with the non-target culture only under conditions of low involvement. That is, American subjects (whose INDSC is relatively more accessible) compared to Japanese subjects (whose INTSC is relatively more accessible) have more favorable attitudes towards ruggedness appeal while Japanese subjects compared to American subjects have more favorable attitudes towards peacefulness appeal only under low-involvement conditions. Han and Shavitt (1994) use low-involvement products such as detergent in their study. They find that collectivist Korean subjects (whose SC presumably tends to be interdependent) have more favorable attitudes towards group-focused ads versus individual-focused ads and
individualistic American subjects (whose SC presumably tends to be independent) have more favorable attitudes towards individual-focused versus group-focused ads. In other words, the culture-congruent appeal appears to be more accessible than the culture-incongruent appeal under low-involvement conditions.

These findings thus suggest that the SC-congruent appeal will be more accessible than the SC-incongruent appeal under low-involvement conditions. Based on ELM and NFC literatures discussed at length previously, it is reasonable to extrapolate evidence from the involvement construct to the NFC construct. The rationale behind this is that NFC is specified as an individual level personality factor influencing the level of involvement in the ELM framework (Petty and Wegener 1998). In fact, although many ELM studies involve manipulations of situational antecedents of the tendency to think about a certain issue (e.g., the manipulation of personal relevance), many more recent studies measure NFC as a more enduring determinant of elaboration likelihood (Areni, Ferrell, and Wilcox 2000; Petty et al. 1991). For example, Stayman and Kardes (1992) operationalize levels of message elaboration by using NFC.

More specifically, SC characteristics and comparative ads are likely to interact only for low NFC consumers. Low NFC consumers might regard congruity between their SC (INDSC vs. INTSC) and ad execution style (comparative versus NC) as a peripheral cue and thus form their evaluations based on this match. When NFC is considered an indicator of involvement, this line of reasoning of this hypothesis is consistent with the findings from Donthu (1998). The levels of involvement in his study are likely to be low on average due to the nature of product categories. It is thus not
surprising to find that, for Indians whose SCs are more interdependent, NC ads (which are more consistent with their SCS) are more persuasive than comparative ads. For Americans and Canadians whose SCs are more independent, comparative ads (which are more consistent with their SCs) are more persuasive than NC ads.

From the above discussion, for low NFC consumers with INDSC, characteristics of the INDSC are more accessible. Comparative ads are therefore hypothesized to be more persuasive. For low NFC consumers with INTSC, characteristics of INTSC are more accessible. NC ads are thus hypothesized to be more persuasive. Thus;

**H2: For low NFC consumers with INDSC (INTSC), comparative (NC) ads will be more persuasive than NC (comparative) ads.**

A different pattern of results is expected for high NFC consumers. These consumers have an intrinsic motivation to process information in a relatively more effortful fashion. They have a stronger desire for information processing and find it more enjoyable (Schmidt and Spreng 1996). As a consequence, they are not expected to use congruity between SC and ad type as a peripheral cue. Instead, they should scrutinize the message argument to come up with their evaluation. That is, for those with high NFC, SC accessibility should be overridden by a desire to solve the problem. It is suggested here that for high NFC consumers, comparative ads should be more persuasive than NC ads. Several empirical findings support this hypothesis. First, Aaker (2000) reports that
the superiority of a culture-congruent ad appeal is observed only under conditions of low-involvement. As a result, the impact of SC should be attenuated for these consumers. Second, comparative (vs. NC) ads elicit more favorable brand attitudes when the products are concurrently cognitive-involving and affective-involving (Putrevu and Lord 1994). The finding indirectly suggests that consumers with high need for cognition may find comparative (vs. NC) ads more persuasive. Third, comparative ads are more persuasive than NC ads when the level of involvement is high whereas, when the level of involvement is low, there is no difference between the impact of comparative ads and NC ads (Gotlieb and Sarel 1991). Because NFC could be considered as an approximate indicator of involvement, this finding should be extended to this dissertation as well. Finally, Jeon and Beatty’s (2002) use of PCs as the target products might be considered a relatively high-involvement condition. And their study reports the superiority of comparative ads over NC ads in both American and Korean cultures. Based on these several pieces of supporting evidence and Wilkie and Farris’s (1975) argument that comparative ads provide consumers with more factual information which presumably helps them in making rational brand choice, it is hypothesized that consumers with high NFC will be more strongly persuaded by comparative ads, irrespective of SC.

**H3**: For high NFC consumers, comparative ads will be more persuasive than NC ads, regardless of SC.
1- vs. 2-dimension version of INDCOL and/or SC

The hypotheses in this dissertation are derived based on a conventional conceptualization of culture-level INDCOL and individual level culture factor SC as bipolar 1-dimension constructs (Kagitcibasi 1997). That is, INDSC and INTSC are expected to yield opposite influences on dependent measures. Nevertheless, there has been an extensive debate over the 1- versus 2-dimension version of INDCOL and/or INDSC-INTSC (Oyserman et al. 2002). At the culture-level, INDCOL is often considered a bipolar 1-dimension construct. Hofstede (1990) assesses only IND because he assumes that IND-COL forms a single continuum. In other words, low IND is isomorphic with high COL. Numerous studies especially at the individual level, however, argue for the orthogonality and coexistence of these two SCs (e.g., Singelis 1994; Singleis and Brown 1995; Trafimow, Triandis, and Goto 1991). In addition, a meta-analysis of INDCOL studies by Oyserman et al. (2002) provides evidence that IND and COL may not be correlated.

Even though recent research suggests that separate dimensions are more appropriate (Ryder et al. 2000), the hypothesis formation of these individual level studies still tends to treat INDSC as the opposite of INTSC (e.g., Aaker and Lee 2001; Aaker and Schmitt 2001). As a consequence, to follow the common practice in the field, the hypotheses based on 1-dimension INDSC-INTSC are first offered. However, given the possibility of 2-dimension INDSC-INTSC, another set of hypotheses will be offered as well and tested if the empirical data suggest the 2-dimension version. In this case, the high INDSC is not the same as low INTSC. When INDSC-INTSC is not a single
continuum, INDSC and INTSC cannot be expected to be equally and inversely related to other variables (Kagitcibasi 1997). If INDSC and INTSC are found to be orthogonal, it is expected that INDSC, rather than, INTSC will have more effect on the dependent variables in this study. In other words, H1, H2 and H3 are more likely to hold for high versus low INDSC than high versus low INTSC because INDSC is directly related to comparative ads which emphasize uniqueness and comparison due to INDSC’s nature of competition. Competition is one major defining feature of INDSC (Oyserman et al. 2002). Consumers with high INDSC value competition (Kagitcibasi 1997) and emphasize the promotion of one’s own goal (Markus and Kitayama 1991). Consumers with low INDSC, on the other hand, do not value competition or the use of others for comparison purposes (Markus and Kitayama 1991). For example, consumers with high INDSC are more likely to use competitive tactics than consumers with low INDSC (Oetzel 1998a) in a decision-making context. Because of these characteristics, INDSC, rather than INTSC, is expected to be more accessible when consumers are exposed to comparative ads.

The core of INTSC, duty or ingroup obligation, may have less to do with comparative ads. While people with dominant INDSC do not make large distinctions between ingroups and outgroups, people with dominant INTSC do. For these people, cooperation is high among ingroups, but is unlikely when other people belong to outgroups (Triandis et al. 1988). Though people with dominant INTSC appear to value harmony, cooperation, and emphasize the importance of relationships, this is likely to be true with the ingroups, but not for outgroups. Comparative ads are neither ingroups nor clear outgroups. In this ambiguous relationship, people with INTSC are inclined to see
ambiguous groups as outgroups (Triandis 1995). If comparative ads are not considered ingroups, harmony is irrelevant.

The literature reveals incidents where only INDSC, but not INTSC, affects dependent measures even though both INDSC and INTSC are measured in the studies. For example, INDSC is reported to be significantly associated with more favorable attitude towards assisted-death while INTSC carries no weight in shaping this attitude (Kemmelmeier et al. 2002; Kemmelmeier, Burnstein and Peng 1999).

Under the condition of the 2-dimension version of INDSC-INTSC, subjects will be classified into high versus low INDSC and high versus low INTSC. That is, each subject will receive two SC scores, one INDSC score and one INTSC score. Subsequently the following set of hypotheses regarding the role of INDSC will be tested;

**H1:** Comparative ads (NC ads) will be more persuasive for consumers with high INDSC (low INDSC).

**H2:** For low NFC consumers with high INDSC (low INDSC), comparative (NC) ads will be more persuasive than NC (comparative) ads.

**H3:** For high NFC consumers, comparative ads will be more persuasive than NC ads, regardless of INDSC.

Because the relationship between INTSC and comparative ads is not as obvious as in the case of INDSC, no formal hypotheses regarding the role of INTSC are offered. It should be noted that with the 2-dimension version of INDSC-INTSC, one cannot simply
expect INTSC to yield effects opposite to INDSC (Kagitcibasi 1997). Doing so will imply the 1-dimension, instead of 2-dimension version of INDSC-INTSC.

As a consequence, given that there is no consensus in the literature on 1- versus 2-dimension version of INDSC-INTSC, one set or the other of hypotheses will be tested according to empirical evidence of 1- versus 2-dimension version from the data in this dissertation. As a reliability check so that the results are not sample-specific, hypotheses will be tested in two disparate cultures.

**Roles of product category types and relative vs. nonrelative measures: exploratory purposes.**

In addition to the hypothesized relationships among ad format, SC, and NFC, this dissertation will also explore the role of product category types (hedonic vs. utilitarian) and the use of relative versus nonrelative dependent measures. However, due to the lack of sufficient theoretical ground, no formal hypotheses regarding these two factors are offered.

The role of product category types also will be examined in this dissertation to explore the possibility that this factor may affect the persuasiveness of comparative ads. As a consequence, in the experiment, one product category will be selected to represent hedonic products (pleasure-oriented products which a consumer buys for fun or experiential purpose), the other utilitarian (practical products which a consumer ordinarily buys to carry out a necessary function or task in life; Kempf 1999). Apart from a few studies (Goodwin and Etgar 1980; Gorn and Weinberg 1983; Putrevu and Lord
1994), previous comparative ad research has paid relatively little attention to the possible moderating role of product category types. As a consequence, there is not sufficient theoretical ground for the development of formal hypotheses. However, it is expected that the findings from this dissertation will contribute to the literature by providing preliminary empirical evidence of this variable. That is, on the one hand, if the results are similar across two product category types, there will be more confidence in the findings. In this case, two product category types will represent replication and the generalizability of the findings will be enhanced. On the other hand, if the results are not consistent across two product category types, their moderating role will be implied.

Another possible relevant factor is the use of relative versus nonrelative dependents measures. Relative measures use response formats that incorporate some specific reference point in judgment making (e.g., “How likely is it that brand X is fast acting than brand Y?”). Nonrelative measures, in contrast, do not contain an explicit reference point in their response frame (e.g., “How likely is it that brand X is fast acting?”) (Miniard et al. 1998). Although a number of studies report that relative measures are more sensitive in the persuasiveness of comparative ads (Miniard et al. 1993, 1994, 1998), these studies have been exclusively conducted in the US. As a consequence, this is a good opportunity to explore whether their findings will be replicated in a cross-cultural setting.
Chapter 5

Methodology

This dissertation employs an experimental approach to examine the relative persuasiveness of comparative versus NC ads in two cultures. The US and Thailand, respectively, are selected to represent individualist and collectivist cultures. The US’s score of 91 on Hofstede’s (1990) INDCOL dimension which ranks 50th is the highest in 50 countries. Thailand, on the other hand, receives a score of 20 and ranks 13th on Hofstede’s (1990) INDCOL dimension, making Thailand a relatively collectivist culture. In cross-cultural advertising research, the US is by far the most-studied country (Samiee and Jeong 1994). Therefore, it is a good benchmark for comparison purposes (Donthu 1998). Thailand has attracted attention from researchers (e.g., Alden et al. 1993, 1995; Alden, Steenkamp, and Batra 1999), although to a lesser extent than other collectivist cultures such as Japan, China, and Korea. In fact, Oyserman et al. (2002) point out in their meta-analysis of research in INDCOL that what is known regarding the INDCOL is seriously limited because of the disproportionately heavy focus on four East Asian countries: Japan, Korea, PR China and Hong Kong. As a consequence, the use of Thailand as a collectivist culture would respond to their call for more empirical evidence from other underrepresented countries.

In addition, the global economy has gone through considerable change as Southeast Asian countries have assumed increasingly important roles. Recent financial and economic crises sparked by concerns about the purchasing power of consumers in Southeast Asia reflect the importance of this once-small market (Briley and Williams
1998). As a result, from a managerial perspective, the study of comparative ad persuasiveness in Thailand would shed light on the possibility of using comparative advertising as a new marketing communication strategy in the region.

Although comparative ads could be presented in the form of either DC (direct comparative) or IC (indirect comparative), only IC ads were employed in the experiment. Ideally the use of both DC and IC ads along with NC ads would provide complete comparisons. But due to practical reasons, the use of all three types of ad formats was not feasible. Because data collection in Thailand was conducted in classroom settings, there was a limit of how much time the experiment could take. Specifically, having a subject exposed to three ad stimuli would have taken too much time from class instructors. The selection of the IC over DC ad format was, nevertheless, expected to enhance both internal and external validities of the study. In terms of internal validity, the use of IC (as opposed to DC) ads provides a control for prior attitude towards the comparison brand. In addition, since the dependent measures involve relative comparison, the reference point (i.e., the comparison brand) in these measures is the same in both cultures; otherwise, the comparison of the results would be meaningless. In terms of external validity, Thailand’s trademark law prohibits any public use of another trade name (Chirapravati 1996). As a consequence, the direct mention of a comparison brand is illegal and thus not used. The use of IC ads, therefore, accommodated this restriction and thus enhanced external validity. The use of IC ads (as opposed to DC ads), however, had a possible drawback. Since DC ads explicitly mention the name of competitors, they appear to be more confrontational than IC ads. As a result, it is likely that DC ads would elicit more threats.
to harmony, cooperation, relationships, and “face-saving.” DC ads, relative to IC ads, are thus likely to represent a stronger ad format manipulation. To compensate for a probable weaker manipulation effect of IC ads, efforts were made to ensure that the comparison aspects of IC ads were perceived by research subjects. In particular, the words “leading brand” were mentioned several times throughout the ads. In addition, pilot tests were conducted to assure that subjects perceived the ads as they were intended.

**Main Study Overview**

Because the first set of hypotheses considered INDSC-INTSC 1-dimension, the main study was at first planned to employ a 2X2X2 full factorial design. That is, Ad formats (IC vs. NC), SC (INDSC vs. INTSC), and NFC (high vs. low) constituted three independent factors. However because SC proved to be 2-dimension rather than 1-dimension, INDSC and INTSC were thus treated as two separate variables. To accommodate this change and thus test the second set of hypotheses, the main study employed a 2X2X2X2 full factorial design with ad formats (IC vs. NC), INDSC (high vs. low), INTSC (high vs. low), and NFC (high vs. low) as four independent factors. Persuasiveness, which is the focal dependent factor, was assessed through $A_{ad}$, $A_b$, and PI.
Subjects

Two hundred and fourteen business students in a major US university and four hundred students in a major Thai university were research subjects. Only those who did not participate in the pilot tests were qualified for the main study. Students voluntarily participated in the study; extra course credit was given to increase motivation and participation.

Procedure

In the US, the experiment was conducted outside class time in a laboratory setting. In Thailand, the experiment was conducted in class. However, both studies used paper-and-pencil measurement systems. Manipulations were provided within survey booklet format. Other basic procedures in both countries were also similar in both studies. First, subjects were informed of the descriptions and purpose of the study. Subjects were also asked for their consent. Subjects then read the first advertisement and subsequently completed measures of advertisement persuasiveness, including $A_{ad}$, $A_{b}$, and PI. Next, subjects completed ad credibility and ad involvement measures. Then subjects read the ad for the second product and completed measures similar to those in the first ad. Two products were used to explore the role of product category types. After finishing the second ad, subjects completed filler tasks, including questions regarding product familiarity and product involvement. Subjects subsequently filled out two measures of individual differences: Singelis’s (1994) SC scale and Cacioppo, Petty and Kao’s (1984) short version of the NFC scale. Finally, subjects provided demographic data.
including age, gender, and ethnicity (only for the U.S.) and were then debriefed. In both the pre-tests and the main study, participation was strictly voluntary.

**Measures**

Independent measures include Singelis's (1994) SC Scale (SCS) and NFC scale (Cacioppo, Petty, and Kao 1984). Dependent measures include $A_{ad}$, $A_{bo}$, and PI. In addition, ad credibility, ad involvement and filler tasks including product familiarity, product involvement, were assessed.

*Independent Measures*

Self-Construal

INDSC versus INTSC was measured by Singelis’s (1994) SCS. The SCS was developed to measure the constellation of thoughts, feelings, and actions influenced by the two different selves. The INDSC subscale items tap the independent-self’s emphasis on the separateness and uniqueness of the individual. Some examples of these include, “I enjoy being unique and different from others in many respects” and “I’d rather say “No” directly, than risk being misunderstood.” The INTSC subscale items, on the other hand, tap the interdependent-self’s emphasis on connectedness and relations. “My happiness depends on the happiness of those around me” and “It is important for me to maintain harmony within my group” are two examples of this subscale items. The original scale (Singelis 1994) employed 24 items; 12 items for each subscale. Six additional items (three for each subscale) were subsequently added to improve internal reliabilities of the original scale (Singelis, Theodore M. personal communication, November 2002).
Responses are made on a 7-point Likert-type scale, with “Strongly Disagree” and “Strongly Agree” as anchoring words. All scale items are displayed in Appendix 1.

Reliabilities of .73-.74 (INDSC subscale) and .69-.70 (INTSC subscale) were reported in the original studies (Singelis 1994). Comparable internal reliabilities were obtained within each of the ethnocultural groups, including European Americans, Asian Americans, and Hong Kong Chinese (Singelis et al. 1999). The construct validity is established in interethnic comparisons. Specifically, Asian Americans have been reported to be more interdependent than Caucasian Americans and Caucasian Americans more independent than Asian Americans in several studies (Singelis 1994; Singelis and Sharkey 1995; Singelis et al. 1995). Predictive validity has been supported by findings that those with higher interdependence scores tend to attribute more influence to the situation than those with lower interdependence scores (Singelis 1994). Convergent validity with measures of INDCOL was reported (Singelis et al. 1995).

