

**CULTURE-DEPENDENT ASSIMILATION AND DIFFERENTIATION OF THE SELF:
PREFERENCES FOR CONSUMPTION SYMBOLS
IN THE UNITED STATES AND CHINA**

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In two studies, we investigate how differences in self-construal patterns affect preferences for consumption symbols through the process of self-expression. The results of Study 1 demonstrate that individuals with a dominant independent self-construal hold attitudes that allow them to express that they are distinct from others. In contrast, individuals with a dominant interdependent self-construal are more likely to hold attitudes that demonstrate points of similarity with their peers. By unpacking these culture-based effects at an individual level through a set of mediation analyses, we show that when meaning is controlled for, the attitudinal differences across cultural groups dissipate. Study 2 provides additional evidence for the mechanism presumed to underlie the results by identifying differential schematic processes as the driver of expressed preferences. We find that differential levels of recall for similar and distinct items exist across culturally-encouraged selves, documenting higher recall for schema-inconsistent information. We discuss the results in terms of differences and similarities in psychological processes across cultures and encourage future research that expands the framework to group decisions and social preferences.

Individuals frequently hold attitudes and state preferences that reflect and express aspects of their own self (Katz, 1960; Shavitt, 1990; Smith, Bruner, & White, 1956). This phenomenon has been documented in a variety of domains including preferences for romantic partners (Swann, Stein-Seroussi, & Giesler, 1992), social situations (Snyder & Ickes, 1985), interaction partners (Robinson & Smith-Lovin, 1992), as well as consumption symbols such as products and brands (Prentice, 1987). In some cases, the attitudes serve self-verification purposes, other times self-enhancement purposes. However, in either case, attitudes are used to express one's dispositions and attitudes to others (e.g., Schlenker, 1980), to one's self (e.g., Swann & Read, 1981, Study 3), or to both (e.g., Wicklund & Gollwitzer, 1982).

Another unifying theme in this research has been the focus on North American contexts. This stream of research has been conducted almost exclusively in the West, where a particular view of the self is fostered. Individuals raised in the West, and in particular, North America, tend to have a highly accessible independent self-construal where the awareness of one's unique personality traits tends to be high

(McGuire & McGuire, 1982), as is the motivation to express one's distinct traits (Park, 1998). Research has been silent on whether processes and outcomes of self-expression may change when self-construal patterns differ fundamentally. What happens in the case of individuals with a dominant interdependent self-construal where the awareness of one's distinct personality traits may be lower but the awareness of how one relates to others is higher (Markus & Kitayama, 1991)?

The primary objective of this research is to address this question. Specifically, we seek to demonstrate that while the *outcomes* that result when attitudes are formed based on self-expressive reasons differ for individuals with distinct construal types, the *process of self-expression* remains similar. That is, a singular role of self-expression exists.

A secondary objective of this research is to explore the underlying processes of self-expression by identifying different schematic processes as a driver of expressed preferences. We demonstrate that differential levels of recall for information indicating how similar one is to others relative to how different one is from others, are found for individuals with a highly accessible independent self relative to those with a

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highly accessible interdependent self. In this light, the theoretical link from culture to expressed individual preferences is made (Study 1) and the process that underlies this link is explicitly examined (Study 2) in order to gain greater confidence that the expressed individual preferences are associated with culturally-nurtured self views.

The Role of the Culture in Self-expression

Recent research has shown that every individual, in any culture, possesses at least two selves: an independent self and interdependent self (Gudykunst, Matsumoto, Ting-Toomey, Nishida, Kim, & Heyman, 1996; Markus & Kitayama, 1991; Singelis, 1994). The independent self involves cognitions concerning individual personality traits, which are seen as residing in the person and being independent from social context and situational constraints (e.g., "I am smart"). The interdependent self, on the other hand, involves cognitions concerning characteristics that are inherently more indicative of how one relates to others (e.g., "I am a daughter"; Greenwald & Pratkanis, 1984).

