

THE EFFECT OF SELF-CONSTRUALS ON THE EFFECTIVENESS OF COMPARATIVE ADVERTISING

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This research focuses on how an individual's self-construal (interdependent and independent) together with advertising format influences the evaluation of advertisements as well as the advertised brand. In the context of comparative versus noncomparative ad formats we examine the influence of self-construal in two distinct product categories: a high cognitively involving product and a low cognitively involving product. We suggest that ads that are presented in a format (comparative versus noncomparative) that are aligned to be congruent with the individual's self construals will generate more positive attitudes when promoting low cognitively involving product. Results of an experiment designed to assess the effects of congruity of formats provide reasonable support for the hypotheses. Implications for managers and academicians are discussed.

INTRODUCTION

"I'm a PC" vs. "I'm a Mac[®]", Dominos[®] sandwiches vs. Subway[®] sandwiches, and a Mitsubishi Gallant[®] racing a Honda Accord[®] in the "See what happens" campaign are all recent examples of firms utilizing comparative advertising to promote and differentiate their offering. Comparative advertising, an advertising format in which a product or service is compared with that of a competitor, is commonly employed and is believed to have some advantages over noncomparative advertising. For example, Donthu (1998) found that comparative ads elicited greater unaided and aided recall of advertisements than noncomparative ads. Additionally, Pechmann and Ratneshwar (1991) found that as consumers process comparative advertising, the sponsored brand may benefit from a HALO effect from just being associated with the comparison brand, thus increasing the sponsored brand's positioning. However, favorable persuasion effects of comparative advertising have not been found consistently throughout the extant research (Grewal, Kavanoor, Fern, Costley and Barnes 1997).

In an attempt to disentangle how and when comparative advertising will be most effective, prior research has heavily examined the message environment of comparative advertising and has focused on aspects such as attributes of the sponsored product (e.g., Putrevu and Lord 1994), content claims in the advertisement (Chow and Luk 2006; Etgar and Goodwin 1982; Jain and Posavac 2004), and consumers' information processing situation (Chow and Luk 2006; Priester, Godek, Nayankuppum and Park 2004). Though these investigations have helped understand comparative advertising effectiveness, the influence of consumer individual difference variables have also garnered attention and provided interesting results (e.g., Choi and Miracle 2004; Polyorat and Alden 2005; Putrevu and Lord 1994; Zhang 2009). Specifically, individual difference factors such as a consumer's culturally defined collectivism (Choi and Miracle 2004; Jeon and Beatty 2002; Zhang 2009) and their cognitive involvement with the product category (Polyorat and Alden 2005; Putrevu and Lord 1994) are suggested to be important elements in understanding the effectiveness of comparative advertisements.

In the present study we further explore the influence of individual level variables on the effectiveness of comparative ads. Our interest

lies in examining how differences in individual's self construal, their independent self-construal and interdependent self construal (hereafter INDSC and INTSC), influence the relationship between advertising formats and attitudes toward the ad and the sponsored brand in two specific advertising contexts; a high cognitive involving product category and a low cognitive involving product category. For managers, this research may assist in determining the potential effectiveness of planned comparative ads campaigns with different constituent groups. For researchers, our work contributes to the understanding of the drivers of comparative ad effectiveness.

The remainder of the paper is organized as follows. First we develop our boundary condition regarding the role of cognitive involvement and comparative ads on attitude toward the ad and attitude toward the brand. Next, we introduce INDSC and INTSC as individual variables and discuss how each impacts the relationship between cognitive involvement and advertising format. This is followed by a description of a study designed to assess our proposed relationships. Lastly we conclude with a discussion of our results.

Involvement and Comparative Ads Effectiveness

A consumer's involvement with a product can influence the information processing strategies employed. For example, higher priced, relatively infrequently purchased items (i.e., cars, computers, cameras) may evoke increased search on attributes and subsequent information processing. Conversely, a less involving product purchasing occasion may evoke less centrally based processing in which information claims are relatively less important. Delineating the manner in which information is processed is important because comparative advertising, by its nature, primarily applies to information comparing specific, measurable product attributes (Prasad 1976) through which the message arguments are thought to be processed centrally (Droge 1989).

In their investigation of the effect of product category involvement with the processing of comparative advertising, Putervu and Lord (1994) suggested that the degree of congruity between the advertising format (comparative versus noncomparative) and product category could influence brand attitudes. In their overall research examining affective and cognitive involvement they found that for a high cognitive involvement product, comparative ads generates more favorable attitudes towards the brand than do noncomparative ads. Specifically they suggested that in the context of four product categories (high-cognitive/high-affective involvement; high-cognitive/low-affective involvement; low-cognitive/high-affective involvement and low-cognitive/low-affective involvement) that the level of an individual's involvement is important in determining the effectiveness of comparative ads. In a similar vein, Yagci, Biswas and Dutta (2009), in their study of relevant attribute comparison ads, found that congruency with the comparative advertising format influenced the effectiveness. This discussion raises the important notion that advertising format, product category and an individual's level of involvement at the time of exposure can influence evaluations.