The INDSC and INTSC subscales are argued to be orthogonal by Singelis (1994). He finds that, using a confirmatory factor analysis, the orthogonal 2-factor model significantly fits the data better than the nonorthogonal 2-factor models which constrain the relationship between the two factors to either 1.0 or -1.0. In addition, he finds the orthogonal 2-factor model to be superior to the 1-factor model.

The SCS has been extensively used by consumer researchers such as Aaker and colleagues (e.g., Aaker 2000; Aaker and Lee 2001). High reliabilities have been reported for the overall scale .90-.91 (Aaker 2000; Aaker and Sengupta 2000; Aaker and Williams 1998). The reliabilities of the two subscales as separate dimensions, however, varied
greatly: .66-.87 for INDSC subscale and .66-.95 for INTSC subscale (Aaker and Lee 2001; Aaker and Schmitt 2001). Most consumer studies have treated SCS as a 1-factor scale. That is, each research participant received a single score instead of two (one for INDSC items and the other for INTSC items) as suggested by Singelis (1994). In fact, Aaker and Williams (1998) explicitly report that a factor-analysis of all items in the SCS yielded only one factor.

For two reasons, the SCS is expected to have sufficient internal consistency for the experiment in this dissertation. First, the scale was originally developed using University of Hawaii students as research participants. As a consequence, it is reasonable to expect that the scale should perform comparably well in this dissertation because the research participants are also University of Hawaii students. Second, a more recent study by Kim, Polyorat, and Alden (forthcoming) administered the SCS to business students at the University of Hawaii and found the scale to be reliable: alpha = .78, .71, and .78 for INDSC items, INTSC items, and overall scale, respectively. Research participants in this dissertation will be drawn from the same subject pool as Kim et al.'s (forthcoming) study. As a consequence, a similar level of the scale's internal consistency is expected for the US study. The performance of SCS in the Thai study, however, is examined before the beginning of the main study.

The Singelis's (1994) SCS was found to be applicable in several cultures including those in East Asia (e.g., Aaker 2000). However, none of the previous studies included Thai research subjects. As a consequence, there remains a need to ascertain the applicability of the scale before conducting the main study. To ensure equivalence
between English and Thai versions of the SCS, double-back translation procedures (Brislin 1980) were used. First, the author, who is a bilingual English-Thai, translated the original instrument from English to Thai. Subsequently, a second bilingual translator who was not aware of the purpose of the study translated the instruments back from Thai to English. The original English version and the new English version were then compared. Discrepancies were resolved through discussion between the two translators with consultation from experts.

One hundred and eleven business students from a major Thai university participated in this SCS pre-test. The scale was found to be as reliable in Thailand as in the West and other Eastern cultures. The reliabilities were .78, .69, and .79 for the overall scale, INDSC items, and INTSC items, respectively. Although the INDSC items’ reliability fell short of a conventional acceptance point of .70, it was nevertheless in the range reported in previous literature (e.g., Aaker and Schmitt 2001, Singelis 1994). As a consequence, it was concluded that the SCS performed reasonably well with Thai subjects.

NFC

The original version of the NFC scale, developed by Cacioppo and Petty (1982), contains 34 items. However, in this dissertation, NFC was measured with an 18-item version of NFC scale which has been found to be highly correlated ($r = .95$) with the original scale (Cacioppo, Petty, and Kao 1984). Moreover, the factor structure of the shorter version was reported by the researchers to be similar to the original version. That is, in both versions, a clearly dominant single factor emerges. This dominant single factor explains more variance in the shorter version than in the original version (37% vs. 27%).
In addition, the reliabilities of the two shorter and the original version were very close (.90 vs. .91). This is consistent with Kim, Polyorat, and Alden (2003) who found that the shorter NFC scale was reliable (alpha = .85). Furthermore, a comprehensive review of NFC by Cacioppo et al. (1996) found that the factor structure and consistency of both versions of the NFC scale had been replicated in numerous studies (see conceptual discussion of NFC for more detail, pp.55-51). Finally, the 18-item version has been more widely used than the original 34-item. As a consequence, there is no reason to use the 34-item version which might trigger more fatigue from research participants. “I find satisfaction in deliberating hard and for long hours” and “Thinking is not my idea of fun” are examples of NFC items. Appendix 2 displays the abbreviated NFC scale used herein.

Even though the NFC scale was found to be reliable in the United States, little is known regarding the performance of this scale in Thai culture. Wong et al. (2003) report low reliability of the scale (.58) in their study with Thai subjects. This poor performance of the scale points to a need to validate the scale before conducting the main study comparing US and Thai consumers. The most recent version of NFC scale (Cacioppo et al. 1996) employs “extremely uncharacteristic-extremely characteristic” as scale end-point labels instead of “strongly disagree-strongly agree” which was used in the older version (Cacioppo and Petty 1982) as well as in Wong et al.’s (2003) study. Kim et al. (2003) find that differences in scale labeling significantly impact the NFC scale’s reliability. Specifically, changing the scale label from “strongly disagree-strongly agree” to “extremely uncharacteristic-extremely characteristic” improves the scale reliability from .60 to .85. Although Kim et al. (2003) do not offer explanation for this finding, it is
possible that the “characteristic” label is easier for research subjects to do the mental work. Based on this finding, the labels “extremely uncharacteristic-extremely characteristic” were used in this NFC pre-test.

In the NFC scale pre-test, the original scale was translated from English to Thai using double-back translation (Brislin 1980) similar to the translation of SCS. Seventy-four business students in a major university in Thailand completed the scale. The scale’s reliability was .72 (vs. Wong et al.’s .58). Means of 4.23 and SD of .70 were similar to those in Wong et al.’s study (4.11 and .51, respectively). The analysis showed that if item 7 “I only think as hard as I have to” were removed, the scale’s reliability would improve to .77. Given that the scale’s reliability was over the conventionally acceptable point of .70, it was concluded that the NFC scale worked fairly well with Thai subjects.

**Manipulation Check**

Following Droge and Darmon (1987), Pechman and Stewart (1990), and Kavanoor, Grewal, and Blodgett (1997), pilot-test subjects were asked to identify:
1) whether an ad was DC if it explicitly named a competitive brand; 2) IC if it implicitly referred to a competitive brand (e.g., as “the leading brand”); or 3) NC if the ad neither named nor indirectly referred to a competitive brand (see Appendix 3 for the measure). The result of manipulation check is reported on page 77.
Dependent Measures

A_{ad}, A_{b}, and PI were used to measure ad persuasiveness. Criteria such as attitudes and/or intentions are often used in the study of ad effects (Miniard et al. 1998). Studies in the persuasion literature employ attitudinal measures of advertising effects. Similarly, advertising practitioners frequently use attitudinal measures to assess advertising effects (Miniard et al. 1998). As a consequence, the use of these three measures is considered appropriate in this dissertation given the fact the measure of real purchase behavior is not likely feasible.

While relative measures outperform nonrelative measures in detecting comparative ad persuasiveness, nonrelative measures outperform relative measures in detecting NC ad persuasiveness (Miniard et al. 1998). Because this dissertation employed both comparative and NC ads in the experiment, it is appropriate to include both relative and nonrelative measures. In addition the two previous cross-cultural studies of comparative ads employed different persuasive measures. That is, while Donthu (1998) employed nonrelative measures, Jeon and Beatty (2002) employed relative measures. As noted earlier, their results conflicted. Hence, this dissertation uses both types of measures. For A_{ad}, however, only nonrelative measures were used because, otherwise, subjects would need to see two ads (one for the sponsoring brand and the other for the comparison brand) for one product to be able to complete relative A_{ad} measures.

A_{ad} was assessed by a seven-item scale drawn from Neese and Taylor (1994). Reliability of .83 is reported in that study. Relative and nonrelative A_{b} was assessed with
two-item measures from Miniard et al. (1993). A correlation of over .95 was reported in that study. Finally, a single relative and nonrelative PI item was drawn from Miniard et al. (1993). Appendix 4 contains the details of these three measures.

*Other ancillary measures*

Subjects completed a 5-item ad credibility measure drawn from Kim et al.’s (2003) study, which reports reliability of .86-.90. In addition, subjects completed a 3-item ad involvement measure also drawn from Kim et al.’s (2003) study which, in turn, adapted the measure from Peracchio and Meyers-Levy (1997).

As a filler task to camouflage the connection between ad stimuli section and individual difference measure section, subjects completed a 2-item product familiarity measure (correlations = .70-.81) drawn from Kim et al. (2003) and a 5-item product involvement measure (reliabilities = .77-.90) drawn from Zaichkowsky (1985). Appendix 5 exhibits these measures.
CHAPTER 6

STIMULI DEVELOPMENT

The use of an unknown advertised brand attacking a market leader is common in the comparative advertising literature (e.g., Pechman and Stewart 1990). To follow this lead, this dissertation employs fictitious sponsoring brands attacking market leaders. The use of fictitious sponsoring brands also prevents influence of prior attitude which could exist if a real brand was used.

Print, rather than broadcast ads, were used in this study. Print is arguably a better vehicle than broadcast media to communicate comparative ad messages (Ash and Wee 1983). Print ads, in comparison with TV or radio commercials, facilitate more thorough brand comparisons because consumers can process the typical large amount of information in a comparative ad at their own pace (Gnepa 1993).

In order to identify the appropriate products as well as other relevant information about those products, two pilot tests were conducted in each country—an informal focus group and a survey.

Pilot Test 1: Focus group

A small focus group of business students was conducted in each country to generate a list of products that were relevant to this segment. Seven US students and six Thai students participated in a focus group and received extra course credits. They were
requested to identify products that were likely to be used, interesting, and/or relevant to college students of both genders as a whole.

Results

US subjects identified the following products; beer, camera, candy, car, CD player, cell phone, cereal, cold remedy, credit card, deodorant, fast food restaurant, PC/laptop, perfume/cologne, shampoo, sneakers, soda, sunglasses, sunscreen, surfboard, toothpaste and watch. Thai subjects identified the following products; backpack, beer/whiskey, candy, cold remedy, CD player, cell phone, handbag, ice-cream, jeans, motorcycle, pen, pencil, perfume/cologne, shampoo, sneaker, soda, sunglasses, toothbrush and toothpaste.

Pilot Test 2: Survey

The purpose of this pilot test was to select two appropriate product categories for use in the main study. The use of two instead of one product enhances generalizability of the findings. In the comparative advertising literature, product characteristic in terms of hedonic versus utilitarian orientation have not been directly examined. Hence, one hedonic and one utilitarian product were used in this dissertation. However, to control for alternative explanations, the two products needed to be similar in terms of product familiarity and involvement.

Based on focus group results, the following product categories were selected because they were reportedly used, interesting, familiar and/or relevant to subjects in both
cultures. These categories are: beer, candy, CD player, cell phone, cold remedy, perfume, shampoo, sneaker, soda, sunglasses and toothpaste. Ice-cream, though identified only by Thai subjects, was added to the final list to balance the number of utilitarian and hedonic products.

Fifty-two US and 80 Thai college students participated in the pilot test. Each subject completed the survey for six, instead of twelve, products to reduce the length of the overall survey. Subjects were asked to identify important attributes of each product in their list. Subsequently they rated in terms of hedonic versus utilitarian characteristics (Kempf 1999; Strahilevitz and Myers 1998), familiarity (Kim et al. 2003), and involvement (Kim et al. 2003) on a 7-point scale.

**Results**

Means and standard deviations of each measure for each product in the US and Thailand are displayed in Tables 6 and 7, respectively. The means of product category characteristics range from 1.51-6.31 (high scores represents hedonic characteristics) in the US and 1.21 – 6.21 in Thailand. Product category involvement scores range from 3.71-5.67 in the US and 3.43- 5.90 in Thailand. Product category familiarity scores range from 3.63-6.23 in the US and 3.11- 6.33 in Thailand.

Insert Table 6 about here

Insert Table 6 about here
Ideally, the two chosen product categories should be very different in terms of product characteristics because the initial reason for using two products was to increase generalizability. They should be similar however in terms familiarity and involvement in both cultures. The two product categories that best met these criteria were toothpaste and candy. Specifically, they were different in terms of utilitarian versus hedonic characteristics (correlations = .65-.82) across cultures ($\bar{X}_{\text{toothpaste}}$, US = 1.51, $\bar{X}_{\text{candy}}$, US = 6.16, $t = -16.90, p \leq .001$ and $\bar{X}_{\text{toothpaste}}$, Thai = 1.47, $\bar{X}_{\text{candy}}$, Thai = 5.15, $t = -15.00, p \leq .001$). In addition, reported category involvement (reliabilities = .73 -.94) was similar in both cultures ($\bar{X}_{\text{toothpaste}}$, US = 4.34, $\bar{X}_{\text{candy}}$, US = 4.13, $t = 0.74, p > .1$ and $\bar{X}_{\text{toothpaste}}$, Thai = 4.62, $\bar{X}_{\text{candy}}$, Thai = 4.27, $t = 1.50, p > .1$). Category familiarity (correlations = .62-.93) was similar in the US but not in Thailand ($\bar{X}_{\text{toothpaste}}$, US = 4.92, $\bar{X}_{\text{candy}}$, US = 5.17, $t = -0.75, p > .1$ and $\bar{X}_{\text{toothpaste}}$, Thai = 5.94, $\bar{X}_{\text{candy}}$, Thai = 5.28, $t = 3.30, p \leq .001$). Note, however, that in Thailand familiarity for both categories was significantly greater ($p \leq .01$) than the midpoint of the scale. Thus, while statistically significant, this difference was not considered problematic.

Tables 8 and 9 display the frequencies of important attributes mentioned by subjects in the US and Thailand for the utilitarian product (toothpaste) and the hedonic product (candy), respectively. Attributes with the highest frequencies in each country and
similar ranking orders were selected. As a result, taste, breath freshness, cleaning ability, whitening ability and color were identified as salient attributes for the utilitarian product. Taste, package, price, color and size were identified for the hedonic product.

Pilot Test 3- Ad copy Pre-test

Ad copy alone, rather than full ads (e.g., ads with pictures), was employed to reduce the possibility that aesthetic ad appeal would influence response (Sorescu and Gelb 2000). Following work by Barone and Miniard (1999), each ad featured a general headline which did not provide attribute-specific information. The headline was followed by four (for the utilitarian product) or five (for the hedonic product) attribute descriptions and a concluding positioning statement. Full ad copies are presented in Appendix 6.

The ad copy pre-test was conducted with students from the same subject pool as the main study. The major purpose of this phase was to test the ad copy manipulation; specifically whether the treatments would be perceived as IC or NC as intended. The words “the leading brand” were used in IC copies. In addition, ad credibility was
assessed. Subjects read ad copy for the first product and then listed their thoughts, completed the manipulation check, and finally completed ad credibility measure.

Results

For the utilitarian product, NC ads were correctly identified by 12 out of 16 US subjects (75%) and 36 out of 38 Thai subjects (95%). IC ads were correctly identified by 16 out of 19 US subjects (84%) and 39 out of 39 Thai subjects (100%).

For the hedonic product, NC ads were correctly identified by 16 out of 19 US subjects (84%) and 36 out of 39 Thai subjects (92%). IC ads were correctly identified by 13 out of 16 of US subjects (81%) and 35 out of 38 Thai subjects (92%). Given the high percentage of correct identification, manipulation of ad format appeared to work effectively for both products in both countries.

In addition, ad credibility (reliabilities = .79-.88) was also measured since it has been known to affect ad persuasiveness. Overall research subjects perceived NC and IC ads to be similar in terms of ad credibility. Specifically, for the utilitarian product, US subjects perceived the NC ad to be equally credible to the IC ad ($X_{NC, utilitarian} = 4.79, X_{IC, utilitarian} = 4.62, t=.46, p>.1$). Similarly, Thai subjects perceived the NC ad to be equally credible to the IC ad ($X_{NC, utilitarian} = 4.46, X_{IC, utilitarian} = 4.21, t=1.60, p>.1$). For the hedonic product, US subjects perceived the NC ad to be equally credible to the IC ad ($X_{NC, hedonic} = 4.46, X_{IC, hedonic} = 4.15, t=.96, p>.1$). Similarly, Thai subjects perceived the NC ad to be equally credible to the IC ad ($X_{NC, hedonic} = 4.18, X_{IC, hedonic} = 4.08, t=.58, p>.1$).
CHAPTER 7

MAIN STUDY RESULTS

Two hundred and eleven US (mean age = 23, 51 percent female) and three hundred and ninety-five Thai (mean age = 20, 69 percent female) usable questionnaires from university students were included in this data analysis after three US questionnaires were removed because of subjects’ insufficient English ability and five Thai questionnaires were removed because of missing data.

Preliminary Analyses

Scale Performance

Overall, most multi-item measures exhibited high reliabilities or correlations; .79-.89 for $A_{ad}$, .56-.77 $A_{b(n)}$, .65-.84 for $A_{b(r)}$, .89-.91 for ad credibility, .88-.92 for ad involvement, and .75-.87 for NFC across two countries and .70 for SCS-INDSC subscale in the US and .71 for SCS-INTSC subscale in Thailand (see Table 10). However, SCS-INTSC subscale’s reliability in the US (.65) and SCS-INDSC subscale’s reliability in Thailand (.61) fell short of the desirable level of .70. However, these relatively low reliabilities were, nevertheless, in the ranges reported in literature. For example, Singelis et al. (1999) report reliabilities of .58 in the INDSC subscale of Hong Kong subjects, .53 in the INTSC subscale of Hong Kong subjects and .62 in the INTSC subscale of Asian American subjects in Hawaii. In addition, Ryer, Alden, and Paulhus (2000) reported reliabilities of .65 in the INDSC subscale and .64 in the INTSC subscale for American subjects. A closer look at the analysis of scale reliabilities indicated no major improvement of scale reliabilities from removing any specific items for the INTSC.
subscale in the US and for the INDSC subscale in Thailand. As a consequence, it appears that the SCS scale exhibited sufficient reliabilities for further analysis.