However, while the two self views appear to co-exist within every individual (Singelis & Brown, 1995) and while each can be made temporarily accessible through referencing tasks (e.g., Aaker & Williams, 1998), situational contexts (e.g., Lee, Aaker, & Gardner, 2000) and primes (e.g., Hong, Morris, Chiu, & Benet-Martínez, 2000), the chronic level of accessibility of the two self views tends to be influenced by antecedent variables such as culture (for a discussion, see Lonner & Adamopoulos, 1997). That is, cultural differences arising from traditions and religions (e.g., Buddhism versus Christianity), life philosophies (e.g., Confucianism versus the Enlightenment), and socialization processes (e.g., child-rearing practices that encourage differentiation versus assimilation) tend to foster the asymmetric development of the independent or interdependent self. Therefore, at the aggregate or cultural level, self view differences have been found whereby individuals from East Asian cultures tend to see themselves as more independent and less interdependent than those in North American cultures (e.g., Kwan, Bond, & Singelis, 1997; Singelis & Sharkey, 1995, but see Gudykunst et al., 1996), a pattern that has been replicated using "Traditional" and "Western" bicultural samples (Yamada & Singelis, 1999).

These distinct ways of viewing the self impact a broad range of social and cognitive processes and have primarily been explored through the method of cross-cultural comparison (see Markus, Kitayama, & Heiman, 1996, for a review). To illustrate, in North America where independence is celebrated, children are encouraged to be unique and self-determining (Bellah, Madsen, Sullivan, Swidler, & Tipton, 1985). Infants are given their own beds and rooms to foster autonomy. When American children are asked to describe themselves by listing their characteristics, they focus on attributes and behavior that differentiate them from their classmates (McGuire, 1984).

In contrast, socialization processes adopted in East Asian cultures tend to encourage a different set of values. One of the most frequent descriptions of a "good child" by Chinese parents is for the child to be group-oriented and cooperative (Wu, 1996). To attain such an ideal, Chinese children are encouraged to pursue collective goals and elaborate on their own inadequacies relative to other children in an effort to "blend in" or assimilate with other children (Yu, 1996). As a result of these socialization processes, Triandis (1989) argues that in Western societies, "to be distinct and different are highly valued, and people find innumerable ways to show themselves to others as different (in dress, possessions, speech patterns). By contrast, in Eastern cultures, conformity to the other in public settings is valued" (p. 350).

This premise, however, suggests two possibilities for the domain of self-expression. One is that the desire for self-expression simply is higher among individuals raised in North America relative to those in East Asia. The second is that the desire for self-expression is similarly high in the two cultural contexts, but the nature of the self that is expressed differs. That is, traits that demonstrate points of distinction from others should be expressed in the former case, while traits that demonstrate points of similarity with others should be expressed in the latter. In other words, while self-expression occurs for individuals in the two cultural contexts, the nature of the self that is expressed differs.

We test this hypothesis in Study 1 by imbuing consumption symbols, such as brands, with different types of associations. One set of associations suggests that the user of the brand would possess points of differentiation from others; the second set of associations suggests that the user would exhibit points of assimilation or similarity. We then examine whether stated attitudes toward the brands differ for individuals with the distinct self-construal patterns, whereby brand attitudes allow them to express their respective selves. We provide convergent evidence for the basic effect, operationalizing self-view through both national culture and individual differences (Singelis, 1994). In doing so, we hope to eliminate potential confounding explanations that may be associated with cultural differences alone (Bond, 1998), and to provide a clearer picture of the relative role of individual and cultural level variations in self view. Finally, through a series of mediation analyses in Study 1 and an examination of underlying schematic processes in Study 2, we provide evidence that the relationship between cultural values and individual level preferences is tied to the self.

STUDY 1

Overview

In Study 1, we focus on the expression of preferences in the domain of consumption symbols since past research has shown that brands (e.g., Nike, BMW, Marlboro) can be associated with personality traits, and that individuals often hold preferences toward them that are self expressive in

nature (Aaker, 1999; Shavitt, 1990). As a cover story, we told participants that the marketer of a particular brand of watches was considering a new advertising campaign, and that consumer reactions to the campaign were needed. In the campaign, the brand was described as having primarily differentiation or assimilation associations. Thus, a 2 (Culture: American vs. Chinese) x 2 (Framing: differentiation vs. assimilation) between-subjects design was used.