Self-Construals and Ad Evaluations

To further understand the processing used to interpret information conveyed in a comparative versus noncomparative ad as noted above, individual characteristics are likely to influence how one incorporates advertising information. One such characteristic is the cultural lens through which an individual interprets information (i.e., Aaker 2000; Han and Shavitt 1994).

In a study in which communication styles were observed, Gudykunst, Matsumoto, Ting-Toomey, Nishida, Kim and Heyman (1996) found that high collectivistic oriented cultures rely heavily on indirect, ambiguous, non-verbal, reserved and understated communication. In contrast, an individualistic culture's communication was identified as one that is

direct, precise, open, and based on feelings or true intentions. It has also been suggested that cultures high in collectivism discourage direct advertising comparisons to maintain consensus and harmony (Miracle, Chang and Taylor 1992) while individualistic cultures emphasizes direct competition (Cheng 1994). Comparative ads which tend to use explicit comparison and aggressive competition are suggested to be more congruent with individualistic cultures and found to be viewed more positively (Jeon and Beatty 2002).

In the examination of cultural dimensions from an individual versus a national level, self-construal is often used as a proxy for the manifestation of Hofstede's (1990) collectivism - individualism dimension of a culture (Gudykunst et al. 1996; Polyrat and Alden 2005). Self-construal is conceptualized as the thoughts, feelings, and actions concerning the relationship of the self to others, and, themselves distinct from others (Singelis and Sharkey 1995). The cultural orientation of the individual influences the formation of self construals (Singelis 1994) with those from an individualistic culture (versus collectivistic) tending to have a higher independent self-construal (INDSC) and those from a collectivistic culture (versus individualistic) tending to have higher interdependent self-construal (INTSC). Though INDSC and INTSC were originally conceptualized as the anchors of a one-dimension variable (Hofstede 1990), researchers have treated them as two distinct dimensions (Singelis 1994; Oyserman, Coon and Kemmelmeir 2002). Specifically, a person with high INTSC does not necessarily imply low INDSC.

Additionally, it has also been suggested that even within a culture there will be differences in individual self construal (e.g., Aaker 2000; Donthu 1998). For example, even though the United States is regarded as representative of an individualistic culture, there are variances in self-construals within the population (Aaker 2000; Choi and Miracle 2004; Polyrat and Alden 2005). The work of Aaker (2000) suggests that within the "melting pot" of

America, there are groups of individuals that mimic different cultural orientations.

Previous research has identified that the congruity between culture background and involvement level can affect the advertising effectiveness. For example, Han and Shavitt (1994) in their cross cultural analysis of print ads suggest that advertising themes which are congruent with the individual's culture background can be more persuasive when promoting low-involvement products, such as frequently purchased consumables. For example, Aaker, (2000) in her study of the diagnosticity versus accessibility processing of advertising information, replicated basic findings that high culturally congruent advertising information lead to more favorable attitudes under low-involvement conditions.

It has also been suggested that an individual's self construal can also have an important impact on advertisement evaluations (Polyorat and Alden 2005). Similar to the argument that congruency between culture and advertising themes moderates advertising persuasion effects when promoting low-involvement products (Han and Shavitt 1994; Aaker 2000), we propose that when promoting a low-involvement product, individual difference factors can influence comparative advertising effectiveness. According to Zhang (2009), consumers' attitudes toward a product promoted with individualism appeals become favorable when their independent self-construals are accessible. Comparative ad is an advertising appeal that promotes individualism, and it is also reasonable to assume that when the participants' INDSC level is high; their INDSC are more easily assessable when they are exposed to comparative ads (versus noncomparative ads). As a result, comparative ads should introduce more positive attitudes in those high INDSC consumers. Based on congruity theory, since high INDSC is more congruent with comparative ads (versus noncomparative ads), it is also reasonable to expect high INDSC participants to have more favorable attitudes towards comparative ads. We therefore propose:

H₁: When exposed to comparative ads for a low-cognitive involvement product category, individuals with high (low) INDSC will (will not) have more favorable (a) attitude towards the advertisement (A_{ad}) and (b) attitude towards the brand (A_b) than when exposed to non-comparative ads.