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Insert Table 10 about here

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**INDSC and INSCT as one dimension versus two dimensions**

In this dissertation, INDSC and INTSC exhibited a nonsignificant correlation of .119 (p > .1) in the US data and small significant, positive correlation of .295 (p ≤ .01) in the Thai data. Although the positive correlation of INDSC and INTSC in the Thai data may appear counterintuitive, this pattern was reported in certain previous studies as well. For example, Singelis and Sharkey (1995) reported a significant positive correlation between INDSC and INTSC of .19 (p < .001) for US subjects. Kwan, Bond, and Singelis (1997) reported significant positive correlation between INDSC and INTSC of .19 (p < .01) for Hong Kong subjects. Moreover, the findings from the Thai data in this dissertation is also consistent Lee and Kacen’s (1999) hypothesis and empirical support for the argument that INDSC and INTSC are more likely to be positively correlated in collectivist cultures than in individualist cultures.

Given the theoretical foundations and empirical evidence of the two SCs as well as the nature of correlations between these two SCs in this dissertation, it appears more appropriate to treat INDSC and INTSC as two separate dimensions rather than as two
opposite poles of a single construct. As a consequence, each subject received one score for INDS and one score for INTSC. These two scores represented two separate independent variables in the MANOVAs and ANOVAs. Thus, subjects were classified as either low vs. high NFC, low vs. high INDSC, and low vs. high INTSC according to median splits.

Hypothesis Testing

In both countries, all dependent measures \( (A_{ad}, A_{b(n)}, A_{b(r)}, PI_{(n)}, PI_{(r)}) \) were highly correlated. Specifically, correlations among the five dependent measures were \( .55 -.85 \) for US-utilitarian product, \( .49 -.70 \) for US hedonic product, \( .38 -.66 \) for Thai utilitarian product and \( .38 -.67 \) for Thai hedonic product. Because all five dependent measures were related, MANOVA, as a test of overall significance, was conducted. This procedure facilitated the examination of multivariate effects and helped control Type I error (Ryder, Alden, and Paulhus 2000).

A 2 (ad format: IC vs. NC) x 2 (INDSC: high vs. low) x 2 (INTSC: high vs. low) X 2 (NFC: high vs. low) between-subject multivariate analysis of variance (MANOVA) was employed to test hypotheses. Results are first reported for the utilitarian product category (toothpaste) in the US and Thailand. Results from the hedonic product category (candy) follow thereafter. Table 11 displays mean differences and statistical significance levels for each of the dependent variable in each hypothesis.
Support for H1 required a significant 2-way interaction effect between ad format and INDSC. The MANOVA results indicated a significant 2-way interaction effect of ad format X INDSC (F [5,186]= 2.66, p ≤ .05). The 2-way interaction effect of ad format X INTSC, however, was not significant (F [5,186]= .28, p >.1). To determine which dependent variables were responsible for the statistically significant MANOVA result, separate ANOVAs were conducted for each of the individual dependent variables. Because the overall results were largely consistent among 5 dependent measures throughout the whole study, only means and significance levels of Ab(r) are provided here for illustration purposes. Complete means and significance levels for the other four dependent measures, A(ad), A(b(n)), PI(n) and PI(e) (all of which were statistically significant at least at .05 level), are provided in Table 11.

Although significant, the contrasts between means were not consistent with predictions. For consumers with low INDSC, IC ads (X = 4.94) were more persuasive than NC ads (X=4.08, p ≤ .001). For consumers with high INDSC, IC ads (X=4.60) and NC ads (X=4.49, p >.1) were similarly persuasive. Because consumers with low INDSC were expected to prefer NC to IC ads and consumers with high INDSC were expected to prefer IC to NC ads, H1 is, thus, not supported. The 2-way interaction, however, must be
interpreted with care because it was further qualified by a significant 3-way interaction as suggested by H2 and H3.

\textit{H2: a 3-way interaction effect between ad format, INDSC and NFC for low NFC consumers}

\textit{H3: a 3-way interaction effect between ad format, INDSC and NFC for high NFC consumers}

Support for H2 and H3 required a significant 3-way interaction effect between ad format, INDSC and NFC.

The MANOVA results revealed a significant 3-way interaction effect of ad format X INDSC X NFC (F[5,186]= 2.73, p \leq .05) but not format X INTSC X NFC (F[5,186]= 1.30, p >.1). The contrasts between means for the 3-way INDSC interaction indicated results as predicted for high NFC consumers but not low NFC consumers.

Specifically, for low NFC consumers with low INDSC, IC ads (\(\bar{X}=5.06\)), as opposed to NC ads (\(\bar{X}=4.25, p \leq .01\)), were more persuasive. But for low NFC consumers with high INDSC, IC ads (\(\bar{X}=3.93\)), as opposed to NC ads (\(\bar{X}=4.85, p \leq .05\)), were less persuasive. Although the cell means were statistically different and indicated the moderating role of INDSC, they were not consistent with predictions. As a consequence, H2 was not supported. However, the fact that the cultural factor (INDSC) did play a role under certain conditions (i.e., for low NFC consumers) suggests that culture is important as originally hypothesized. In this sense, the results are consistent with the underlying premise of H2. That is, culture matters in some cases and not others.
which were statistically significant at least at .05 level except $A_{b(n)}$ which was not significant in low INDSC condition), are provided in Table 11.

For high NFC consumers with low INDSC, IC ads ($\bar{X}=4.80$), as opposed to NC ads ($\bar{X}=3.92$, $p \leq .05$) were more persuasive. For high NFC consumers with high INDSC, IC ads ($\bar{X}=4.80$), as opposed to NC ads ($\bar{X}=3.92$, $p \leq .05$) were also more persuasive. As a result, H3 was supported. That is, the cultural factor did not have a moderating influence for high NFC consumers. Complete means and significance levels for the other four dependent measures (all of which were statistically significant at least at .05 level except $A_{ad}$ which was not significant in low INDSC condition and $A_{b(n)}$ which was not significant in high INDSC condition), are provided in Table 11.

**Utilitarian product- Thailand**

$H1$: a 2-way interaction of ad format $X$ INDSC

The MANOVA results indicated a significant 2-way interaction effect of ad format $X$ INDSC ($F[5,331]= 2.91$, $p \leq .05$). The 2-way interaction effect of ad format $X$ INTSC, however, was not significant ($F[5,331]= .65$, $p >.1$).

As in the US, the contrasts for the significant INDSC 2-way interaction, however, were not consistent with predictions. For consumers with low INDSC, IC ads ($m = 4.93$) were more persuasive than NC ads ($\bar{X}=3.79$, $p \leq .001$). For consumers with high INDSC, IC ads ($\bar{X}=4.16$) and NC ads ($\bar{X}=3.96$, $p >.1$) were similarly persuasive. Because consumers with low INDSC were expected to prefer NC to IC ads and consumers with
high INDSC were expected to prefer IC to NC ads, the results are not consistent with H1.
The 2-way interaction, however, must be interpreted with care because it was further
qualified by a significant 3-way interaction as suggested by H2 and H3.

Complete means and significance levels for the other four dependent measures,
$A_{ad}$, $A_{b(o)}$, $PI_{(o)}$ and $PI_{(r)}$ (all of which were statistically significant at least at .01 level), are
provided in Table 11.

$H2$: a 3-way interaction effect between ad format, INDSC and NFC for low NFC
consumers

$H3$: a 3-way interaction effect between ad format, INDSC and NFC for high NFC
consumers

The MANOVA results revealed a significant 3-way interaction effect of ad format
$X$ INDSC $X$ NFC ($F[5,331]= 4.02, p \leq .001$) but not format $X$ INTSC $X$ NFC ($F[5,331]= .64, p >.1$). As in the US, the contrasts between means for the 3-way IND interaction
indicated results as predicted for high NFC consumers but not for low NFC consumers.

Specifically, for low NFC consumers with low INDSC, IC ads ($\bar{X}=4.41$), as
opposed to NC ads ($\bar{X}=3.73, p \leq .001$), were more persuasive. But for low NFC
consumers with high INDSC, IC ads ($\bar{X}=3.85$), as opposed to NC ads ($\bar{X}=4.27, p \leq .05$),
were less persuasive. Although the cell means were statistically different and indicated
the moderating role of INDSC, they were not consistent with predictions. As a
consequence, H2 was not supported. However, the fact that the cultural factor (INDSC)
did play a role under certain conditions (i.e., for low NFC consumers), suggests that
culture is important as originally hypothesized. In this sense, the results are consistent
with the underlying premise of H2. That is, culture matters in some cases and not others. Complete means and significance levels for the other four dependent measures (all of which were statistically significant at least at .05 level), are provided in Table 11.

For high NFC consumers with low INDSC, IC ads ($\bar{X}=4.35$), as opposed to NC ads ($\bar{X}=3.89$, $p \leq .05$) were more persuasive. For high NFC consumers with high INDSC, IC ads ($\bar{X}=4.49$), as opposed to NC ads ($\bar{X}=3.71$, $p \leq .001$) were also more persuasive. As a result, H3 was supported. That is, the cultural factor did not have a moderating influence for high NFC consumers. Complete means and significance levels for the other four dependent measures (all of which were statistically significant at least at .05 level except $A_{bn}$ which was not significant in low INDSC condition), are provided in Table 11.

Summary for US and Thai utilitarian product category data

The Thai and US results demonstrate high reliability (i.e., the results are consistent across two cultures), providing evidence of strong external validity given the unique and different environments in each country. The 2-way interaction effect of ad format X INDSC was significant. However the cell means were not consistent with predictions. As a consequence, H1 was not supported in either the US or Thailand. Furthermore, the 2-way interaction, however, must be interpreted with care because it was further qualified by a significant 3-way interaction as suggested by H2 and H3.

The 3-way interaction of ad format X INDSC X NFC was significant. Overall this 3-way interaction supports the argument that the cultural factor (INDSC) matters in low NFC consumers but not high NFC consumers. Specifically, for low NFC consumers, the
individual level cultural factor (INDSC) impacted the comparative ad persuasion as hypothesized. The cell means, however, were not consistent with predictions. As a consequence, H2 was not supported in both the US and Thailand although the underlying premise of H2 was supported. For high NFC consumers, the cell means were in the predicted direction. H3 was thus supported in both the US and Thailand.

Hedonic product-US

The multivariate analysis of variance was conducted to examine the overall model. The results revealed only one marginally significant 3-way interaction of ad format X INTSC X NFC (F[5,186] = 2.13, p = .06) which was relevant to H2 and H3. 2-way interactions of ad format X INDSC (F[5,186] = 1.70, p > .1) and ad format X INT (F[5,186] = .44, p > .1), however, were not significant. Because the 2-way interaction effects were not significant, H1 was not supported for the hedonic product.

To determine which dependent variables were responsible for the statistically significant MANOVA result, results from separate ANOVAs for each dependent measure indicated Aad as the only dependent measure with significant results.

A 2x2x2x2 ANOVA on Aad revealed a significant interaction of ad format X INTSC X NFC (F[1, 191] = 8.97, p ≤ .01). The interaction of ad format X INTSC X NFC, however, did not support H2 and H3. Specifically for H2, low NFC consumers with low INT exhibited more positive Aad for IC ads (X=4.93) than for NC ads (X=4.32) (t[49] = -2.26, p ≤ .05). In contrast, low NFC consumers with high INTSC exhibited
similar $\bar{A}_{ad}$ for IC ads ($\bar{X}=5.15$) and for NC ads ($\bar{X}=4.80$) ($t[48] = -1.63, p > .1$). As a consequence, H2 was not supported.

High NFC consumers with low INTSC exhibited more positive $A_{ad}$ for NC ads ($\bar{X}=4.60$) than for IC ads ($\bar{X}=4.12$) ($t[56] = 2.21, p < .05$). High NFC consumers with high INTSC, however, exhibited more positive $A_{ad}$ for IC ads ($\bar{X}=4.84$) than for NC ads ($\bar{X}=4.34$) ($t[46] = -2.00, p < .05$). Even though this interaction was significant, the results contradicted H3 which predicted the NFC's suppression on SC. As a consequence, H3 was not supported.

In summary, apart from the significant 3-way interaction of ad format X INTSC X NFC for $A_{ad}$ which did not yield cell means in the predicted direction, none of the other 2-way or 3-way interactions were significant. As a consequence, none of the hypotheses was supported for the hedonic product in the US.

**Hedonic product - Thailand**

The multivariate analysis of variance was conducted to examine the overall model. The results indicated no significant interactions. As a consequence, none of the hypotheses were supported for Thai data.

**Summary of overall findings**

Table 12 summarizes major results from hypotheses testing. The results for utilitarian product ads were consistent in both the US and Thailand. In particular, H1, which argued for advantage of SC-congruent ad type for all consumers, was not
supported. H2, which argued for the moderating role of the individual level culture factor (INDSC) in low NFC consumers, was not supported because cell means were not consistent with predictions. However, the fact that the cultural factor (INDSC) did play a role under certain conditions (i.e., for low NFC consumers), suggests that culture is important as originally hypothesized. H3, which argued for the advantage of IC over NC ads for high NFC consumers regardless of their SCs, was supported. Figures 2, 3 and 4 graphically display the hypotheses and findings for H1, H2 and H3, respectively. For hedonic product ads in both the US and Thailand, none of the hypotheses were supported.

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Insert Figure 4 about here
Even though H1 and H2 were not supported by the data from utilitarian product ads, cell means were, in general, significantly different and provide consistent patterns among five dependent measures. Specifically, consumers with low INDSC were significantly more persuaded by IC versus NC ads while consumers with high INDSC were persuaded by both formats equally. Given the current literature in the field, no theoretical framework appears to satisfactorily explain these results. As a consequence, these data were not analyzed further. However this is not the case for H2 which proposed that SC would interact with ad formats for low NFC consumers. Specifically, SC-incongruent ad types (IC/ low INDSC and NC/high INDSC) were preferred over SC-congruent ad types (IC/ high INDSC and NC/low INDSC). The cell means were not only different from what was predicted but in the opposite direction of what was expected. The incongruity literature stream (e.g., Meyers-Levy and Tybout 1989; Stayman, Alden and Smith 1992) offered bases for theoretical explanation of this finding. Thus, further analyses were undertaken on low NFC consumers.

Additional analysis for low NFC consumers

The primary research question here was: why, for low-NFC consumers, were ads with SC-incongruent appeal more persuasive than ads with SC-congruent appeal? Literature in the incongruity effect area may provide answers to this question. Mandler’s (1982) schema-congruity hypothesis posits that moderate incongruity generally prompts greater positive affect than that associated with congruity or extreme
incongruity. Recent consumer research theoretically investigates this issue and provides empirical support for Mandler's (1982) theory.

A number of studies examine congruity between product attributes and product schema as an operationalization of an incongruity level (e.g., Meyers-Levy and Tybout 1989; Peracchio and Tybout 1996; Stayman, Alden, and Smith 1992). These studies consistently report that a more positive product evaluation may result when the schema representation and the product description are moderately mismatched than when there is a match or extreme mismatch. The incongruity between ad appeal and SC in this dissertation could represent moderate incongruity rather than extreme incongruity because every individual possesses both INDSC and INTSC (Singelis 1994). That is, the two self-views appear to coexist within every individual. In other words, INTSC is not the opposite pole of INDSC. An SC-incongruent ad type seems likely to represent an extreme mismatch if an individual had a higher score on one self and zero or near zero score on the other self. However, this case does not appear in this data set and may be rare in general (Singelis 1994). As a consequence, the fact that this dissertation observed that ads with SC-incongruent appeal were more persuasive than ads with SC-congruent appeal may be due to the affect enhancing impact of moderate incongruity.

Meyers-Levy and Tybout (1989) suggest that the additional cognitive effort that is required to resolve moderate incongruity may augment positive affect. In fact, several studies (Heckler and Childer 1992; Houston, Childers, and Heckler 1987; Meyers-Levy and Tybout 1989; Sujan, Bettman, and Sujan 1986) demonstrate that, when presented
with information that is somehow incongruent with prior expectation or schemata, consumers will engage in more effortful or elaborative ad processing.

Three studies specifically examine the impact of congruity versus incongruity in a cross-cultural context and consistently report the evidence supporting the argument that incongruity increases ad message elaboration (Aaker and Williams 1998; Leach and Liu 1998; Alden, Staymen, and Hoyer 1994). Specifically, Aaker and Williams's (1998) study reports that ego-focused (e.g. pride, happiness) versus other-focused (e.g. empathy, peacefulness) emotional ad appeals lead to more favorable attitudes for collectivists while other-focused vs. ego-focused emotional appeals lead to more favorable attitudes for individualist. That is, culture-incongruent emotional appeals appear to be more persuasive than culture-congruent emotional appeals. In addition, they also found that greater elaboration of ads with culture-incongruent (vs. culture-congruent) emotional appeals accounts for the findings.

Leach and Liu (1998) report that for Taiwanese who are more independent minded, exposure to group-relevant information in an ad message activates inner conflict, which leads to the allocation of more cognitive effort to centrally process an ad. These findings support theory predicting that incongruity between one's disposition and ad stimuli triggers elaborated thought. Alden et al.(1994) report that incongruence from product category expectation results in more elaborative information processing for both American and Thai research subjects.

Their incongruity effect has been found to be moderated by some variables. Peracchio and Tybout (1996) report the moderating role of prior knowledge. Specifically,
they found that the effect is obtained when consumers have limited knowledge about the product category but not when consumers possess elaborate knowledge about the category. NFC may be another variable that sets a boundary of this incongruity effect. Maheswaran and Chaiken (1991) examine the influence of incongruent information on processing by consumers with low versus high motivation. They find that subjects in high motivation settings exhibited a great deal of information elaboration regardless of congruency. However, subjects in low motivation settings process information more effortfully when they are exposed to incongruent information. Since NFC indicates the intrinsic motivation to process information, it is likely that the pattern from Maheswaran and Chaiken’s (1991) findings will be extended to consumers with high vs. low NFC. Specifically, it is possible that incongruity between ad format and SC will increase ad message elaboration for low NFC but not for high NFC. And this higher level of ad elaboration will result in more persuasiveness for ads with SC-incongruent appeals for low NFC consumers. That is, ad involvement or elaboration is expected to mediate the impact of the incongruity between ad format and SC on ad persuasiveness.