Method

Stimuli Development

A pretest was conducted to identify a brand stimulus that was similarly liked and familiar in both cultural contexts. Therefore, participants in the United States ($n = 20$) and mainland China ($n = 20$) were given a set of salient brands from ten product categories (e.g., athletic shoes, apparel, fragrances). Participants rated each of the brands, all of which were available in both China and the United States, on 7-point Likert scales that captured valence (1 = *very unfavorable, negative, and bad*, 7 = *very favorable, positive, and good*; $\alpha = .91$) and familiarity (1 = *not at all familiar, well-known, and common*, 7 = *very familiar, well-known, and common*; $\alpha = .83$). The results of a one-way ANOVA suggested that the Timex brand was the most similarly valued ($M = 4.24$) and familiar ($M = 5.23$) for individuals in the two cultural groups, $F_s < 1$, so it was chosen as the stimulus.

Participants and Procedure

A total of 50 Chinese participants ($M = 18.72$ years, 32% female) from an undergraduate program at a large Chinese university, and 71 Caucasian participants ($M = 20.60$ years, 49% female) from an undergraduate program at a large North American university were recruited to participate.¹ Participants read the following instructions: "Timex watches is considering a new advertising campaign and is interested in getting feedback about it before the advertisements are created and the campaign is launched. Therefore, a very brief description of the central message in the advertising campaign will be given to you below, followed by a series of questions regarding your reactions to the campaign." A random selection of half of the participants was exposed to the differentiation positioning frame. Since the intent of the manipulation was to change the meaning of the advertising campaign (i.e., degree of differentiation or assimilation imbued in the message) but not the valence (i.e., degree of positive or negative associations inferred based on the message), we attempted to control for the latter by framing both messages in a positive light. Participants in the differentiation frame condition were told that the central message was: "Timex watches. It embodies so much. It's like a person. It is an impressive personality, very individualistic, and with a strong focus and concern for oneself -- in a positive way." Participants in the assimilation frame condition were told

that the central message was: "Timex watches. It embodies so much. It's like a person. It is an impressive social being, very connected to others, and with a strong focus and concern for others -- in a positive way."

Next, all participants were asked three attitudinal questions, based on a 7-point Likert scale (1 = *brand is very unfavorable, negative and bad*, 7 = *very favorable, positive and good*). Manipulation checks were then collected. Participants were asked to rate the degree the message conveys assimilation (8 items drawn from Han and Shavitt (1994); e.g., support for the group, belonging) and differentiation (6 items; e.g., individuality, personal goals), a brand usage question ("Please indicate whether you own a Timex watch?") and demographic questions. They then filled out the Self Construal Scale (SCS, Singelis, 1994) that measures the two variables, independence (e.g., "I feel it is important for me to act as an independent person", "My personal identity, independent of others, is very important to me") and interdependence (e.g., "It is important for me to maintain harmony within my group", "It is important to me to respect decisions made by the group"). A high score on independence reflects an individual with a highly developed independent self, while a high score on interdependence reflects an individual with a highly developed interdependent self. However, importantly, the correlation between the two variables tends to be low (e.g., $r = .19$; Singelis & Sharkey, 1995), thereby suggesting that if one scores high on one variable, they may not necessarily score low on the other.

At the end of the questionnaire, participants were given an open-ended suspicion probe ("Please explain the purpose of the study"), then were debriefed and excused. Two participants mentioned the intent of the advertiser to appeal to consumers' emotions; however, no participant guessed the hypotheses. Accuracy of the Chinese version was verified using a back-translation procedure using two external translators blind to the hypotheses (Hui & Triandis, 1985).

Results

The hypotheses were tested based on an overall 2 x 2 between-subjects ANOVA. The covariate, prior use of the brand, did not influence the main or interaction effects involving the treatment variables. First, we performed a 2 x 2 ANOVA on the frame manipulation checks. Participants rated the degree the message conveys assimilation ($\alpha = .84$ for American participants; $\alpha = .89$ for Chinese participants) and differentiation ($\alpha = .73$ for American participants; $\alpha = .86$ for Chinese participants). As expected, the 2 x 2 ANOVA on the Differentiation frame index resulted in a significant main effect of Frame, $F(1, 117) = 12.38, p < .001$, where the differentiation frame received higher ratings than the assimilation frame ($M = 5.18$ vs. 4.39). Further, the parallel 2 x 2 ANOVA on the Assimilation frame index also resulted in a significant main effect of Frame, $F(1, 117) = 26.18, p < .001$, where the assimilation frame received higher ratings than the differentiation frame ($M = 4.59$ vs. 3.50). No other main or interaction effects were significant.