A different pattern of results is expected for high-cognitive involvement products. These products, by their nature, are more likely to trigger careful comparison and attribute-related thinking. Therefore, individuals (regardless of INDSC) are expected to be more involved with the content of advertising. In this situation, we do not expect the congruity between self construal and the advertising format to have an effect in the evaluation process. However, since comparative ads are more congruent with central information processing (Aaker 2000), individuals will have more favorable attitudes towards comparative advertising:

H₂: For a high-cognitive involvement product category, comparative ads will generate more favorable (a) attitude towards the advertisement (A_{ab}) and (b) attitude towards the brand (A_b) than non-comparative ads, regardless of INDSC level.

High INTSC consumers are like high collectivists, and they usually discourage or avoid direct advertising comparisons. As a result, when exposed to comparative ads (versus noncomparative ads) promoting low-involvement product, their attitudes are expected to be more negative (Choi and Miracle 2004) because the congruity between noncomparative ads and high INTSC is higher than that between comparative ads and high INTSC. We therefore propose:

H₃: When exposed to noncomparative ads for a low-cognitive involvement product category, individuals with high (low) INTSC will (will not) have more favorable (a) attitude towards the

advertisement (A_{ad}) and (b) attitude towards the brand (A_b) than when exposed to comparative ads.

Similarly, the effect of INTSC is likely to be paramount when promoting a low-involvement product. When promoting a high-involvement product, INTSC is not likely to be a significant factor.

H₄: For a high-cognitive involvement product category, comparative ads will generate more favorable (a) attitude towards the advertisement (A_{ad}) and (b) attitude towards the brand (A_b) than non-comparative ads, regardless of INTSC level.

METHOD

To develop the ad stimuli, three pilot tests were conducted. Those who participated in the pilot tests were excluded from the main study. In all cases, subjects were undergraduate students at a Midwestern U.S. college and received extra credit in a marketing class in exchange for their participation. For the first pilot test, the high and low cognitive involvement categories were developed. Forty-three subjects rated five product categories on the five-item, 7-point semantic differential cognitive involvement scale used by Putrevu and Lord (1994). The focal low and high-cognitive involvement products were toothpaste and desktop computers respectively.

The second pilot test was designed to elicit dominant salient product attributes as well as identify the direct comparative brand. Forty-six subjects listed the most important characteristics they would consider when buying toothpaste and a personal computer. Based on responses, taste/breath freshness, cleaning ability, whitening ability, and price were salient attributes for toothpaste while hard drive, RAM, CPU processor and price were important attributes for personal computers. Additionally, these subjects identified the leading brands of computers and toothpaste as Dell and Crest.

The final pilot test served as a manipulation check for the ads. Print ads were developed in a process similar to Polyorat and Alden (2005), featuring a general headline followed by four attribute descriptions and a concluding remark (see Appendix A). The comparative and noncomparative print ads for the same product contained the same information except that comparative ad also indicated that the advertised brand was better on each attribute than the comparative brand. Forty-five students participated with each exposed to one of two combinations (comparative ad for computer and noncomparative ad for toothpaste or comparative ad for toothpaste and noncomparative ad for computer). More than 90% of participants correctly identified the ad message structure as intended (i.e., comparative ad as comparative ad; noncomparative ad as noncomparative ad), therefore the manipulation of ad message structure was successful. In addition, subjects were asked if the information was credible and the target ads were viewed as

credible, that is, $\bar{X}_{NA} = 4.76$, $\bar{X}_{CA} = 4.65$

for computer and $\bar{X}_{NA} = 4.78$, $\bar{X}_{CA} = 4.72$ for toothpaste, significantly greater than four on a seven-point sum scale ($p < .05$). Both of the product categories selected represent categories in which the subjects would be or have been in the market for, as well as the theory testing objective of the study provide support for the use of a student sample.

Four booklet versions were then prepared which rotated the order of the target ads with filler ads maintaining their position. Booklets contained in order, a filler ad, a comparative [or noncomparative] ad for toothpaste or computer, another filler ad and then a noncomparative [or comparative] ad for the computer or toothpaste (e.g., Booklet 1: Filler ad, comparative toothpaste ad, Filler ad, noncomparative computer ad). Post-hoc analysis indicated no ordering effects on dependent variables.

Procedure

Because we are interested in the influence of individual variables on the process of evaluations, as opposed to group/nationality or culture, we examined subjects from a single country (e.g. Pechman and Esteban 1994). As such, one hundred and ninety six subjects participated in the study. Eight subjects were excluded due to their inability to correctly identify the advertising format. Forty two percent were female. Subjects were randomly provided one of the four experimental booklets.

After reading the instructions, participants opened their booklets and viewed the four ads, of which two were target ads. They then responded to a manipulation check (Chang 2007), rating the degree they agreed ($1 = Strongly Disagree$, $7 = Strongly Agree$) with the statements "The ad compares the target brand with a competitor's brand," and "the ad shows the superiority of the target brand to a competitor's brand." Agreement was significantly higher for comparative ads than noncomparative ads for both product categories for both questions (p 's $< .05$).