**Hypothesis**

**H4: Higher ad involvement mediates the impact of the incongruity between ad format and SC on ad persuasiveness for low NFC consumers but not for high NFC consumers.**
Results

Before running regression to directly test the mediation of ad involvement, a 3-way ANOVA with ad format X INDSC X NFC as predictors and ad involvement as a dependent variable was employed to examine if the three predictors have any interaction effect on involvement.

Table 13 displays cell means and statistical significance levels of the results in both cultures. Overall, in both cultures, the 3-way interaction of Ad format X INDSC X NFC similarly affected involvement. Specifically, for low NFC consumers with low INDSC, IC ads (vs. NC ads) evoked higher ad involvement. But for low NFC consumers with high INDSC, NC ads (vs. IC ads) evoke higher ad involvement. For consumers with high NFC, IC ads (vs. NC ads) evoked higher ad involvement regardless of self-construal.

To examine this post-hoc hypothesis, a mediation test was conducted on the reverse relationship predicted in H2. With the purpose of exploring the underlying
mechanism that may explain the unpredicted results that were in the opposite direction of what was predicted, a series of regressions were conducted using each of 5 persuasion measures as the dependent variable. Therefore 5 sets of regressions were conducted for low NFC consumers for the utilitarian product ads in each country following Baron and Kenny’s (1986) guideline. Table 14 displays standardized beta coefficients and other relevant statistical values from regression analyses. Because the results from the five dependent measures are largely consistent, only $A_{b(r)}$ will be illustrated. The results from the other four dependent measures were significantly at least at .05 level.

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Insert Table 14 about here

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Consumers with low NFC

*Utilitarian product-US*

1. The predictor variable Ad format X INDSC, taken by itself, had a strong effect on the mediator, ad involvement ($\beta = -2.77, p \leq .01$). That is, for low INDSC consumers, IC ad format (vs. NC) elicited higher ad involvement. For high INDSC consumers, NC ad format (vs. IC) elicited higher ad involvement.

2. Ad format X INDSC exhibited a strong relationship to the dependent variable $A_{b(r)}$ ($\beta = -3.35, p \leq .01$). Low INDSC consumers preferred IC to NC ads, and high INDSC consumers preferred NC to IC ads.

3. Ad involvement significantly affected $A_{b(r)}$ ($\beta = .60, p \leq .01$) That is, the more involved consumers were with the ad, the more persuasive the ad was.
4. Ad involvement was significant ($\beta = .53, p \leq .01$) as was ad format X INDSC ($\beta = -1.79, p \leq .05$) in a model that included both ad format X INDSC and ad involvement, indicating partial mediation. It may be concluded that Ad format X INDSC did have some direct effect on $A_{b(t)}$ that was not completely mediated by ad involvement. The squared partial correlation (i.e., squared beta coefficient) indicating the effect of Ad format X INDSC on $A_{b(t)}$ dropped by 71% when ad involvement was included in the regression equation ($\beta$ [before inclusion] = -3.35, $p \leq .01$; $\beta$ [after inclusion] = -1.79, $p \leq .05$). These results indicate that the effects of SC-incongruent ad format on $A_{b(t)}$ operated through viewer's involvement with ads rather than directly. Ad involvement also partially mediated the impact of ad format X INDSC on $A_{b(n)}$, $P_{I(n)}$ and $P_{I(t)}$. However, for $A_{ad}$, ad involvement was significant, but ad format X INDSC was not significant in a model that included both ad format X INDSC and ad involvement, indicating full mediation.

In summary, ad involvement fully mediated the effects of Ad format X INDSC on $A_{ad}$ and substantially mediated the effects of Ad format X INDSC on the other four persuasion measures.

Utilitarian product-Thailand

1. Similar to the results from the US data, the predictor variable Ad format X INDSC, taken by itself, had a strong effect on the mediator, ad involvement ($\beta = -2.65, p \leq .01$).

2. Similar to the results from the US data, Ad format X INDSC exhibited a strong relationship to the dependent variable $A_{b(t)}$ ($\beta = -2.81, p \leq .01$).
3. Similar to the results from the US data, ad involvement significantly affected $A_{b(r)}$ ($\beta = .52, p \leq .01$).

4. Ad involvement was significant ($\beta = .47, p \leq .01$) as was ad format X INDSC ($\beta = -1.60, p \leq .01$) in a model that included both ad format X INDSC and ad involvement, indicating partial mediation. It may be concluded that Ad format X INDSC did have some direct effect on $A_{b(r)}$ that was not completely mediated by ad involvement. The squared partial correlation (i.e., squared beta coefficient) indicating the effect of Ad format X INDSC on $A_{b(r)}$ dropped by 68% when ad involvement was included in the regression equation ($\beta$ [before inclusion] = -2.81, $p \leq .01$; $\beta$ [after inclusion] = -1.60, $p \leq .05$). These results indicate that the effects of SC-incongruity ad format on $A_{b(r)}$ operated through viewer's involvement with ads rather than directly. Ad involvement also partially mediated the impact of ad format X INDSC on $A_{ad}$ and $PI_{(r)}$. However, for $A_{b(n)}$ and $PI_{(n)}$, ad involvement was significant, but ad format X INDSC was not significant in a model that included both of ad format X INDSC and ad involvement, indicating full mediation.

In summary, ad involvement fully mediated the effects of Ad format X INDSC on $A_{b(n)}$ and $PI_{(n)}$ and substantially mediated the effects of Ad format X INDSC on $A_{ad}$, $A_{b(r)}$ and $PI_{(r)}$. 
Consumers with high NFC

**Utilitarian product-US**

The variable Ad format X INDSC did not significantly affect ad involvement ($\beta = .065$, $t = .14$, $p > .1$). Since this first condition of mediation was not met, further analysis of mediation was not conducted.

**Utilitarian product -Thailand**

Similar to the result from the US data, the variable Ad format X INDSC did not significantly affect ad involvement ($\beta = .241$, $t = .77$, $p > .1$). Since this first condition of mediation was not met, further analysis of mediation was not conducted.

**Overall Mediation Analysis Summary**

Because ad involvement was found to either fully or substantially mediate the impact of Ad format X INDSC on dependent measures for low NFC consumers but not for high NFC consumers, H4 was thus supported.

**Unhypothesized but significant relationships**

There are a number of significant findings which were not originally hypothesized. Table 15 and Table 16 summarize significant relationships which consistently occur with all or most dependent measures for utilitarian product ads and hedonic product ads, respectively.

There is a main effect of ad format (where IC ads were more persuasive than NC ads) for utilitarian product ads in both cultures and for hedonic product ad in the US but not in Thailand. There is a main effect of NFC for hedonic product ads with US subjects
only. That is, low-NFC consumers (vs. high-NFC consumers) found ads to be more persuasive. There is a significant interaction effect of ad format X NFC for utilitarian product ads in both countries. Specifically, low-NFC consumers found IC and NC ads to be equally persuasive. High-NFC consumers, on the contrary, found IC ads more persuasive than NC ads.

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CHAPTER 8
DISCUSSION, CONTRIBUTIONS AND FUTURE RESEARCH

Discussion and Contributions

The primary purpose of this dissertation was to examine the moderating role of an individual level culture factor, SC, and an individual difference personality factor, NFC, on the relative persuasiveness of comparative ads versus NC ads. Overall, the results from experiments in both the US and Thailand demonstrated that culture played an important role in comparative ad persuasiveness for one of the two product categories tested. However, the role of culture itself was further moderated or limited by another factor which, in this case, was NFC. That is, for low NFC consumers, the persuasiveness of comparative ads was influenced by their SC. However, this was not the case for high NFC consumers. Specifically, the findings from both US and Thai studies consistently indicated that low NFC consumers found SC-incongruent ads for a utilitarian product or toothpaste (but not a hedonic product or candy) to be more persuasive than SC-congruent ads. That is, low NFC-consumers with low INDSC found IC ads to be more persuasive than NC ads. Conversely, low NFC consumers with high INDSC found NC ads to be more persuasive than IC ads. However, for high NFC consumers who possessed a higher level of motivation to process ad messages, the cultural impact was muted. In other words, high NFC consumers, regardless of their SCs, found IC ads to be more persuasive than NC ads. Because the findings within low NFC consumers were opposite to what was
predicted, ad hoc analyses were conducted to shed light on the results. A set of mediation analyses indicated that higher involvement evoked by the SC-incongruent ad type was responsible for the findings within low NFC consumers.

This dissertation made contributions to existing consumer theories in several ways. First, it was the first study to directly examine the role of culture at an individual level on the persuasiveness of comparative ads. Although numerous content-analytic studies report the differences in the extent to which comparative ads are used in the US versus other parts of the world, these studies do not directly examine the persuasiveness of such ads. In addition, although two experimental studies (Jeon and Beatty 2002; Donthu 1998) were conducted in a cross-cultural context, no direct measures of cultural influence at an individual level were employed. As a consequence, several other factors in addition to culture might have influenced their findings. This dissertation specifically addresses and provides empirical support for the role of culture-associated SC on comparative ad persuasiveness.

Another contribution is the identification of an individual difference personality factor influencing the role of culture. The conditions under which culture matters have been examined by consumer researchers. However, those studies have focused on situational factors such as the manipulation of personal relevance. An individual difference personality factor such as NFC has not been examined as a moderating factor of cultural influence. Cultural preferences of ad appeals may depend on the elaboration of the ad messages. That is, under high elaboration of information processing (e.g., high NFC), the incongruity effect between culture and ad appeal disappears. In fact, these
findings are in line with what was reported in Aaker’s (2000) research paper. In that study, when subjects’ cognitive elaboration was enhanced by giving two (vs. one) exposures to the ad message, cultural preference towards certain types of ad appeal diminished.

This dissertation also sheds light on psychological mechanisms underlying the superiority of SC-incongruent ad type (high INDSC/NC ads and low INDSC/IC ads) in low NFC consumers. Specifically, the findings suggest that SC-incongruent ad type evoke higher levels of involvement from low NFC consumers and that this type of ad becomes more persuasive. This research, therefore, also makes a contribution to the incongruity effect literature by offering the incongruity between SC and ad stimulus as an alternative approach to define congruity. Previous studies in this field often operationalized levels of congruity through the match of product category and product attribute (e.g., Meyers-Levy and Tybout 1989; Stayman, Alden, and Smith 1992) or the match between verbal and visual information (e.g., Houston, Childers, and Heckler 1987).

Furthermore, this dissertation contributes to the INDCOL literature by studying Thailand as an example of collectivist cultures. As argued by Oyserman et al. (2002), INDCOL is disproportionately studied in four Asian cultures (i.e., Japan, Korea, PR China and Hong Kong). The findings from Thai subjects will explain how similar or different various collectivist cultures are.

Although the role of product category types (utilitarian vs. hedonic) was not formally predicted and incorporated into the study. The hypothesized relationships of ad
format types, INDSC and NFC gain support for utilitarian product ads but not for hedonic product ads. This discrepancy suggests the moderating role of product category types which were not explicitly taken into account in this dissertation. Through a series of pretests, toothpaste and candy were found to be similar in several aspects in both countries. They are both identified as relevant to college students. Moreover, they were rated as similar in terms of product familiarity and product involvement. The only difference between these two products, which were captured by the pretest, was product category types in terms of utilitarianism versus hedonism. In fact, the difference in product category types was the very reason for having two products in the study. That is, the use of two products was initially expected to increase the generalizability of the findings. However, it appears that the generalizability of this study is limited to ads for utilitarian products.

There are a few studies that report the roles of product characteristics in comparative ad effectiveness. As mentioned in the conceptual section, Putrevu and Lord (1994) report that comparative ads elicit more favorable brand attitudes when products are concurrently cognitive-involving and affective-involving. However, NC ads produce more favorable brand attitudes when affective involvement alone is high rather than low. Gorn and Weinberg (1983) find a relative advantage of comparative ads over NC ads in provoking more favorable $A_b$ for toothpaste but not for golf balls. Although the authors do not offer an explanation for this inconsistency, it is possible that product nature might account for the discrepancy, i.e., golf balls seem likely to be perceived as more hedonic while toothpaste more utilitarian.
The diversity of the products used in previous comparative ad studies affects the generalization of results from a particular product category to a somewhat broader group (Goodwin and Etgar 1980). In their study, the interaction effect of product types and ad formats were reported for two dependent measures. First, for a utilitarian product (i.e., cold remedy), IC ads (vs. NC ads) were perceived as providing greater extent of product knowledge. However, for a social product (i.e., beer), IC and NC ads were not perceived as different in enhancing product knowledge. Second, for a utilitarian product (i.e., cold remedy), IC ads (vs. NC ads) elicited more favorable ad personality. However, for a social product (i.e., beer), IC and NC ads were not different in eliciting favorable ad personality. The results indicated the interaction of ad format X product characteristics in which differences in dependent measures exist for utilitarian products but not for social products. A clear pattern develops from here. That is, the use of comparative ads versus NC ads matters in ads for a utilitarian product (cold remedy) but not a hedonic product (beer).

It is possible that hedonic products such as candy may not lend itself to the examination of relative persuasiveness of comparative vs. NC ads. In fact, a review of literature reveals that no single empirical study employed candy as a focal product while toothpaste, as the second most widely used product after cold remedy, was used by at least eight studies. It should be noted that the two most commonly used products in comparative advertising research (cold remedy and toothpaste) are obviously utilitarian.

In addition to the above contributions, several other study-related issues of the results are worth noting. First, it may seem unexpected that the results from the US and
Thai data were largely consistent. A number of studies suggest that an individual-level variable (e.g., SC) will outperform a culture-level variable (e.g., INDCOL) in explaining differences in outcome measures. For example, Cialdini et al. (1999) compare idiocentrism and allocentrism across IND (US) and COL (Polish) cultures to study compliance with a request to participate without pay in a marketing survey. They observe that participants responded in accordance with their personal INDCOL orientation rather than to the dominant cultural orientation. That is, irrespective of nationality, collectivists are more influenced by their peers’ compliance histories (vs. their own compliance histories) and individualists are more influenced by their own compliance histories (vs. their peers’ compliance histories). Similarly, Gudykunst et al. (1996) report that the individual-level factor (i.e., SC) is a better predictor of low- and high-context communication styles across cultures than the culture-level INDCOL. Therefore, it is possible that the use of SC as well as NFC in this dissertation may overshadow the cultural influence of INDCOL.

Second, the results from this dissertation provide a partial replication of Jeon and Beatty’s (2002) findings. In their studies, IC ads were more persuasive than NC ads in both the US (an individualist culture) and Korea (a collectivist culture). This dissertation demonstrates a similar result. That is, IC ads were more persuasive than NC ads in both the US (an individualist culture) and Thailand (a collectivist culture). This similar pattern suggests a theoretical and managerial implication. Specifically, comparative ads may not be regarded by collectivists as negative as previously thought. In fact, this finding may suggest that current marketing practice may not reflect the best or optimal strategy in a
given culture. As a consequence, if law permits, an advertising practitioner may consider using comparative ads (at least IC) in a culture where it is relatively uncommon. Moreover, although Jeon and Beatty (2002) suggest a novelty effect (less familiar ad appeals increase motivation to process ad messages and this increased elaboration make the less familiar ad appeals more persuasive) to account for their findings, they do not directly test for this explanation. This dissertation, hence, provides partial support for the novelty effect, however, only for low NFC consumers, where increased consumers’ involvement with the ad message which is incongruent with ones’ self-construal leads to more persuasiveness.

Third, the results from this dissertation and Jeon and Beatty’s are nonetheless at odds with a number of content-analytic studies reviewed in the conceptual section of this dissertation. Specifically, those advertising studies (e.g., Mueller 1987, 1992; Moon and Franke 1987) consistently report the relatively less prevalent use of comparative ads in collectivist cultures including Japan and Korea. This discrepancy, however, may suggest a methodological implication. It is possible that empirical findings from different methods such as ad content analysis versus experiment might yield different results. For example, Moon and Franke (1987) report that Korean magazine ads are more informative and less image-oriented than US ads, while an experiment conducted by Taylor, Miracle, and Wilson (1997) find that Koreans prefer high-context and less information-oriented ads than Americans do. Taylor et al. (1997) propose that content analyses may reflect what is available in an actual environment. Experimental studies, on the other hand, generally try to examine cause and effect in a tightly controlled environment which may
or may not exist in a real setting. Because of the differences in the nature of these two approaches, conflicting results are thus possible.

Fourth, only INDSC, but not INTSC, influenced comparative ad persuasiveness. In general, the literature on self-construal suggests that these two selves have different, often opposite, impacts on dependent measures. However, the lack of effects for INT can be considered informative. It indicates discriminant validity for the two SCs (Singelis and Brown 1995). If INDSC and INTSC were simply bipolar opposites, these two SCs would be equally and inversely related to the outcome variables.

Fifth, another interesting notable issue regarding SC is the findings that INDSC and INTSC are not correlated in the US but positively correlated in Thailand. One possible explanation for the significance of the correlation between INDSC and INTSC in the Thai data might be due to its larger sample size as it is suggested in statistical literature that a large sample increases the likelihood of detecting a difference (Kerlinger and Lee 2000). However, this positive correlation of the two SCs has also been reported in other studies that involve Asian research subjects (e.g. Kwan et al. 1997; Lee and Kacen 1999, Polyorat et al. 2003). In fact, the correlations reported in Lee and Kacen (1999) (r = .34 and .49, p ≤ .001) is even higher than what was found in this dissertation (r = .295, p ≤ .01). As a consequence, the positive correlation of the two SCs in this dissertation should not come from a larger sample size but should come from the fact that the two SCs are actually correlated in Asian cultures. The antecedents of this phenomenon, however, remain uncovered and thus warrant further examination.
The sixth noteworthy finding is the lack of difference between the results from the use of relative versus non-relative persuasion measures. That is, the results from relative and nonrelative measures mirrored each other. The correlations between the two types of measures were high, varying between .63 - .91. Results from factor analysis also indicated similar results. That is, a single dominant factor emerged from factor analyzing Ab(n) and Ab(r), items and Pi(n), and Pi(r) items in both the US and Thailand. In all cases, the single dominant factor account for at least 66% of the total variance. The similarity between the results from the two types of measure might intuitively suggest either the measures' insensitivity to the influences of the two types of ads or subjects' insensitivity to the difference between the two types of measures. Based on the data available in this dissertation, however, it is impossible to answer this intuitive speculation. There is, nevertheless, one remarkable difference in the stimuli types used in this dissertation and previous literature. All of the previous studies reporting the superiority of relative measures over nonrelative measures in detecting comparative ad persuasiveness exclusively used DC ads (Miniard et al. 1993, 1994, 1998; Rose et al. 1993). This dissertation, in contrast, used IC ads. While DC ads make explicit reference by mentioning the name of a competitive brand, IC ads, on the other hand, do not mention any specific comparison brand(s) but compare the focal brand with an unnamed brand or the category in general. As a consequence, it could be possible that, for IC ads which do not provide a concrete reference point as in the case of DC ads, relative measures may not necessarily outperform nonrelative measures. More studies which purposefully examine this issue are obviously needed. In particular, the design for such studies calls
for incorporating both types of comparative ads (DC and IC) and both types of persuasion measures (relative and nonrelative) in the same experiment.

**Future Research**

This dissertation, nevertheless, has several limitations which suggest avenues for future research. First, the dissertation employed college students as research subjects. Additional research to examine the generalizability of the findings with other groups of consumers is clearly needed. Second, this dissertation focused on persuasiveness as a primary dependent measure. Therefore, other aspects of comparative ad effectiveness in a cross-cultural context remain unknown. Future studies may consider including other dependent measures such as recall, cognition, and behavior or actual sales. Third, this dissertation used NFC as a method to operationalize levels of motivation to process ad messages. However, an advertising practionner may seek an alternative way of operationalizing involvement which is under more control. Therefore, future replication with different approaches of operationalizing involvement is encouraged. These approaches may include the use of single versus double or multiple ad exposure (Aaker 2000) and the ending of ad message with rhetorical questions (rather than simple statements) which is suggested to increase thinking about persuasive messages (Petty and Wegener 1998).

Fourth, the finding that the impact of culture (INDSC in this dissertation) exists under low involvement condition but not under high involvement condition is consistent
with what was reported in Aaker’s (2000). In addition, the higher level of ad involvement elicited by SC-incongruent ad format is consistent with Aaker and Williams’s (1998) findings. This dissertation incorporates the two findings into a single study and thus identifies the outcome of being exposed to SC-congruent versus SC-incongruent ad format. There might be, nevertheless, one seeming contradiction in the results. That is, when low NFC consumers are exposed to SC-incongruent ad format, should the higher level of ad involvement not result in the attenuation of the cultural variable (INDSC)? In other words, why did the cultural impact not disappear after consumers became more involved with the ad? It is possible that the answer to this question lies in the different sources of involvement. The cultural impact was muted in Aaker’s (2000) when subjects received two (vs. one) ad exposures and when subjects are high NFC consumers in this dissertation. Two exposure and high NFC share the similarity in the sense that the involvement is already there; either manipulated by researchers and/or being person-specific. That is, consumers already possess high level of involvement before they process the ads. The higher level of involvement in Aaker and Williams’s (1998) and in low NFC consumers in this dissertation, in contrast, are naturally derived by being exposed to ad stimuli and reflects consumers’ response to ad exposure. In addition, the process by which the higher level of involvement is achieved involves an attempt to resolve incongruity and this process prompts greater positive affect. As a consequence, the SC-incongruent (vs. SC-congruent) ad appeal becomes more persuasive. In summary, the explanation for the seemingly self-contradictory research findings is the different
sources or natures of involvement. Future research, however, is needed to verify this explanation.

In addition, because this dissertation employed only IC and NC ads, future studies should include DC ads in the design to examine if the explicit mention of a comparison’s brand systematically affects the results. Finally, the relatively low reliabilities of Singelis’s (1994) SCS in this dissertation may weaken the robustness of the findings. However, since Singelis’s (1994) SCS is often found to have reliabilities less than .7, other SC scales such as Leung and Kim’s (1997) may be an option. Although the scale itself has not been published and has never been used in consumer research, it appears to possess high reliability. For example, Kim et al. (2000) report the scale’s reliabilities of .76-.90 in the US and Hong Kong. Another alternative to measuring SC is to use a different method of SC operationalization such as priming. For example, Mandel (2003) recently reports that consumers whose INTSC were primed (vs. those whose INDSC were primed) were more risk-seeking in financial choices but less risk-seeking in social choices. It is speculated that those with the SC priming should yield similar results to the measurement of SC.

Although comparative advertising has been widely used in the US for several years, it is much less common in other countries. As a consequence, additional research in a cross-cultural setting is urgently needed to develop a pancultural framework of how comparative ads work.
APPENDIX A

MEASURES

SELF-CONSTRUAL SCALE

1. I enjoy being unique and different from others in many respects.
2. I can talk openly with a person who I meet for the first time, even when this person is much older than I am.
3. Even when I strongly disagree with group members, I avoid an argument.
4. I have respect for the authority figures with whom I interact.
5. I do my own thing, regardless of what others think.
6. I respect people who are modest about themselves.
7. I feel it is important for me to act as an independent person.
8. I will sacrifice my self interest for the benefit of the group I am in.
9. I'd rather say "No" directly, than risk being misunderstood.
10. Having a lively imagination is important to me.
11. I should take into consideration my parents' advice when making education/career plans.
12. I feel my fate is intertwined with the fate of those around me
13. I prefer to be direct and forthright when dealing with people I've just met.
14. I feel good when I cooperate with others.
15. I am comfortable with being singled out for praise or rewards.
16. If my brother or sister fails, I feel responsible.
17. I often have the feeling that my relationships with others are more important than my own accomplishments.
18. Speaking up during a class (or a meeting) is not a problem for me.
19. I would offer my seat in a bus to my professor (or my boss).
20. I act the same way no matter who I am with.
21. My happiness depends on the happiness of those around me.
22. I value being in good health above everything.
23. I will stay in a group if they need me, even when I am not happy with the group.
24. I try to do what is best for me, regardless of how that might affect others.
25. Being able to take care of myself is a primary concern for me.
26. It is important to me to respect decisions made by the group.
27. My personal identity, independent of others, is very important to me.
28. It is important for me to maintain harmony within my group.
29. I act the same way at home that I do at school (or work).
30. I usually go along with what others want to do, even when I would rather do something different.

NEED FOR COGNITION SCALE

1. I would prefer complex to simple problems.
2. I like to have the responsibility of handling a situation that requires a lot of thinking.
3. Thinking is not my idea of fun.
4. I would rather do something that requires little thought than something that is sure to challenge my thinking abilities.
5. I try to anticipate and avoid situations where there is a likely chance I will have to think in depth about something.
6. I find satisfaction in deliberating hard and for long hours.
7. I only think as hard as I have to.
8. I prefer to think about small, daily projects to long-term ones.
9. I like tasks that require on thought to make my way to the top appeals to me.
10. The idea of relying on thought to make may way to the top appeals to me.
11. I really enjoy a task that involves coming up with new solutions to problems.
12. Learning new ways to think doesn’t excite me very much.
13. I prefer my life to be filled with puzzles that I must solve.
14. The notion of thinking abstractly is appealing to me.
15. I would prefer a task that is intellectual, difficult, and important to one that is somewhat important but does not require much thought.
16. I feel relief rather than satisfaction after completing a task that required a lot of mental effort.
17. It's enough for me that something gets the job done: I don't care how or why it works.
18. I usually end up deliberating about issues even when they do not affect me personally.
MANIPULATION CHECK

From the ad copy your read, please indicate whether the ad (choose only one answer)

A explicitly compares the advertised brand with a competing brand
B implicitly compares the advertised brand with another unnamed brand (e.g, by using the word the “leading brand”, “number 1 brand”
C does not make comparison with any other brand.

If A – which brand ________________

DEPENDENT MEASURES

Attitude towards Ad
Only Nonrelative Measures
Is the ad ____?
(7-point Likert type; offensive, believable, useful, informative, clear, likable, convincing)

Attitude towards Brand
Nonrelative Measures
My opinion of (the sponsoring brand) is _____.
(very unfavorable=1, very favorable=7)
(very negative=1, very positive=7)
Relative Measures
Compared to (the comparison brand),
My opinion of (the sponsoring brand) is _____.
(more unfavorable=1, more favorable=7)
(more negative=1, more positive=7)

Purchase Intention
Nonrelative Measure
How likely is it that you would buy (the sponsoring brand) if you wanted a (product category)?
(very unlikely=1, very likely=9)
Relative Measure
How likely is it that you would buy (the sponsoring brand) instead of (the comparison brand) if you wanted a (product category)?
(most likely to buy (the sponsoring brand)=1, most likely to buy (the advertising brand)=9)
ANCILLARY VARIABLES

Ad Credibility

Please indicate the extent to which the information is the ad was ________.

(undependable=1, dependable=7)
(dishonest=1, honest=7)
(unreliable=1, reliable 7)
(insincere=1, sincere=7)
(untrustworthy=1, trustworthy=7)

Ad Involvement

1. How much attention did you pay to the ad?
(No attention at all=1, A lot of attention=7)
2. How involved were you with the ad?
(Not involved at all=1, Very involved=7)
3. How interested were you as you read the ad?
(Not interested at all=1, Very interested=7)

Product Familiarity

1. How familiar are you with (product category)?
(Not familiar at all=1, Extremely familiar=7)
2. How familiar are you with features of (product category)?
(Not familiar at all=1, Extremely familiar=7)

Product Involvement

For me, (product category) are ______.
(Uninterested =1, Interested =7)
(Boring=1, Interesting=7)
(Appealing=1, Unappealing=7)
(Unexciting=1, Exciting=7)
(Mundane=1, Fastinating=7)

Product Characteristics

1. Would you characterize (product category) as primarily a functional product or an entertainment/enjoyable product?
(primarily for functional use=1, primarily for entertainment/enjoyable use=7)
2. Please consider whether (the product category) is practical product or pleasure-oriented product.
(Practical products involves goal-oriented consumption. Something which one ordinarily buys to carry out a necessary function or task in one’s life. Pleasure-oriented product is something fun and experiential.
(Primary a practical product=1, Primary a pleasure-oriented product=7)
Why should you choose DentiFresh the next time you shop for toothpaste?

Taste
Recent tests conducted by a marketing research firm find that 9 out of 10 consumers like the refreshing taste of DentiFresh. You can be confident about your fresh breath after using DentiFresh.

Cleaning Ability
Independent clinical tests document DentiFresh’s cleaning ability – DentiFresh removes plaque!

Powerful whiteners
Another clinical test demonstrates that DentiFresh is effective in removing stains from your teeth.

Color
DentiFresh is available in a variety of colors including: natural white, green, blue, and pink.

DentiFresh: Toothpaste for Today’s Consumers!
Why should you choose *DentiFresh* instead of the leading brand the next time you shop for toothpaste?

**Taste**
Recent tests conducted by a marketing research firm have shown that 9 out of 10 consumers prefer the refreshing taste of DentiFresh over the taste of the leading brand. You can be more confident about your fresh breath with DentiFresh than with the leading brand.

**Cleaning Ability**
Independent clinical tests document DentiFresh’s cleaning ability – DentiFresh removes more plaque than the leading brand.

**Powerful whiteners**
Another clinical test demonstrates that DentiFresh is 20% more effective than the leading brand in removing stains from your teeth.

**Color**
DentiFresh is available in a greater variety of colors than the leading brand, including natural white, green, blue, and pink.

DentiFresh: Toothpaste for Today’s Consumers!
Fruitasty is the candy for you. Here are 5 reasons why.

Taste
A consumer research firm reports that most consumers like the sweetness and scent of fruity, chewy Fruitasty candies.

Packaging
Each Fruitasty candy is carefully wrapped. Research indicates that our wrapper maintains taste and freshness for a long period of time.

Price
Fruitasty candies are inexpensive. College students find them a good bargain.

Color
Fruitasty candies are available in a variety of beautiful natural colors.

Size
Another independent study reports that 8 out of 10 consumers like the size of Fruitasty candies.

Fruitasty: Candy for you!
CANDY (COMPARATIVE)

Fruitasty is the candy for you.
Here are 5 reasons why.

Taste
A consumer research firm reports that most consumers prefer the sweetness and scent of fruity, chewy Fruitasty candies over the leading brand.

Packaging
Each Fruitasty candy is carefully wrapped. Research indicates that our wrapper maintains taste and freshness longer than the wrapper of the leading brand.

Price
Fruitasty candies are 30% less expensive than the leading brand. College students find them a good bargain.

Color
Fruitasty candies are available in a greater variety of beautiful natural colors than the leading brand.

Size
Another independent study reports that 8 out of 10 consumers prefer the size of Fruitasty candies over the size of the leading brand.

Fruitasty: Candy for you!
### APPENDIX C
### TABLES

#### TABLE 1
THE EFFECTS OF COMPARATIVE/NONCOMPARATIVE ADS ON MAJOR DEPENDENT MEASURES

<table>
<thead>
<tr>
<th>Dependent Measure</th>
<th>Study</th>
<th>Finding</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cognition</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Recall</td>
<td>Donthu (1992)</td>
<td>Recall increases as the comparative intensity increases</td>
</tr>
<tr>
<td></td>
<td>Muehling et al. (1990)</td>
<td>Comparative ads generate more recall than NC ads</td>
</tr>
<tr>
<td></td>
<td>Pechman and Stewart (1991)</td>
<td>For brands with low or high marketing share, comparative ads generate more recall than NC ads, but no difference for brands with moderate market share.</td>
</tr>
<tr>
<td></td>
<td>Murphy and Amundsen 1981;</td>
<td>Comparative ads do not generate more recall than NC ads.</td>
</tr>
<tr>
<td></td>
<td>Shimp and Dyer 1978</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Gotlieb and Sarel (1991)</td>
<td>No effects of ad types</td>
</tr>
<tr>
<td>Involvement</td>
<td>Muehling et al. (1990)</td>
<td>Comparative ads generate, greater attention to the message content, more message elaboration, thus higher level of involvement with the message than NC ads</td>
</tr>
<tr>
<td>Nature of information processing</td>
<td>Johnson and Horne (1988)</td>
<td>Comparative ads primarily produce an association of the sponsoring brand with the comparison brand.</td>
</tr>
<tr>
<td></td>
<td>Pechman and Ratneshwar (1991)</td>
<td>Comparative ads produce both associative and disassociative information processing</td>
</tr>
</tbody>
</table>
### TABLE 1 (CONTINUED)

**THE EFFECTS OF COMPARATIVE/NONCOMPARATIVE ADS ON MAJOR DEPENDENT MEASURES**

<table>
<thead>
<tr>
<th>Dependent Measure</th>
<th>Study</th>
<th>Finding</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Affect</strong></td>
<td>Manning et al. (2001)</td>
<td>Comparative ads primarily produce disassociative information processing</td>
</tr>
<tr>
<td>Attitude towards ad</td>
<td>Neese and Taylor (1994)</td>
<td>Comparative ads produce more positive ( A_{ad} ) than NC ads</td>
</tr>
<tr>
<td></td>
<td>Belch (1981); Gorn and Weinberg (1984)</td>
<td>Comparative ads produce less positive ( A_{ad} ) than NC ads</td>
</tr>
<tr>
<td></td>
<td>Pechmann and Ratneshwar (1991)</td>
<td>No difference between DC and IC ads</td>
</tr>
<tr>
<td>Attitude towards brand</td>
<td>Miniard et al. (1994)</td>
<td>Comparative ads produce more positive ( A_{b} ) than NC ads</td>
</tr>
<tr>
<td></td>
<td>Neese and Taylor (1994)</td>
<td>No difference between comparative ads and NC ads</td>
</tr>
<tr>
<td></td>
<td>Gorn and Weinberg (1983)</td>
<td>Comparative ads produce more positive ( A_{b} ) than NC ads than NC ads than NC ads for toothpaste and cigarettes, but not golf balls.</td>
</tr>
<tr>
<td></td>
<td>Droge (1989)</td>
<td>( A_{ad} ) is a significant predictor for ( A_{b} ) only for NC ads, but not for DC ads. ( A_{b} )-Conation consistency is higher for DC ads.</td>
</tr>
<tr>
<td><strong>Intention and Behaviors</strong></td>
<td>Miniard et al. (1994); Gotlieb and Sarel (1991)</td>
<td>Comparative Ads produce more favorable purchase intention than NC ads.</td>
</tr>
<tr>
<td></td>
<td>Neese and Taylor (1994)</td>
<td>No difference between comparative ads and NC ads.</td>
</tr>
<tr>
<td>Dependent Measure</td>
<td>Study</td>
<td>Finding</td>
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<tr>
<td><strong>Moderators</strong> (CP vs. NC ads)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Product Characteristics</td>
<td>Putrevu and Lord (1994)</td>
<td>Comparative ads produce more positive $A_b$ when the products are both cognitive-involving and affective-involving. NC ads produce more positive $A_{ad}$ when the products are affective-involving.</td>
</tr>
<tr>
<td>Relative vs. nonrelative measures</td>
<td>Miniard et al. 1993, 1994,</td>
<td>Comparative ads are more persuasive than NC ads when relative measures are used.</td>
</tr>
<tr>
<td></td>
<td>Miniard et al. 1998</td>
<td>Relative measures are superior to nonrelative measures for measuring comparative ad effectiveness. Nonrelative measures are superior to relative measures for measuring NC ad effectiveness.</td>
</tr>
<tr>
<td>Source credibility</td>
<td>Gotlieb and Sarel (1991)</td>
<td>Comparative ads are more effective than NC ads when a high credibility sources is included. No effect of ad formats when a low credibility is included.</td>
</tr>
<tr>
<td>One- vs. two-sided message</td>
<td>Belch (1981)</td>
<td>There are no advantages of a two-sided message over a one-sided message for either comparative or NC ads.</td>
</tr>
<tr>
<td></td>
<td>Etgar and Goodwin (1982)</td>
<td>Two-sided comparative ads produce a more favorable $A_b$ and a more favorable PI than one-sided comparative ads.</td>
</tr>
<tr>
<td>Dependent Measure</td>
<td>Study</td>
<td>Finding</td>
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<td>--------------------------------------------------------</td>
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<td>--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td><strong>Moderators</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(DC vs. IC ads)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Consumers’ knowledge</td>
<td>Cowley (1998)</td>
<td>High vs. low knowledge consumers exhibit different levels of recognition accuracy and confidence for DC versus IC ads</td>
</tr>
<tr>
<td>Attribute typicality and brand familiarity</td>
<td>Pechmann and Ratneshwar (1991)</td>
<td>Attribute typicality and brand familiarity impact perceived similarity between sponsoring brands and comparisons brand differently for DC and IC ads. However, they have no impact on ad believability and ad likability.</td>
</tr>
<tr>
<td><strong>Marketing Share</strong></td>
<td>Pechman and Stewart (1991)</td>
<td>For brands with low or high marketing share, comparative ads generated more recall than NC ads, but there is no difference for brands with moderate market share.</td>
</tr>
<tr>
<td><strong>Cross-cultural Context</strong></td>
<td>Donthu (1998)</td>
<td>In all cultures, comparative ads produce more recall than NC ads. In western cultures, comparative ads produce more positive $A_{ad}$ than NC ads. In Asian culture, comparative ads produce less positive $A_{ad}$ than NC ads.</td>
</tr>
<tr>
<td>Jeon and Beatty (2002)</td>
<td></td>
<td>In western culture, IC are more persuasive (using $A_b$ and PI) than either DC or NC ads. In Asian culture, DC are more persuasive than either IC or NC ads.</td>
</tr>
</tbody>
</table>
### TABLE 2