Next, attitude toward the ad (A_{ad}) was measured (Chang 2002) by participants providing the degree they agreed the ad was "interesting," "good," "likable," "not irritating," and "pleasant." These items were assessed on 7-point scales ($1 = Strongly Disagree$, $7 = Strongly Agree$) and had satisfactory internal reliability with $\alpha = 0.77$ (toothpaste) and $\alpha = 0.82$ (computer).

For attitude toward the brand (A_b) participants indicated the degree to which they agreed that the brand was "good," "likable," "pleasant," "positive," and "high quality." These items were adopted from Chang (2002) and had satisfactory internal reliability with $\alpha = 0.93$ (toothpaste) and $\alpha = 0.92$ (computer).

Cognitive involvement for the purchase of both product categories was assessed using Putrevu and Lord's (1994) five semantic differential items ($1 = \text{"Very Important decision and } 7 =$

“Unimportant decision”; 1=“Decision requires a lot of thought” and 7=“Decision requires little thought”; “A lot to lose if you choose the wrong brand” and 7=“Little to lose if you choose the wrong brand”; 1=“Decision is not mainly logical and objective” and 7=“Decision is mainly logical and objective”; 1=“Decision is based mainly on functional facts,” 7=“Decision is not based mainly on functional facts”). Overall these items exhibited satisfactory internal reliability with $\alpha = 0.72$.

Individual variables were collected next. The self-construal scale (1= *Strongly Disagree*, 7= *Strongly Agree*) used by Choi and Miracle (2004), exhibited satisfactory reliability for independent self construal (INDSC) $\alpha = 0.82$ and for interdependent self construal (INTSC) $\alpha = 0.83$. Following completion of the items, participants were debriefed and excused.

RESULTS

To verify the manipulation, product involvement was assessed and as expected, computers were rated by subjects as being a high cognitive, low affective involvement product (p 's < .05) and toothpaste was rated as a low cognitive, low affective involvement product (p 's < .05). As expected, a two-dimensional rather than a one-dimensional solution best represented the self-construal construct. INDSC and INTSC exhibited an orthogonal relation in the collected data ($r = -.02$, $p = 0.785$). Therefore, INDSC and INTSC were treated as two separate variables as suggested by the literature. The variables were then partitioned into three groups representing low, medium and high scores. In order to maximally test our hypotheses, subjects in the medium group were held out. Of the 188 original cases, 63 were considered as high INDSC (INTSC) and 63 were considered as low INDSC (INTSC). To test the influence of self construals on advertising effectiveness, MANOVA was employed (Jeong and Beatty 2002

Hypothesis 1. MANOVA (Multivariate analysis of variance) was first used to verify that there was a significant three-way interaction; among INDSC levels (high versus low), product categories (high versus low involvement) and advertising appeals (comparative versus noncomparative) ($F(2,243) = 4.51$, $p = 0.012$). This three-way interaction indicated that the effect of ad appeals and INDSC levels varied when promoting different product category.

MANOVA was then used to test the two-way interaction effect of low-involvement product. Overall, attitudes (towards toothpaste advertising and brand) were influenced by a significant two-way interaction between advertising format and INDSC level ($F(2,121) = 5.146$, $p = .007$). ANOVA (analysis of variance) was used to find detailed information about hypothesis 1. Supporting H1a, ANOVA shows that advertising format was not significant ($F(1,122) = .49$, $p = .48$) while there was a significant two-way effect between advertising format and INDSC level ($F(1,122) = 9.061$, $p = .003$) for A_{ad} . The comparative ad, as opposed to the non-comparative ad, was viewed more favorably by the customers with high INDSC ($A_{ad} = 3.19$ for noncomparative ad, $A_{ad} = 4.08$ for comparative ad, $p = .003$). Additionally as we suggested there was no difference in evaluations for those with low INDSC ($A_{ad} = 4.18$ for noncomparative ad, $A_{ad} = 3.71$ for comparative ad, $p = .18$). For attitude towards the brand, analysis indicated a significant interaction effect between the advertising format and the INDSC level ($F(1,122) = 8.80$, $p = .002$) and the mean values were consistent with the prediction for the role of INDSC as shown in Table 1. Thus, comparative ads promoting the low cognitive involving product, toothpaste, resulted in more favorable attitudes in high INDSC participants while not more favorable attitudes in low INDSC customers. ANOVA also showed that advertising format was not significant ($F(1,122) = .80$, $p = .37$). Overall, H₁ is supported.