THE EFFECTS OF INDCOL AND SELF-CONSTRUAL IN MARKETING RESEARCH

<table>
<thead>
<tr>
<th>Topic</th>
<th>Study</th>
<th>Finding</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Marketing Research in General</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Consumption as self-representation</td>
<td>Eckhardts and Houston (1998)</td>
<td>Self-representation through consumption is more widespread in a COL culture than in an IND culture</td>
</tr>
<tr>
<td></td>
<td>Eckhardts and Houston (2001)</td>
<td>In a COL culture, possessions’ meanings are almost wholly related to relationships, rather than utilitarian value, enjoyment, or self-expression.</td>
</tr>
<tr>
<td>Materialism</td>
<td>Wong (1997)</td>
<td>Materialism is positively correlated with individualism and negatively correlated with collectivism.</td>
</tr>
<tr>
<td></td>
<td>Webster and Beatty (1997)</td>
<td>Individualist consumers emphasize possessions that reflect the private self while collectivist consumers emphasize possessions that reflect the public self.</td>
</tr>
<tr>
<td>Sales promotion</td>
<td>Huff and Alden (1998)</td>
<td>In collectivist cultures, social normative factors have a stronger influence on attitude toward coupons and sweepstakes than what documented in individualist cultures.</td>
</tr>
<tr>
<td>Purchase Intention</td>
<td>Lee (2000)</td>
<td>Referent influences have stronger influence on purchase intention for allocentrics than for idiocentrics. However attitude toward purchase has stronger influence PI for idiocentrics than allocentrics</td>
</tr>
</tbody>
</table>
TABLE 2 (CONTINUED)
THE EFFECTS OF INDCOL AND SELF-CONSTRUAL IN MARKETING RESEARCH

<table>
<thead>
<tr>
<th>Topic</th>
<th>Study</th>
<th>Finding</th>
</tr>
</thead>
<tbody>
<tr>
<td>Advertising Research</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cognitive Responses to ad</td>
<td>Shavitt et al. 1997</td>
<td>Individualists focus more on product-related thoughts while collectivists focus more on ad-evaluation thoughts.</td>
</tr>
<tr>
<td>Ad persuasiveness</td>
<td>Han and Shavitt (1994)</td>
<td>Collectivist appeals are more persuasive in a collectivist culture while individualist appeals are more persuasive in an individualist culture.</td>
</tr>
<tr>
<td>Ad appeal</td>
<td>Wang and Chan (2001)</td>
<td>Ads with a connectedness theme are more common in a collectivist culture while ads with a separateness theme are more common in an individualist culture.</td>
</tr>
<tr>
<td>Humor</td>
<td>Alden et al. (1993)</td>
<td>Collectivist (individualist) cultures employ more humor ads with collectivist (individualist) themes.</td>
</tr>
<tr>
<td>Consumption Symbol</td>
<td>Aaker and Schmitt (2001)</td>
<td>Consumers with independent (interdependent) self prefer brands advertised in a differentiation (assimilation) frame. Recall of brand information is higher for schema-inconsistent information.</td>
</tr>
<tr>
<td></td>
<td>Aaker et al. (2001)</td>
<td>Peacefulness is a brand personality dimension specific to Japan while ruggedness is specific to the US.</td>
</tr>
</tbody>
</table>
### TABLE 3

**POSITIVE RELATIONSHIPS BETWEEN NFC AND VARIOUS INDIVIDUAL DIFFERENCES**

<table>
<thead>
<tr>
<th>Construct</th>
<th>Study</th>
<th>Correlation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ability to devote attentional process exclusively to any ongoing cognitive task</td>
<td>Osberg (1987)</td>
<td>$r = .37, p &lt; .01$</td>
</tr>
<tr>
<td>American College Test scores</td>
<td>Cacioppo and Petty (1982)</td>
<td>$r = .39, p &lt; .01$</td>
</tr>
<tr>
<td></td>
<td>Petty and Jarvis (1996)</td>
<td>$r = .20, p &lt; .01$</td>
</tr>
<tr>
<td>Attributional complexity</td>
<td>Fletcher et al. (1986)</td>
<td>$r = .36, p &lt; .001$</td>
</tr>
<tr>
<td>Cognitive innovativeness</td>
<td>Venkatraman et al. (1990)</td>
<td>$r = .40, p &lt; .05$</td>
</tr>
<tr>
<td>Desire for control</td>
<td>Thompson, Chaiken, and Hazlewood (1993)</td>
<td>$r = .48, p &lt; .001$</td>
</tr>
<tr>
<td>Number of years in education</td>
<td>Spott (1994)</td>
<td>$r = .43-.46, p &lt; .001$</td>
</tr>
<tr>
<td>Information style orientation in terms of a tendency to seek out and elaborate self-relevant information under problem solving conditions</td>
<td>Berzonsky and Sullivan (1992)</td>
<td>$r = .50, p &lt; .001$</td>
</tr>
<tr>
<td>Intelligence in terms of verbal reasoning</td>
<td>Cacioppo et al. (1986)</td>
<td>$r = .32, p &lt; .001$</td>
</tr>
<tr>
<td>Academic curiosity</td>
<td>Olson, Camp, and Fuller (1984)</td>
<td>$r = .68, p &lt; .05$</td>
</tr>
<tr>
<td>Intrinsic motivation to work</td>
<td>Amabile et al. (1994)</td>
<td>$r = .69, p &lt; .001$</td>
</tr>
<tr>
<td>Market maven tendency</td>
<td>Inman, McAlister, and Hoyer (1990)</td>
<td>$r = .36, p &lt; .001$</td>
</tr>
<tr>
<td>Need to evaluate</td>
<td>Jarvis and Petty (1996)</td>
<td>$r = .35, p &lt; .05$</td>
</tr>
</tbody>
</table>
### TABLE 3 (CONTINUED)

**POSITIVE RELATIONSHIPS BETWEEN NFC AND VARIOUS INDIVIDUAL DIFFERENCES**

<table>
<thead>
<tr>
<th>Construct</th>
<th>Study</th>
<th>Correlation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Objectivism or a tendency to base one's judgments and beliefs on the empirical information and rational considerations</td>
<td>Leary, Shepperd, McNeil, Jenkins, and Barnes (1986)</td>
<td>$r = .47, p &lt; .001$</td>
</tr>
<tr>
<td>Importance of personal value to one's identity</td>
<td>Berzonsky and Sullivan (1992)</td>
<td>$r = .38, p &lt; .01$</td>
</tr>
<tr>
<td>Tendency to perceive social issues as personally important</td>
<td>Thompson and Zanna (1995)</td>
<td>$r = .23, p &lt; .05$</td>
</tr>
<tr>
<td>Uncertainty orientation</td>
<td>Sorrentino et al. (1988)</td>
<td>$r = .20, p &lt; .001$</td>
</tr>
<tr>
<td>Preference for verbal versus visual style of processing</td>
<td>Childers, Houston, and Heckler (1985)</td>
<td>$r = .22, p$ not reported</td>
</tr>
<tr>
<td>Construct</td>
<td>Study</td>
<td>Correlation</td>
</tr>
<tr>
<td>--------------------------------------------------------------------------</td>
<td>------------------------------------</td>
<td>------------------------------------</td>
</tr>
<tr>
<td>Apprehension regarding interpersonal communication</td>
<td>Wycoff (1992)</td>
<td>r = -.33, p &lt; .05</td>
</tr>
<tr>
<td>Ambivalence</td>
<td>Thompson and Zanna (1995)</td>
<td>r = -.33-.44, p &lt; .001</td>
</tr>
<tr>
<td>Anxiety</td>
<td>Olson, Camp and Fuller (1984)</td>
<td>r = -.23-.27, p &lt; .05</td>
</tr>
<tr>
<td>Causal uncertainty or a chronic uncertainty concerning cause-and-effect relationship</td>
<td>Weary and Edwards (1994)</td>
<td>r = -.42, p &lt; .001</td>
</tr>
<tr>
<td>Tendency to ignore problems and self-relevant information</td>
<td>Berzonsky and Sullivan (1992)</td>
<td>r = -.35, p &lt; .01</td>
</tr>
<tr>
<td>Dogmatism</td>
<td>Cacioppo and Petty (1982)</td>
<td>r = -.23, p &lt; .05</td>
</tr>
<tr>
<td>External locus of control</td>
<td>Fletcher et al. (1986)</td>
<td>r = -.32, p &lt; .001</td>
</tr>
<tr>
<td>Need for closure</td>
<td>Petty and Jarvis (1996)</td>
<td>r = -.25, p &lt; .01</td>
</tr>
<tr>
<td>Low self-appraised problem-solving effectiveness</td>
<td>Heppner, Reeder, and Larson (1983)</td>
<td>r = -.62, p &lt; .001</td>
</tr>
<tr>
<td>Receivers’ apprehension or a tendency to respond to information tasks with anxiety</td>
<td>Buhr and Pryor (1988)</td>
<td>r = -.33, p &lt; .01</td>
</tr>
<tr>
<td>Simplification</td>
<td>Venkatraman et al. (1990)</td>
<td>r = -.26, p &lt; .05</td>
</tr>
<tr>
<td>Social anxiety</td>
<td>Mueller and Grove (1991)</td>
<td>r = -.24, p &lt; .05</td>
</tr>
<tr>
<td>Importance of social values</td>
<td>Berzonsky and Sullivan (1992)</td>
<td>r = -.28, p &lt; .05</td>
</tr>
</tbody>
</table>
### TABLE 5

**THE EFFECTS OF NFC ON MAJOR DEPENDENT MEASURES**

<table>
<thead>
<tr>
<th>Dependent Measure</th>
<th>Study</th>
<th>Finding</th>
</tr>
</thead>
<tbody>
<tr>
<td>Recall</td>
<td>Kassin, Reddy, and Tulloch (1990); Lassiter, Briggs, and Bowman (1991)</td>
<td>High NFCs generate more recall of information to which they are exposed than low NFCs.</td>
</tr>
<tr>
<td>Responsiveness to</td>
<td>Cacioppo et al. (1986); Cacioppo, Petty, and Morris (1983)</td>
<td>High NFCs’ attitudes are more influenced by the quality of the issue-relevant arguments in a persuasive message than those of low NFCs.</td>
</tr>
<tr>
<td>argument quality</td>
<td>E.g., Petty and Cacioppo (1984)</td>
<td>Low NFCs are more influenced by simple peripheral cues such as number of argument, source expertise, source attractiveness than high NFCs.</td>
</tr>
<tr>
<td>Responsiveness to</td>
<td>Lassiter, Briggs, and Slaw (1991); Venplanken (1993)</td>
<td>High NFCs generate more issue/task-relevant thoughts than low NFCs.</td>
</tr>
<tr>
<td>peripheral cues</td>
<td>Verplanken (1989)</td>
<td>High NFCs’ judgments or attitudes are more correlated with their thoughts or beliefs than those of low NFCs.</td>
</tr>
<tr>
<td>Number of thoughts</td>
<td>Verplanken (1991)</td>
<td>The attitudes of High NFCs have a longer persistence than those of low NFCs.</td>
</tr>
<tr>
<td>Relation of thoughts</td>
<td>Verplanken (1991)</td>
<td>The attitudes of high NFCs have more resistance to counterattitudinal influence.</td>
</tr>
<tr>
<td>and judgments</td>
<td>Haugtvedt and Petty (1992)</td>
<td>The attitudes of high NFCs are more consistent with their intentions and behaviors.</td>
</tr>
<tr>
<td>Attitudinal persistence</td>
<td>Cacioppo et al. (1986)</td>
<td></td>
</tr>
</tbody>
</table>
### TABLE 5 (CONTINUED)

THE EFFECTS OF NFC ON MAJOR DEPENDENT MEASURES

<table>
<thead>
<tr>
<th>Dependent Measure</th>
<th>Study</th>
<th>Finding</th>
</tr>
</thead>
<tbody>
<tr>
<td>Relatively versus biased information procession</td>
<td>Petty et al. (1993); Petty and Jarvis (1996)</td>
<td>High NFCs are more susceptible to mood manipulation and priming than low NFCs.</td>
</tr>
<tr>
<td></td>
<td>Cacioppo et al. (1983)</td>
<td>High NFCs are more motivated to think about strong but not weak message arguments which support a counterattitudinal position</td>
</tr>
</tbody>
</table>
### TABLE 6

MEANS AND SDs OF PRODUCTS IN THE US PILOT TEST

<table>
<thead>
<tr>
<th>Product</th>
<th>Functional/Hedonic</th>
<th>Product Involvement</th>
<th>Product Familiarity</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Means</td>
<td>SDs</td>
<td>Means</td>
</tr>
<tr>
<td>Beer</td>
<td>6.31</td>
<td>0.75</td>
<td>3.81</td>
</tr>
<tr>
<td>Soda</td>
<td>5.59</td>
<td>1.15</td>
<td>3.83</td>
</tr>
<tr>
<td>Candy</td>
<td>6.16</td>
<td>0.98</td>
<td>4.13</td>
</tr>
<tr>
<td>Ice cream</td>
<td>5.93</td>
<td>1.05</td>
<td>4.66</td>
</tr>
<tr>
<td>Perfume</td>
<td>5.33</td>
<td>1.50</td>
<td>4.67</td>
</tr>
<tr>
<td>Cold Remedy</td>
<td>2.24</td>
<td>1.37</td>
<td>3.71</td>
</tr>
<tr>
<td>CD player</td>
<td>5.64</td>
<td>0.90</td>
<td>4.86</td>
</tr>
<tr>
<td>Sunglasses</td>
<td>3.50</td>
<td>1.57</td>
<td>4.64</td>
</tr>
<tr>
<td>Shampoo</td>
<td>2.10</td>
<td>1.10</td>
<td>4.28</td>
</tr>
<tr>
<td>Sneakers</td>
<td>3.08</td>
<td>1.38</td>
<td>4.90</td>
</tr>
<tr>
<td>Toothpaste</td>
<td>1.51</td>
<td>0.98</td>
<td>4.34</td>
</tr>
<tr>
<td>Cell phone</td>
<td>3.21</td>
<td>1.01</td>
<td>5.67</td>
</tr>
</tbody>
</table>
TABLE 7

MEANS AND SDs OF PRODUCTS IN THE THAI PILOT TEST

<table>
<thead>
<tr>
<th>Product</th>
<th>Functional/Hedonic</th>
<th>Product Involvement</th>
<th>Product Familiarity</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Means</td>
<td>SDs</td>
<td>Means</td>
</tr>
<tr>
<td>Beer</td>
<td>6.21</td>
<td>0.93</td>
<td>3.48</td>
</tr>
<tr>
<td>Soda</td>
<td>5.26</td>
<td>1.44</td>
<td>4.21</td>
</tr>
<tr>
<td>Candy</td>
<td>5.15</td>
<td>1.47</td>
<td>4.27</td>
</tr>
<tr>
<td>Ice cream</td>
<td>5.31</td>
<td>1.69</td>
<td>5.04</td>
</tr>
<tr>
<td>Perfume</td>
<td>3.47</td>
<td>1.59</td>
<td>5.05</td>
</tr>
<tr>
<td>Cold Remedy</td>
<td>1.21</td>
<td>0.44</td>
<td>3.43</td>
</tr>
<tr>
<td>CD player</td>
<td>5.91</td>
<td>0.95</td>
<td>5.26</td>
</tr>
<tr>
<td>Sunglasses</td>
<td>2.94</td>
<td>1.15</td>
<td>4.37</td>
</tr>
<tr>
<td>Shampoo</td>
<td>1.59</td>
<td>0.88</td>
<td>5.47</td>
</tr>
<tr>
<td>Sneakers</td>
<td>5.38</td>
<td>1.20</td>
<td>4.80</td>
</tr>
<tr>
<td>Toothpaste</td>
<td>1.47</td>
<td>0.62</td>
<td>4.63</td>
</tr>
<tr>
<td>Cell phone</td>
<td>3.09</td>
<td>1.03</td>
<td>5.90</td>
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</table>
### TABLE 8

**FREQUENCIES OF IMPORTANT ATTRIBUTES FOR UTILITARIAN PRODUCT (TOOTHPASTE)**

<table>
<thead>
<tr>
<th>Attribute</th>
<th>Frequency</th>
<th>Attribute</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>taste</td>
<td>20</td>
<td>Breath freshness</td>
<td>24</td>
</tr>
<tr>
<td>whitener</td>
<td>14</td>
<td>Cleaning ability</td>
<td>23</td>
</tr>
<tr>
<td>color</td>
<td>10</td>
<td>Taste</td>
<td>22</td>
</tr>
<tr>
<td>Cavity fighting</td>
<td>8</td>
<td>Scent</td>
<td>21</td>
</tr>
<tr>
<td>Breath freshness</td>
<td>8</td>
<td>Color</td>
<td>20</td>
</tr>
<tr>
<td>Cleaning ability</td>
<td>8</td>
<td>Cavity fighting</td>
<td>13</td>
</tr>
<tr>
<td>Tartar protection</td>
<td>7</td>
<td>Whitener</td>
<td>12</td>
</tr>
<tr>
<td>Size</td>
<td>7</td>
<td>Packaging</td>
<td>11</td>
</tr>
<tr>
<td>Scent</td>
<td>5</td>
<td>Size</td>
<td>8</td>
</tr>
<tr>
<td>Packaging</td>
<td>5</td>
<td>Price</td>
<td>7</td>
</tr>
<tr>
<td>Price</td>
<td>5</td>
<td>Non-erosive</td>
<td>6</td>
</tr>
<tr>
<td>Brand</td>
<td>4</td>
<td>Strength</td>
<td>3</td>
</tr>
<tr>
<td>Good feeling</td>
<td>4</td>
<td>Ingredients</td>
<td>3</td>
</tr>
<tr>
<td>Texture</td>
<td>3</td>
<td>Fluoride</td>
<td>3</td>
</tr>
<tr>
<td>Fluoride</td>
<td>3</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Only attributes mentioned by more than two subjects were displayed in this Table.*
TABLE 9
FREQUENCIES OF IMPORTANT ATTRIBUTES FOR HEDONIC PRODUCT (CANDY)*

<table>
<thead>
<tr>
<th>Attribute</th>
<th>US Frequency</th>
<th>Attribute</th>
<th>Thailand Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Taste</td>
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<td>Taste</td>
<td>30</td>
</tr>
<tr>
<td>Size</td>
<td>13</td>
<td>Color</td>
<td>22</td>
</tr>
<tr>
<td>Color</td>
<td>11</td>
<td>Package</td>
<td>18</td>
</tr>
<tr>
<td>Price</td>
<td>9</td>
<td>Scent</td>
<td>16</td>
</tr>
<tr>
<td>Package</td>
<td>7</td>
<td>Shape</td>
<td>16</td>
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<tr>
<td>Sweetness</td>
<td>6</td>
<td>Price</td>
<td>15</td>
</tr>
<tr>
<td>Sugar</td>
<td>5</td>
<td>Sweetness</td>
<td>13</td>
</tr>
<tr>
<td>Calories</td>
<td>4</td>
<td>Size</td>
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</tr>
<tr>
<td>Flavor</td>
<td>4</td>
<td>Brand</td>
<td>7</td>
</tr>
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<td>Shape</td>
<td>3</td>
<td>Assortment</td>
<td>4</td>
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<td>Scent</td>
<td>3</td>
<td>Appearance</td>
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<td>Texture</td>
<td>3</td>
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<td></td>
</tr>
<tr>
<td>Chewy</td>
<td>3</td>
<td></td>
<td></td>
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</tbody>
</table>

* Only attributes mentioned by more than two subjects were displayed in this Table.
<table>
<thead>
<tr>
<th>Measures (# of items)</th>
<th>Utilitarian Product</th>
<th>Hedonic Product</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(toothpaste)</td>
<td>(candy)</td>
</tr>
<tr>
<td></td>
<td>US</td>
<td>Thailand</td>
</tr>
<tr>
<td>$A_{ad}$ (7)</td>
<td>.89</td>
<td>.79</td>
</tr>
<tr>
<td>$A_b$-nonrelative (2)</td>
<td>.73</td>
<td>.75</td>
</tr>
<tr>
<td>$A_b$-relative (2)</td>
<td>.84</td>
<td>.73</td>
</tr>
<tr>
<td>PI-nonrelative (1)</td>
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<td>n/a</td>
</tr>
<tr>
<td>PI-relative (1)</td>
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<td>n/a</td>
</tr>
<tr>
<td>Ad credibility (5)</td>
<td>.91</td>
<td>.91</td>
</tr>
<tr>
<td>Ad involvement (3)</td>
<td>.92</td>
<td>.89</td>
</tr>
<tr>
<td>SCS-INDSC (15)</td>
<td>.70</td>
<td>.61</td>
</tr>
<tr>
<td>SCS-INTSC (15)</td>
<td>.65</td>
<td>.71</td>
</tr>
<tr>
<td>NFC (18)</td>
<td>.87</td>
<td>.75</td>
</tr>
</tbody>
</table>
### TABLE 11
MEANS DIFFERENCES AND SIGNIFICANCE LEVELS (UTILITARIAN PRODUCT)

<table>
<thead>
<tr>
<th>Hypothesis</th>
<th>US</th>
<th>Thai</th>
</tr>
</thead>
<tbody>
<tr>
<td>H1: Format X INDSC&lt;sup&gt;a&lt;/sup&gt;</td>
<td></td>
<td></td>
</tr>
<tr>
<td>L-IND: IC &lt; NC</td>
<td></td>
<td></td>
</tr>
<tr>
<td>H-IND: IC &gt; NC</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Findings</strong></td>
<td><strong>A&lt;sub&gt;ad&lt;/sub&gt;</strong></td>
<td><strong>A&lt;sub&gt;ad&lt;/sub&gt;</strong></td>
</tr>
<tr>
<td>L-IND: IC(X=5.32) &gt; NC (X=4.87) *</td>
<td>L-IND: IC(X=4.55) &gt; NC (X=4.05) ***</td>
<td></td>
</tr>
<tr>
<td>H-IND: IC(X=5.02) = NC (X=5.10)</td>
<td>H-IND: IC(X=4.34) = NC (X=4.35)</td>
<td></td>
</tr>
<tr>
<td>H1: Not supported&lt;sup&gt;b&lt;/sup&gt;</td>
<td>H1: Not supported&lt;sup&gt;b&lt;/sup&gt;</td>
<td></td>
</tr>
<tr>
<td>L-IND: IC(X=5.03) &gt; NC (X=4.31) **</td>
<td>L-IND: IC(X=4.57) &gt; NC (X=4.16) **</td>
<td></td>
</tr>
<tr>
<td>H-IND: IC(X=4.70) = NC (X=4.86)</td>
<td>H-IND: IC(X=4.35) = NC (X=4.29)</td>
<td></td>
</tr>
<tr>
<td>H1: Not supported&lt;sup&gt;b&lt;/sup&gt;</td>
<td>H1: Not supported&lt;sup&gt;b&lt;/sup&gt;</td>
<td></td>
</tr>
<tr>
<td>L-IND: IC(X=4.94) &gt; NC (X=4.08) ***</td>
<td>L-IND: IC(X=4.39) &gt; NC (X=3.79) ***</td>
<td></td>
</tr>
<tr>
<td>H-IND: IC(X=4.60) = NC (X=4.49)</td>
<td>H-IND: IC(X=4.16) = NC (X=3.96)</td>
<td></td>
</tr>
<tr>
<td>H1: Not supported&lt;sup&gt;b&lt;/sup&gt;</td>
<td>H1: Not supported&lt;sup&gt;b&lt;/sup&gt;</td>
<td></td>
</tr>
<tr>
<td>L-IND: IC(X=4.69) &gt; NC (X=3.56) ***</td>
<td>L-IND: IC(X=4.51) &gt; NC (X=3.80) ***</td>
<td></td>
</tr>
<tr>
<td>H-IND: IC(X=4.25) = NC (X=4.04)</td>
<td>H-IND: IC(X=4.28) = NC (X=4.13)</td>
<td></td>
</tr>
<tr>
<td>H1: Not supported&lt;sup&gt;b&lt;/sup&gt;</td>
<td>H1: Not supported&lt;sup&gt;b&lt;/sup&gt;</td>
<td></td>
</tr>
<tr>
<td>L-IND: IC(X=4.33) &gt; NC (X=2.81) ***</td>
<td>L-IND: IC(X=4.13) &gt; NC (X=3.04) ***</td>
<td></td>
</tr>
<tr>
<td>H-IND: IC(X=3.82) = NC (X=3.56)</td>
<td>H-IND: IC(X=3.85) = NC (X=3.83)</td>
<td></td>
</tr>
<tr>
<td>H1: Not supported&lt;sup&gt;b&lt;/sup&gt;</td>
<td>H1: Not supported&lt;sup&gt;b&lt;/sup&gt;</td>
<td></td>
</tr>
<tr>
<td>H2</td>
<td>US</td>
<td>Thai</td>
</tr>
<tr>
<td>----</td>
<td>----</td>
<td>------</td>
</tr>
<tr>
<td><strong>Hypothesis</strong></td>
<td>H2: Format X INDSC X NFC</td>
<td>L-NFC;</td>
</tr>
<tr>
<td></td>
<td></td>
<td>L-IND: IC &lt; NC</td>
</tr>
<tr>
<td></td>
<td></td>
<td>H-IND: IC &gt; NC</td>
</tr>
<tr>
<td><strong>Findings</strong></td>
<td>For L-NFC;</td>
<td>For L-NFC;</td>
</tr>
<tr>
<td></td>
<td>A&lt;sub&gt;ad&lt;/sub&gt;</td>
<td>A&lt;sub&gt;ad&lt;/sub&gt;</td>
</tr>
<tr>
<td></td>
<td>L-IND: IC((\bar{X}=5.44)) &gt; NC ((\bar{X}=4.90)) *</td>
<td>L-IND: IC((\bar{X}=4.45)) &gt; NC ((\bar{X}=3.95)) **</td>
</tr>
<tr>
<td></td>
<td>H-IND: IC((\bar{X}=4.61)) &lt; NC ((\bar{X}=5.47)) *</td>
<td>H-IND: IC((\bar{X}=4.09)) &lt; NC ((\bar{X}=4.50)) *</td>
</tr>
<tr>
<td></td>
<td>H2: Not supported&lt;sup&gt;ε&lt;/sup&gt;</td>
<td>H2: Not supported&lt;sup&gt;ε&lt;/sup&gt;</td>
</tr>
<tr>
<td></td>
<td>A&lt;sub&gt;b(n)&lt;/sub&gt;</td>
<td>A&lt;sub&gt;b(n)&lt;/sub&gt;</td>
</tr>
<tr>
<td></td>
<td>L-IND: IC((\bar{X}=5.03)) = NC ((\bar{X}=4.31))</td>
<td>L-IND: IC((\bar{X}=4.56)) = NC ((\bar{X}=4.12)) *</td>
</tr>
<tr>
<td></td>
<td>H-IND: IC((\bar{X}=4.19)) &lt; NC ((\bar{X}=5.25)) *</td>
<td>H-IND: IC((\bar{X}=4.13)) &lt; NC ((\bar{X}=4.57)) *</td>
</tr>
<tr>
<td></td>
<td>H2: Not supported&lt;sup&gt;ε&lt;/sup&gt;</td>
<td>H2: Not supported&lt;sup&gt;ε&lt;/sup&gt;</td>
</tr>
<tr>
<td></td>
<td>A&lt;sub&gt;p(n)&lt;/sub&gt;</td>
<td>A&lt;sub&gt;p(n)&lt;/sub&gt;</td>
</tr>
<tr>
<td></td>
<td>L-IND: IC((\bar{X}=5.06)) &gt; NC ((\bar{X}=4.25)) **</td>
<td>L-IND: IC((\bar{X}=4.41)) &gt; NC ((\bar{X}=3.73)) ***</td>
</tr>
<tr>
<td></td>
<td>H-IND: IC((\bar{X}=3.93)) &lt; NC ((\bar{X}=4.85)) *</td>
<td>H-IND: IC((\bar{X}=3.85)) &lt; NC ((\bar{X}=4.27)) *</td>
</tr>
<tr>
<td></td>
<td>H2: Not supported&lt;sup&gt;ε&lt;/sup&gt;</td>
<td>H2: Not supported&lt;sup&gt;ε&lt;/sup&gt;</td>
</tr>
<tr>
<td></td>
<td>PI&lt;sub&gt;π(n)&lt;/sub&gt;</td>
<td>PI&lt;sub&gt;π(n)&lt;/sub&gt;</td>
</tr>
<tr>
<td></td>
<td>L-IND: IC((\bar{X}=4.68)) &gt; NC ((\bar{X}=3.74)) *</td>
<td>L-IND: IC((\bar{X}=4.58)) &gt; NC ((\bar{X}=3.82)) **</td>
</tr>
<tr>
<td></td>
<td>H-IND: IC((\bar{X}=3.30)) &lt; NC ((\bar{X}=4.71)) **</td>
<td>H-IND: IC((\bar{X}=3.53)) &lt; NC ((\bar{X}=4.55)) ***</td>
</tr>
<tr>
<td></td>
<td>H2: Not supported&lt;sup&gt;ε&lt;/sup&gt;</td>
<td>H2: Not supported&lt;sup&gt;ε&lt;/sup&gt;</td>
</tr>
<tr>
<td></td>
<td>PI&lt;sub&gt;π(n)&lt;/sub&gt;</td>
<td>PI&lt;sub&gt;π(n)&lt;/sub&gt;</td>
</tr>
<tr>
<td></td>
<td>L-IND: IC((\bar{X}=4.24)) &gt; NC ((\bar{X}=2.96)) **</td>
<td>L-IND: IC((\bar{X}=4.23)) &gt; NC ((\bar{X}=3.00)) ***</td>
</tr>
<tr>
<td></td>
<td>H-IND: IC((\bar{X}=3.00)) = NC ((\bar{X}=4.13)) *</td>
<td>H-IND: IC((\bar{X}=3.53)) = NC ((\bar{X}=4.20)) *</td>
</tr>
<tr>
<td></td>
<td>H2: Not supported&lt;sup&gt;ε&lt;/sup&gt;</td>
<td>H2: Not supported&lt;sup&gt;ε&lt;/sup&gt;</td>
</tr>
</tbody>
</table>

<sup>ε</sup> Indicates significance levels at different confidence intervals.
### TABLE 11 (CONTINUED)
MEANS DIFFERENCES AND SIGNIFICANCE LEVELS
(UTILITARIAN PRODUCT)

<table>
<thead>
<tr>
<th>H3</th>
<th>US</th>
<th>Thai</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Hypothesis</strong></td>
<td>H3: Format X INDSC X NFC</td>
<td></td>
</tr>
<tr>
<td></td>
<td>H-NFC;</td>
<td></td>
</tr>
<tr>
<td></td>
<td>L-IND: IC &gt; NC</td>
<td></td>
</tr>
<tr>
<td></td>
<td>H- IND: IC &gt; NC</td>
<td></td>
</tr>
<tr>
<td><strong>Findings</strong></td>
<td>For H-NFC;</td>
<td>For H-NFC;</td>
</tr>
<tr>
<td>A_{ad}</td>
<td></td>
<td>A_{ad}</td>
</tr>
<tr>
<td>L-IND: IC(\bar{X}=5.16) &gt; NC (\bar{X}=4.81)</td>
<td>L-IND: IC(\bar{X}=4.71) &gt; NC (\bar{X}=4.24) *</td>
<td></td>
</tr>
<tr>
<td>H-IND: IC(\bar{X}=5.37) &gt; NC (\bar{X}=4.78)*</td>
<td>H-IND: IC(\bar{X}=4.60) &gt; NC (\bar{X}=4.24)*</td>
<td></td>
</tr>
<tr>
<td>H3: Supported</td>
<td>H3: Supported</td>
<td></td>
</tr>
<tr>
<td>A_{b(0)}</td>
<td></td>
<td>A_{b(0)}</td>
</tr>
<tr>
<td>L-IND: IC(\bar{X}=4.93) &gt; NC (\bar{X}=4.02)*</td>
<td>L-IND: IC(\bar{X}=4.58) &gt; NC (\bar{X}=4.23)</td>
<td></td>
</tr>
<tr>
<td>H-IND: IC(\bar{X}=5.14) &gt; NC (\bar{X}=4.54)</td>
<td>H-IND: IC(\bar{X}=4.59) &gt; NC (\bar{X}=4.04)*</td>
<td></td>
</tr>
<tr>
<td>H3: Supported</td>
<td>H3: Supported</td>
<td></td>
</tr>
<tr>
<td>A_{b(0)}</td>
<td></td>
<td>A_{b(0)}</td>
</tr>
<tr>
<td>L-IND: IC(\bar{X}=4.80) &gt; NC (\bar{X}=4.92)*</td>
<td>L-IND: IC(\bar{X}=4.35) &gt; NC (\bar{X}=3.89) *</td>
<td></td>
</tr>
<tr>
<td>H-IND: IC(\bar{X}=5.15) &gt; NC (\bar{X}=4.18)**</td>
<td>H-IND: IC(\bar{X}=4.49) &gt; NC (\bar{X}=3.71)***</td>
<td></td>
</tr>
<tr>
<td>H3: Supported</td>
<td>H3: Supported</td>
<td></td>
</tr>
<tr>
<td>PI_{(0)}</td>
<td></td>
<td>PI_{(0)}</td>
</tr>
<tr>
<td>L-IND: IC(\bar{X}=4.70) &gt; NC (\bar{X}=3.35)**</td>
<td>L-IND: IC(\bar{X}=4.40) &gt; NC (\bar{X}=3.72) *</td>
<td></td>
</tr>
<tr>
<td>H-IND: IC(\bar{X}=5.03) &gt; NC (\bar{X}=3.46)***</td>
<td>H-IND: IC(\bar{X}=4.16) &gt; NC (\bar{X}=3.53)***</td>
<td></td>
</tr>
<tr>
<td>H3: Supported</td>
<td>H3: Supported</td>
<td></td>
</tr>
<tr>
<td>PI_{(0)}</td>
<td></td>
<td>PI_{(0)}</td>
</tr>
<tr>
<td>L-IND: IC(\bar{X}=4.45) &gt; NC (\bar{X}=2.62) ***</td>
<td>L-IND: IC(\bar{X}=3.98) &gt; NC (\bar{X}=3.13)**</td>
<td></td>
</tr>
<tr>
<td>H-IND: IC(\bar{X}=4.48) &gt; NC (\bar{X}=3.07)**</td>
<td>H-IND: IC(\bar{X}=4.16) &gt; NC (\bar{X}=3.53) *</td>
<td></td>
</tr>
<tr>
<td>H3: Supported</td>
<td>H3: Supported</td>
<td></td>
</tr>
</tbody>
</table>
a: format = ad format, INDSC = independent self-construal, IC = indirect comparative ads, NC= noncomparative ads, NFC = need for cognition, L-NFC = consumers with low need for cognition, H-NFC = consumers with high need for cognition, L-IND = consumers with low independent self-construal, H-IND = consumers with high independent self-construal

b: Although results were significant, cell means were not in the direction of what predicted.

c: The argument that an individual level culture factor (INDSC) influences the comparative ad persuasiveness for low NFC consumers is supported. The cell means, however, were not consistent with predictions.