Hypothesis 2. Overall, MANOVA showed that there was no significant two-way interaction

between advertising appeals and INDSC level on computer related attitudes ($F(2,121) = 0.958, p = .386$). ANOVA also showed that the interaction between advertising format and INDSC was not significant in affecting A_{ad} ($F(1,122) = 1.45, p = .23$). However, results did indicate a strong main effect for advertising format on A_{ad} ($F(1,122) = 6.842, p = .01$) with comparative advertising generally resulting more positive advertising attitudes. In terms of attitude towards the brand, ANOVA analysis indicated that the interaction between advertising format and INDSC was not significant ($F(1,122) = .42, p = .52$) and advertising format was not a significant main factor either ($F(1,122) = .42, p = .52$). Therefore, H_{2a} was completely supported while H_{2b} was not supported.

Hypothesis 3. MANOVA showed that there were significant three-way interactions among INTSC levels (high versus low), product categories (high versus low involvement) and advertising appeals (comparative ad versus noncomparative ad) ($F(2,243)=12.85, p=0.000$). This three-way interaction indicated that the effect of ad appeals and INTSC levels also varied when promoting different product category.

MANOVA showed that there was a significant two-way interaction between advertising appeals and INTSC level on toothpaste related attitudes ($F(2,121) = 13.38, p = .000$). ANOVA also showed there was a significant interaction effect between the ad format and INTSC level ($F(1,122) = 26.97, p = .000$) on advertising attitude towards toothpaste advertisement. Table 2 shows that when subjects viewed the comparative toothpaste ad, those with low INTSC had more favorable attitudes toward the ad than those exposed to non-comparative ads ($A_{ad} = 4.65$ for comparative ad and $A_{ad} = 3.45$ for noncomparative ad, $p = .000$); while noncomparative ad resulted in more positive advertising attitudes than comparative advertising did in high INTSC participants ($A_{ad} = 3.19$ for comparative ad and $A_{ad} = 4.11$ for noncomparative ad, $p = .001$). Therefore, H_{3a} is supported. In terms of attitudes towards the brand, H_{3b} , Table 2 illustrates that there was a significant interaction effect between the ad format and INTSC level ($F(1,122) = 9.62, p = .002$) on brand attitude and the means were in the predicted direction for those with low INTSC ($p = .09$) and high INTSC levels ($p = .01$). Therefore, H_{3b} is partly supported. ANOVA also showed that advertising format was not a significant factor in affecting either advertising attitudes ($F(1,122) = .11, p = .74$) or brand attitudes ($F(1,122) = .89, p = .35$).

TABLE 1:
Influence of Independent Self Construal on Dependent Measures

		Low_INDSC			High_INDSC			F	P
		Non-comparative	comparative	p	noncomparative	comparative	p		
Low-Cognitive involvement product	A_{ad}	4.18 (1.20)	3.71 (1.60)	0.18	3.19 (1.00)	4.08 (1.17)	0.003	9.061	0.003
	A_b	4.13 (1.18)	3.69 (1.58)	0.21	3.42 (1.07)	4.29 (1.05)	0.002	8.80	0.004
High-Cognitive involvement product	A_{ad}	3.78 (1.27)	4.65 (1.04)	0.004	4.39 (1.19)	4.74 (1.36)	0.28	1.45	0.23
	A_b	4.00 (1.41)	4.35 (1.29)	0.31	4.31 (1.56)	4.33 (1.36)	0.97	0.42	0.52

A_{ad} and A_b rated 1=strongly disagree, 7=strongly agree; Mean and (Standard Deviation)

Hypothesis 4. MANOVA showed that there was significant two-way interaction between advertising appeals and INTSC level on computer related attitudes ($F(2,121) = 2.267, p = .10$). For hypotheses 4a, in the case of the advertisement of the high cognitive involving product, the interaction between the advertising format and INTSC level was significant in affecting customers' attitude towards the computer advertising ($F(1,122) = 4.33, p = .04$). Table 2 shows the pattern of results. Comparative ad (versus noncomparative ad) resulted in more positive attitudes toward the ad for subjects with high INTSC ($A_{ad} = 4.99$ for comparative ad and $A_{ad} = 4.13$ for noncomparative ad, $p = .01$); however, for low INTSC subjects ($p > .88$), there was no significant difference. ANOVA also indicated a strong main effect for advertising format on A_{ad} ($F(1,122) = 3.85, p = .05$) with comparative advertising generally resulting more positive advertising attitudes. Therefore, H_{4a} was supported.

For H_{4b} regarding attitude towards the brand, there was a significant two-way interaction effect between advertising format and INTSC level ($F(1,122) = 4.02, p = .04$), but advertising format was not a significant factor ($F(1,122) = 0.46, p = .50$). Inspection of Table 2 shows that for low INTSC individuals there was no

difference in A_b ($p = .33$), but for high INTSC individuals, comparative ads resulted in more positive A_b than noncomparative ads ($A_b = 4.77$ for comparative ad and $A_b = 4.08$ for noncomparative ad, $p = .07$). Therefore H_{4b} was marginally supported.

DISCUSSION

This study investigated the influence of the individual self construals on the advertising effectiveness of comparative and non comparative ads in the context of a high cognitive involving product and a low cognitive involving product. Interesting results regarding the influence of the focal variables on attitude toward the ad and attitude toward the brand were found.

Overall, our study revealed that self-construals played important roles in the formation of attitudes; and this influence is different when associated with products of different cognitive involvement level. Specifically, when exposed to an advertisement for a low cognitive involvement product, the participants showed more favorable attitudes towards the advertising format that was congruent with their personal traits (i.e., high INTSC/ low INTSC would be consistent with comparative ads).

TABLE 2:
Influence of Interdependent Self Construal on Dependent Measures

		Low_INTSC			High_INTSC			F	P
		noncomparative	comparative	P	noncomparative	comparative	P		
Low-Cognitive involvement product	A_{ad}	3.45 (1.11)	4.65 (1.23)	0.000	4.11 (1.07)	3.19 (1.12)	0.001	26.97	0.000
	A_b	3.98 (1.40)	4.57 (1.10)	0.09	4.21 (1.42)	3.29 (1.33)	0.01	9.62	0.002
High-Cognitive involvement product	A_{ad}	4.66 (1.29)	4.62 (0.87)	0.88	4.13 (1.44)	4.99 (1.22)	0.01	4.33	0.04
	A_b	4.66 (1.73)	4.30 (1.20)	0.33	4.08 (1.57)	4.77 (1.38)	0.07	4.02	0.04

A_{ad} and A_b rated 1=strongly disagree, 7=strongly agree; Mean and (Standard Deviation)

Additionally, for an advertisement with a high cognitively involving product, it was predicted that an individual's INDSC and INTSC levels would be less likely to influence processing. We suggest that the advertising format would be paramount in this situation. The results of the experiment supported the hypotheses in most cases. For example, we found that comparative ads always generated more positive advertising attitudes than noncomparative ads did when promoting a high cognitive product (computer). However, in terms of brand attitudes, our data showed that ad format was not a consistent factor. The exception was observed in high INTSC participants where they showed more favorable attitudes towards comparative ads than noncomparative ads.

Most of our hypotheses regarding attitudes were reasonably supported. However, similar to past research, inconsistent findings were observed in some situations (see Choi and Miracle 2004; Putrevu and Lord 1994; Shao, Bao and Gray 2004). For example, in the case of the high cognitively involving product, though the participants generally exhibited a more positive A_{ad} for comparative ads versus noncomparative ads, there was no significant difference in forming A_b . Based on our result, participants' attitudes towards the ad format were not completely transferred into their attitudes towards the brand when promoting high-involvement product.

CONCLUSION

The importance of this study can be evaluated in several ways. First, to the best of our knowledge, this study is the first study to investigate the influence of comparative advertising for differing levels of cognitively involving products and the role that individual self construals have on evaluations. Most existing studies have found mixed results regarding comparative ad effectiveness when either focusing on individual traits or product characteristics. Given that the evaluation of advertising is a procedure involving viewers (participants) and target object presentation

(product and ad format), it is necessary to consider influences from both aspects. This research attempted to explain the influence of viewers and the objects by designing an experiment covering two different product categories and different self construals levels. Interestingly, we found that there is significant three-way interaction among self construal levels (both INTSC and IN DSC), product categories (high versus low involvement) and advertising formats (comparative versus noncomparative). The findings are consistent with our expectation that advertising format effectiveness depends on an individual's self construals and the product categories. These findings should help us better understand the impact of comparative ads as part of a system.

The findings from this study also provide important practical implications for advertising firms when planning advertising strategy. Our research found that for a low-cognitive involving product, the congruity between an individual's self construals and advertising format play an important role in advertising effectiveness. Therefore, when choosing advertising format for a low-involvement product, comparative ads may be better targeted to specific groups, especially in dynamic situations such as web advertising. Our study also found that for a high-involvement product, comparative ads generally resulted in more positive attitudes toward the ad (but not brand attitudes). Therefore, when promoting high-involvement product, care should be taken if comparative advertising is chosen as a format for increasing brand attitudes.

Care of course should be taken with the results found in this study. Though this study faces limitations in the use of scenario advertisements as well as student samples, the situations and characteristics of the study reasonably represent advertisements and product brochure information. Future research can provide greater external validity through the use of real, yet unfamiliar products as well as a more heterogeneous sample.