* p < .05
** p < .01
*** p < .001
**TABLE 12**

**SUMMARY OF HYPOTHESES TESTING**

<table>
<thead>
<tr>
<th>Hypothesis Offered</th>
<th>H1: Format X INDSC&lt;sup&gt;a&lt;/sup&gt;</th>
<th>H2: Format X INDSC X NFC L-NFC; L-IND: IC &lt; NC L-IND: IC &gt; NC H-IND: IC &gt; NC</th>
<th>H3: Format X INDSC X NFC H-NFC; L-IND: IC &gt; NC H-IND: IC &gt; NC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Findings</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Utilitarian Product</td>
<td>US</td>
<td>L-IND: IC &gt; NC L-IND: IC = NC H-IND: IC = NC H1: not supported&lt;sup&gt;b&lt;/sup&gt;</td>
<td>L-IND: IC &gt; NC L-IND: IC &lt; NC H-IND: IC &gt; NC H-IND: IC &gt; NC H2: partially supported&lt;sup&gt;c&lt;/sup&gt;</td>
</tr>
<tr>
<td></td>
<td>Thailand</td>
<td>L-IND: IC &gt; NC H-IND: IC = NC H1: not supported&lt;sup&gt;b&lt;/sup&gt;</td>
<td>L-IND: IC &gt; NC L-IND: IC &lt; NC H-IND: IC &gt; NC H-IND: IC &gt; NC</td>
</tr>
<tr>
<td>Hedonic Product</td>
<td>US</td>
<td>No significant interaction effects H1: not supported</td>
<td>No consistently significant interaction effects H2: not supported</td>
</tr>
<tr>
<td></td>
<td>Thailand</td>
<td>No significant interaction effects H1: not supported</td>
<td>No significant interaction effects H2: not supported</td>
</tr>
</tbody>
</table>

<sup>a</sup>: INDSC = independent self-construal, IC = indirect comparative ads, NC = noncomparative ads, NFC = need for cognition, L-NFC = consumers with low need for cognition, H-NFC = consumers with high need for cognition, L-IND = consumers with low independent self-construal, H-IND = consumers with high independent self-construal

<sup>b</sup>: although results were significant, cell means were not in the direction of what was predicted, not even in the opposite direction.

<sup>c</sup>: INDSC influences ad persuasiveness but not in the predicted direction.
TABLE 13
ANOVA RESULTS: AD FORMAT X INDSC X NFC ON INVOLVEMENT

<table>
<thead>
<tr>
<th>US</th>
</tr>
</thead>
<tbody>
<tr>
<td>For L-NFC;</td>
</tr>
<tr>
<td>for L-IND, IC ((\bar{X}=4.89)) &gt; NC ((\bar{X}=4.04))**</td>
</tr>
<tr>
<td>for H-IND, IC ((\bar{X}=4.04)) &lt; NC ((\bar{X}=4.94))*</td>
</tr>
<tr>
<td>For H-NFC;</td>
</tr>
<tr>
<td>for L-IND, IC ((\bar{X}=5.13)) &gt; NC ((\bar{X}=4.29))*</td>
</tr>
<tr>
<td>for H-IND, IC ((\bar{X}=4.83)) &gt; NC ((\bar{X}=3.95))*</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Thai</th>
</tr>
</thead>
<tbody>
<tr>
<td>For L-NFC;</td>
</tr>
<tr>
<td>for L-IND, IC ((\bar{X}=4.57)) &gt; NC ((\bar{X}=3.77))***</td>
</tr>
<tr>
<td>for H-IND, IC ((\bar{X}=3.74)) &lt; NC ((\bar{X}=4.27))*</td>
</tr>
<tr>
<td>For H-NFC;</td>
</tr>
<tr>
<td>for L-IND, IC ((\bar{X}=4.61)) &gt; NC ((\bar{X}=4.02))*</td>
</tr>
<tr>
<td>for H-IND, IC ((\bar{X}=4.64)) &gt; NC ((\bar{X}=3.88))***</td>
</tr>
</tbody>
</table>

* \(p < .05\)
** \(p < .01\)
*** \(p < .001\)
TABLE 14
MEDIATION ANALYSIS
(STANDARDIZED BETA COEFFICIENTS)

<table>
<thead>
<tr>
<th>USA</th>
<th>1. Involvement</th>
<th>2. Persuasive -ness</th>
<th>3. Persuasive -ness</th>
<th>4. Persuasive -ness</th>
<th>Full vs.</th>
<th>Partial</th>
<th>Mediation</th>
<th>And % of $\beta^2$ drop$^a$</th>
</tr>
</thead>
<tbody>
<tr>
<td>$A_{ad}$</td>
<td>$\beta = -2.77$, $t = -3.40$, $p &lt; .01$</td>
<td>$\beta = -3.00$, $t = -3.68$, $p &lt; .01$</td>
<td>$\beta = -1.34$, $t = -1.94$, $p &gt; .05$</td>
<td>$\beta = .64$, $t = 8.38$, $p &lt; .01$</td>
<td>Full</td>
<td>$80%$</td>
<td></td>
<td></td>
</tr>
<tr>
<td>$A_{b(i)}$</td>
<td>$\beta = -2.77$, $t = -3.40$, $p &lt; .01$</td>
<td>$\beta = -3.10$, $t = -3.79$, $p &lt; .01$</td>
<td>$\beta = -1.42$, $t = -1.99$, $p &gt; .05$</td>
<td>$\beta = .61$, $t = 7.72$, $p &lt; .01$</td>
<td>Partial</td>
<td>$79%$</td>
<td></td>
<td></td>
</tr>
<tr>
<td>$A_{b(e)}$</td>
<td>$\beta = -2.77$, $t = -3.40$, $p &lt; .01$</td>
<td>$\beta = -3.35$, $t = -4.19$, $p &lt; .01$</td>
<td>$\beta = -1.79$, $t = -2.49$, $p &gt; .05$</td>
<td>$\beta = .60$, $t = 7.42$, $p &lt; .01$</td>
<td>Partial</td>
<td>$71%$</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note: $\beta$ = Standardized Beta Coefficient

$R^2$ values for each model:

- $A_{ad}$: $R^2 = .105$ (Full), $R^2 = .127$ (Partial), $R^2 = .413$ (Mediation), $R^2 = .440$ (Full vs. Partial)
- $A_{b(i)}$: $R^2 = .105$ (Full), $R^2 = .138$ (Partial), $R^2 = .374$ (Mediation), $R^2 = .410$ (Full vs. Partial)
- $A_{b(e)}$: $R^2 = .105$ (Full), $R^2 = .156$ (Partial), $R^2 = .355$ (Mediation), $R^2 = .401$ (Full vs. Partial)
<table>
<thead>
<tr>
<th>PI (n)</th>
<th>1. Involvement</th>
<th>2. Persuasive</th>
<th>3. Persuasive</th>
<th>4. Persuasive</th>
<th>Full vs. Partial Mediation</th>
<th>( \beta^2 ) drop</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ad format X</td>
<td>( \beta = -2.77, )</td>
<td>( \beta = -3.42, )</td>
<td>( \beta = -2.14, )</td>
<td>( \beta = -3.40, )</td>
<td>Partial</td>
<td>61%</td>
</tr>
<tr>
<td>INDSC</td>
<td>( t = -3.40, )</td>
<td>( t = -4.34, )</td>
<td>( t = -2.91, )</td>
<td>( t = -4.34, )</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Involvement</td>
<td>( \beta = .54, )</td>
<td>( \beta = .46, )</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>( t = 6.49, )</td>
<td>( t = 5.37, )</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>( p &lt; .01 )</td>
<td>( p &lt; .01 )</td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>R^2</td>
<td>.105</td>
<td>.164</td>
<td>.294</td>
<td>.354</td>
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<table>
<thead>
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<th>PI (r)</th>
<th>1. Involvement</th>
<th>2. Persuasive</th>
<th>3. Persuasive</th>
<th>4. Persuasive</th>
<th>Full vs. Partial Mediation</th>
<th>( \beta^2 ) drop</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ad format X</td>
<td>( \beta = -2.77, )</td>
<td>( \beta = -3.03, )</td>
<td>( \beta = -1.74, )</td>
<td>( \beta = -3.03, )</td>
<td>Partial</td>
<td>67%</td>
</tr>
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<td>( t = -3.40, )</td>
<td>( t = -3.77, )</td>
<td>( t = -2.30, )</td>
<td>( t = -3.77, )</td>
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</tr>
<tr>
<td>Involvement</td>
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<td>( \beta = .48, )</td>
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<td></td>
</tr>
<tr>
<td></td>
<td>( t = 6.33, )</td>
<td>( t = 5.31, )</td>
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<tr>
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<td>( p &lt; .01 )</td>
<td>( p &lt; .01 )</td>
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</tr>
<tr>
<td>R^2</td>
<td>.105</td>
<td>.127</td>
<td>.284</td>
<td>.322</td>
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**THAILAND**

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<tr>
<th>A_{ad}</th>
<th>1. Involvement</th>
<th>2. Persuasive</th>
<th>3. Persuasive</th>
<th>4. Persuasive</th>
<th>Full vs. Partial Mediation</th>
<th>( \beta^2 ) drop</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ad format X</td>
<td>( \beta = -2.65, )</td>
<td>( \beta = -2.43, )</td>
<td>( \beta = -1.33, )</td>
<td>( \beta = -2.43, )</td>
<td>Partial</td>
<td>70%</td>
</tr>
<tr>
<td>INDSC</td>
<td>( t = -4.69, )</td>
<td>( t = -4.19, )</td>
<td>( t = -2.42, )</td>
<td>( t = -4.19, )</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Involvement</td>
<td>( \beta = .48, )</td>
<td>( \beta = .43, )</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>( t = 7.76, )</td>
<td>( t = 6.78, )</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>( p &lt; .01 )</td>
<td>( p &lt; .01 )</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>R^2</td>
<td>.104</td>
<td>.084</td>
<td>.226</td>
<td>.253</td>
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<table>
<thead>
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<th>A_{b(n)}</th>
<th>1. Involvement</th>
<th>2. Persuasive</th>
<th>3. Persuasive</th>
<th>4. Persuasive</th>
<th>Full vs. Partial Mediation</th>
<th>( \beta^2 ) drop</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ad format X</td>
<td>( \beta = -2.65, )</td>
<td>( \beta = -2.17, )</td>
<td>( \beta = -1.06, )</td>
<td>( \beta = -2.17, )</td>
<td>Full</td>
<td>94%</td>
</tr>
<tr>
<td>INDSC</td>
<td>( t = -4.69, )</td>
<td>( t = -3.76, )</td>
<td>( t = -1.06, )</td>
<td>( t = -3.76, )</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Involvement</td>
<td>( \beta = .62, )</td>
<td>( \beta = .61, )</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>( t = 11.19, )</td>
<td>( t = 10.38, )</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>( p &lt; .01 )</td>
<td>( p &lt; .01 )</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>R^2</td>
<td>.104</td>
<td>.069</td>
<td>.379</td>
<td>.393</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### TABLE 14. (CONTINUED)
MEDIATION ANALYSIS
(Standardized Beta Coefficients)

<table>
<thead>
<tr>
<th>$A_b(r)$</th>
<th>1. Involvement</th>
<th>2. Persuasive -ness Measure</th>
<th>3. Persuasive -ness Measure</th>
<th>4. Persuasive -ness Measure</th>
<th>Full vs. Partial Mediation And % of $\beta^2$ drop$^a$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ad format X</td>
<td>$\beta = -2.65, t = -4.69, p &lt; .01$</td>
<td>$\beta = -2.81, t = -4.97, p &lt; .01$</td>
<td>$\beta = -1.60, t = -3.04, p &lt; .01$</td>
<td>$\beta = .52, t = 8.84, p &lt; .01$</td>
<td>$\beta = .47, t = 7.60, p &lt; .01$</td>
</tr>
<tr>
<td>INDSC</td>
<td>$\beta = -2.65, t = -4.69, p &lt; .01$</td>
<td>$\beta = -2.50, t = -4.39, p &lt; .01$</td>
<td>$\beta = -1.93, t = -1.93, p &gt; .05$</td>
<td>$\beta = .59, t = 10.21, p &lt; .01$</td>
<td>$\beta = .50, t = 8.55, p &lt; .01$</td>
</tr>
<tr>
<td>R$^2$</td>
<td>.104</td>
<td>.121</td>
<td>.273</td>
<td>.315</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>$P_l(r)$</th>
<th>1. Involvement</th>
<th>2. Persuasive -ness Measure</th>
<th>3. Persuasive -ness Measure</th>
<th>4. Persuasive -ness Measure</th>
<th>Full vs. Partial Mediation And % of $\beta^2$ drop$^a$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ad format X</td>
<td>$\beta = -2.65, t = -4.69, p &lt; .01$</td>
<td>$\beta = -2.90, t = -5.25, p &lt; .01$</td>
<td>$\beta = -1.59, t = -3.17, p &lt; .01$</td>
<td>$\beta = .57, t = 9.90, p &lt; .01$</td>
<td>$\beta = .50, t = 8.55, p &lt; .01$</td>
</tr>
<tr>
<td>INDSC</td>
<td>$\beta = -2.65, t = -4.69, p &lt; .01$</td>
<td>$\beta = -2.50, t = -4.97, p &lt; .01$</td>
<td>$\beta = -1.93, t = -3.04, p &lt; .01$</td>
<td>$\beta = .59, t = 7.60, p &lt; .01$</td>
<td>$\beta = .47, t = 68%</td>
</tr>
<tr>
<td>R$^2$</td>
<td>.104</td>
<td>.142</td>
<td>.319</td>
<td>.371</td>
<td></td>
</tr>
</tbody>
</table>

---

$a$ : % of $\beta^2$ drop : percentage of drop in squared beta coefficient of Ad format X IND after ad involvement is included in the regression equation.
## TABLE 15

UNHYPOTHESIZED BUT SIGNIFICANT RELATIONSHIPS

UTILITARIAN PRODUCT

<table>
<thead>
<tr>
<th>Source of Variation</th>
<th>US</th>
<th>Thailand</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Main Effect</strong></td>
<td>Ad format</td>
<td>Ad format</td>
</tr>
<tr>
<td></td>
<td>IC &gt; NC</td>
<td>IC &gt; NC</td>
</tr>
<tr>
<td></td>
<td>((A_b(n), P_{l(n)}, P_{l(r)}))</td>
<td>((A_{ad}, A_{b(r)}, P_{l(n)}, P_{l(r)}))</td>
</tr>
<tr>
<td><strong>Interaction Effect</strong></td>
<td>Ad format X NFC</td>
<td>Ad format X NFC</td>
</tr>
<tr>
<td></td>
<td>L-NFC : IC = NC</td>
<td>L-NFC : IC = NC</td>
</tr>
<tr>
<td></td>
<td>H-NFC : IC &gt; NC</td>
<td>H-NFC : IC &gt; NC</td>
</tr>
<tr>
<td></td>
<td>((A_{ad}, A_{b(n)}, A_{b(r)}, P_{l(n)}, P_{l(r)}))</td>
<td>((A_{ad}, A_{b(n)}, A_{b(r)}, P_{l(n)}, P_{l(r)}))</td>
</tr>
<tr>
<td>Source of Variation</td>
<td>US</td>
<td>Thailand</td>
</tr>
<tr>
<td>---------------------</td>
<td>---------------------------------</td>
<td>------------------------------</td>
</tr>
<tr>
<td>Main Effect</td>
<td>Ad format</td>
<td>None</td>
</tr>
<tr>
<td></td>
<td>IC &gt; NC</td>
<td>None</td>
</tr>
<tr>
<td></td>
<td>(A₂ad, A₂b(t), P₁(n₁), P₂(t₁))</td>
<td>None</td>
</tr>
<tr>
<td></td>
<td>NFC</td>
<td></td>
</tr>
<tr>
<td></td>
<td>L-NFC &gt; H-NFC</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(A₂ad, A₂b(n₁), P₁(n₁))</td>
<td></td>
</tr>
<tr>
<td>Interaction Effect</td>
<td>None</td>
<td>None</td>
</tr>
</tbody>
</table>
FIGURE 1
NOMOLOGICAL FRAMEWORK OF VARIABLES AND THEIR RELATIONSHIPS EXAMINED IN THE DISSERTATION

Ad Formats
-Comparative
-NC

Self-Construal
-Independent
-Interdependent

Consistency between Ad Formats & Self-Construal
-Comparative ad & Independent Self
- NC ad & interdependent Self

Moderator
- Need for Cognition

Ad Persuasiveness
-Attitude towards Ad
-Attitude towards Brand
-Purchase Intention
FIGURE 2

H1: AD FORMAT X INDSC ON AD PERSUASIVENESS

(UTILITARIAN PRODUCT)

Hypothesis

Finding
FIGURE 3

H2: AD FORMAT X INDSC X NFC FOR LOW NFC CONSUMERS

(UTILITARIAN PRODUCT)

Hypothesis

Finding
FIGURE 4
H3: AD FORMAT X INDSC X NFC FOR HIGH NFC CONSUMERS
(UTILITARIAN PRODUCT)

Hypothesis

Ad Persuasiveness

<table>
<thead>
<tr>
<th>High</th>
<th>IC Ad</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Low</th>
<th>NC Ad</th>
</tr>
</thead>
</table>

INDSC

Low High

Findings

Ad Persuasiveness

<table>
<thead>
<tr>
<th>High</th>
<th>IC Ad</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Low</th>
<th>NC Ad</th>
</tr>
</thead>
</table>

INDSC

Low High
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