REFERENCES

- Aaker, Jennifer L. (2000), "Accessibility or Diagnosticity? Disentangling the Influence of Culture on Persuasion Process and Attitude," *Journal of Consumer Research*, 26 (March), 340-357.
- Chang, Chingching (2002), "Self-Congruency as a Cue in Different Advertising Processing Contexts," *Communication Research*, 29 (5), 503-536.
- Chang, ——— (2007), "The Relative Effectiveness of Comparative and Noncomparative Advertising: Evidence for Gender Differences in Information-Processing Strategies," *Journal of Advertising*, 36 (1), 21-35.
- Cheng, Hong (1994), "Reflection of Cultural Values: A Content Analysis of Chinese Magazine Advertisements from 1982 and 1992," *International Journal of Advertising*, 13(2), 167-183.
- Choi, Yung Kyun, and Gordon E. Miracle (2004), "The Effectiveness of Comparative Advertising in Korea and the United States: a Cross-Cultural an Individual-Level Analysis," *Journal of Advertising*, 33 (4), 75-87.
- Chow, Cheris W. C. and Chung-Leung Luk (2006), "Effects of Comparative Advertising in High- and Low-Cognitive Elaboration Conditions," *Journal of Advertising*, 35 (2), 55-67.
- Donthu, Naveen A. (1998), "Cross-Country Investigation of Recall of and Attitude toward Comparative Advertising," *Journal of Advertising*, 27 (2), 111-122.
- Droge, Cornelia (1989), "Shaping the Route to Attitude Change: Central versus Peripheral Processing through Comparative versus Non-comparative Advertising," *Journal of Marketing Research*, 26 (May), 193-204.
- Etgar, Michael, and Steven A. Goodwin (1982), "One-Sided versus Two-Sided Comparative Message Appeals for New Brand Introductions," *Journal of Consumer Research*, 8 (March), 460-465.
- Grewal, Dhruv, Sumumar Kavanoor, Edward F. Fern, Carolyn Costley, and James Barnes (1997), "Comparative Versus Noncomparative Advertising: A Meta-analysis," *Journal of Marketing*, 61 (4), 1-15.
- Gudykunst, W. B., Matsumoto, Y., Ting-Toomey, S., Nishida, T., Kim, K., & Heyman, S. (1996), "The Influence of Cultural Individualism-collectivism, Self-construals, and Individual Values on Communication Styles across Cultures," *Human Communication Research*, 22 (4), 510-543.
- Han, Sang-Pil, and Sharon Shavitt (1994), "Persuasion and Culture: Advertising Appeals in Individualistic and Collectivistic Societies," *Journal of Experimental Social Psychology*, 30 (4), 326-350.
- Hofstede, Geert (1990), *Culture and Organization: Software of the Mind*, London: McGraw-Hill.
- Irwin, Julie R. and Gary H. McClelland (2003), "Negative Consequences of Dichotomizing Continuous Predictor Variables," *Journal of Marketing Research*, 40 (3), 366-371.
- Jain, Shailendra Pratap and Steven S. Posavac (2004), "Valenced Comparisons," *Journal of Marketing Research*, 41 (1), 46-58.
- Jeon, Jung Ok and Sharon E. Beatty (2002), "Comparative Advertising Effectiveness in Different National Cultures," *Journal of Business Research*, 55 (11), 907-913.
- MacCallum, Robert C., Shaobo Zhang, Kristopher J. Preacher, and Derek D. Rucker (2002), "On the Practice of Dichotomization of Quantitative Variables," *Psychological Methods*, 7 (1), 19-40.
- Miracle, Gordon E., Kyu-Yeol Chang, and Charles R. Taylor (1992), "Culture and Advertising Executions: A Comparison of Selected Characteristics of Korean and U.S. Television Commercials," *International Marketing Review*, 9(4), 5-17.
- Oyserman, Daphna, Heather M. Coon, and Markus Kemmelmeir (2002), "Rethinking Individualism and Collectivism: Evaluation of Theoretical Assumptions and Meta-Analyses," *Psychological Bulletin*, 128 (1), 3-72.

- Pechmann, Cornelia and S. Ratneshwar (1991), "The Use of Comparative Advertising for Brand Positioning: Associative Versus Differentiation," *Journal of Consumer Research*, 18 (3), 145-160.
- Polyorat, Kawpong, and Dana L. Alden (2005), "Self-Construal and Need-for-Cognition Effects on Brand Attitudes and Purchase Intentions in Response to Comparative Advertising in Thailand and the United States," *Journal of Advertising*, 34 (1), 37-48.
- Prasad, V. Kanti (1976), "Communications-Effectiveness of Comparative Advertising: A Laboratory Analysis," *Journal of Marketing Research*, 13, 128-137.
- Priester, Joseph R., John Godek, D. J. Nayakankuppum and Kiwan Park (2004) "Brand Congruity and Comparative Advertising: When and Why Comparative Advertisements Lead to Greater Elaboration," *Journal of Consumer Psychology*, 14 (1/2), 115-123.
- Putrevu, Sanjay, and Kenneth R. Lord (1994), "Comparative and Noncomparative Advertising: Attitudinal Effects Under Cognitive and Affective Involvement Conditions," *Journal of Advertising*, 23 (2), 77-91.
- Shao, T. Alan, Yeqing Bao and Elizabeth Gray (2004), "Comparative Advertising Effectiveness: A Cross-Cultural Study," *Journal of Current Issues and Research in Advertising*, 26 (2), 67-80.
- Singelis, Theodore M. (1994), "The Measurement of Independent and Interdependent Self-Construals," *Personality and Social Psychology Bulletin*, 20, 580-591
- and William E. Sharkey (1995), "Culture, Self-Construal, and Embarrassability," *Journal of Cross-Cultural Psychology*, 26 (6), 622-644.
- Yagci, Mehmet I., Abhijit Biswas, Sujay Dutta (2009). "Effects of Comparative Advertising Format on Consumer Responses: The Moderating Effects of Brand Image and Attribute Relevance," *Journal of Business Research*, 62 (8), 768-774.
- Zhang, J. (2009), "The Effect of Advertising Appeals in Activating Self-Construals: A Case of Bicultural Chinese Generation X Consumers," *Journal of Advertising*, 38 (1), 63-81.

APPENDIX A
Advertisement Claims for Comparative and Non Comparative Advertising Formats

Computer Ad (noncomparative)	Computer Ad (comparative)
<p><u>With GIGA, you get a high-end configuration at a low price along with good quality and U.S.-based tech support.</u></p> <p>Hard Drive All-In-One <i>GIGA</i> PC has 400G SATA Hard Drive with just \$999.</p> <p>RAM All-In-One <i>GIGA</i> PC has 4G PC2-5300 DDR2 memory with just \$999.</p> <p>Processor All-In-One <i>GIGA</i> PC uses Intel Core 2 Duo E6550 Dual Core Desktop Processor with just \$999.</p> <p>Others DVD±RW DL, Windows Vista Home Premium, 21" LCD, and Three-year warranty.</p> <p align="center">GIGA: Get a PC and get a good One!</p>	<p><u>With GIGA, you get a higher-end configuration at the lower price than Dell, along with better quality and U.S.-based tech support.</u></p> <p>Hard Drive All-In-One <i>GIGA</i> PC has 400G SATA Hard Drive with just \$999, compared to <i>Dell</i> XPS One All-in-One \$1,299 with 320G.</p> <p>RAM All-In-One <i>GIGA</i> PC has 4G PC2-5300 DDR2 memory with just \$999, compared to <i>Dell</i> XPS One \$1,299 with 2G.</p> <p>Processor All-In-One <i>GIGA</i> PC uses Intel Core 2 Duo E6550 Dual Core Desktop Processor with just \$999, compared to <i>Dell</i> XPS One \$1,299 with the same processors.</p> <p>Others DVD±RW DL, Windows Vista Home Premium, 21" LCD, better than <i>Dell</i> XPS One. Three-year warranty.</p> <p align="center">GIGA: Get a PC and get a better One!</p>
Toothpaste Ad (noncomparative)	Toothpaste Ad (comparative)
<p align="center">Why should you choose CoolFresh the next time you shop for toothpaste?</p> <p>Taste Recent tests conducted by a marketing research firm found that 9 out of 10 consumers like the refreshing taste of <i>CoolFresh</i>. You can be confident about your fresh breath after using <i>CoolFresh</i>.</p> <p>Cleaning Ability Independent clinical tests document <i>CoolFresh's</i> cleaning ability— <i>CoolFresh</i> removes plaque!</p> <p>Powerful Whiteners Another clinical test demonstrates that <i>CoolFresh</i> is effective in removing stains from your teeth.</p> <p>Value <i>CoolFresh</i> is reasonable in price.</p> <p align="center">CoolFresh!</p>	<p align="center">Why should you choose CoolFresh instead of Crest the next time you shop for toothpaste?</p> <p>Taste Recent tests conducted by a marketing research firm have shown that 9 out of 10 consumers prefer the refreshing taste of <i>CoolFresh</i> over the taste of <i>Crest</i>. You can be more confident about your fresh breath with <i>CoolFresh</i> than with <i>Crest</i>.</p> <p>Cleaning Ability Independent clinical tests document <i>CoolFresh's</i> cleaning ability — <i>CoolFresh</i> removes more plaque than <i>Crest</i>!</p> <p>Powerful Whitener Another clinical test demonstrates that <i>CoolFresh</i> is 20% more effective than <i>Crest</i> whitening products in removing stains from your teeth.</p> <p>Value <i>CoolFresh</i> is cheaper than <i>Crest</i>.</p> <p align="center">CoolFresh!</p>