To test the hypotheses, the overall model was run on the evaluation index, an average of the three attitude items ($\alpha = .96$ for American participants, $\alpha = .88$ for Chinese participants). As expected, the ANOVA resulted in only a significant Culture x Frame interaction, $F(1, 117) = 15.74, p < .001$. Planned contrasts showed that, as predicted, Chinese participants had higher preference levels for the brand in the assimilation frame than the differentiation frame, $F(1, 117) = 9.34, p < .01$. In contrast, American participants had higher preference levels for the differentiation frame than the assimilation frame, $F(1, 117) = 6.82, p < .01$. See the Figure for means.

Unpacking Culture

Additional support for the premise that self view is the underlying determinant of why individuals in the two cultures differ in the nature of self-expression may be found through a mediation analyses relying on the measured SCS variable. In this light, the cultural level effects reported above can be unpacked at the individual level (Bond, 1998), thereby providing greater confidence that the results reported above are associated with the cultural encouragement of a dominant independent or interdependent self (rather than socio-economic differences associated with country status, for example). In line with Singelis, Bond, Sharkey, and Lai (1999), independence and interdependence scores were derived by multiplying the individuals' raw item score by the item factor score coefficient (as identified in Singelis, 1994), and totaling across the items composing each of the two variables. Internal reliabilities for the independent variable were relatively high: $\alpha = .87$ for American participants, $\alpha = .78$ for Chinese participants. For the interdependent variable, they were: $\alpha = .95$ for American participants, $\alpha = .90$ for Chinese participants.² Replicating prior research, Chinese participants had higher scores on the interdependent variable than did the American participants ($M = 5.42$ vs. $5.15, F(1, 117) = 3.57, p < .05$), while the American participants had higher scores on the independent variable than did the Chinese participants ($M = 5.44$ vs. $4.89, F(1, 116) = 23.60, p < .01$).³ When the variables were collapsed (high independent/low interdependent individuals or "Western" sample and low independent/high interdependent individuals or "Traditional" sample; Yamada & Singelis, 1999), Chinese participants were more interdependent and less independent in their self-construal than the Anglo American participants ($M = .02$ vs. $-.31, F(1, 116) = 3.94, p < .05$).

Next, two sets of four regression analyses (Baron & Kenny, 1986) were run to determine whether: (a) culture influences attitudes toward brand framed with differentiation (or assimilation) associations; (b) culture influences the profile of self-construal patterns (see above); (c) self-construal influences attitudes toward brand framed with differentiation (or assimilation) associations; (d) self-construal but not culture is a significant predictor in a model regressing attitudes toward a brand framed with

differentiation (or assimilation) associations. To account for potential cross-cultural differences in scale responses, we applied a z-transformation (within culture) to the SCS measure (Van de Vijver & Leung, 1997).

Processes of Assimilation

The results of the mediation analyses indicated that (a) Chinese versus American participants had more favorable attitudes toward a brand framed with assimilation associations (coefficient = $1.21, p < .001$); (b) Chinese versus American participants were more likely to be more interdependent and less independent (coefficient = $.61, p < .05$); (c) self-construal influenced attitudes toward a brand framed with assimilation associations (coefficient = $.36, p < .05$); and (d) in a model regressing attitudes toward an assimilation framed brand on both culture and self-construal, culture was not a significant predictor (coefficient = $.24, p = .15$) but self-construal was a significant predictor (coefficient = $.95, p < .01$) of attitudes.

Processes of Differentiation

To examine the mechanism underlying the processes of differentiation, a second set of analyses was conducted. The results demonstrated that (a) American versus Chinese participants had more favorable attitudes toward a brand framed with differentiation associations (coefficient = $.80, p < .03$); (b) American versus Chinese participants were more likely to be more independent and less interdependent (coefficient = $.53, p < .001$). Further, (c) self-construal had a marginal influence on attitudes toward a brand framed with differentiation associations (coefficient = $.45, p < .06$); and (d) in a model regressing attitudes toward a differentiation framed brand on both culture and self-construal, culture was not a significant predictor (coefficient = $.22, p = .47$) but self-construal was a significant predictor (coefficient = $.73, p < .05$) of attitudes. Taken together, the results of these analyses provide support for the premise that self-expression operates for members of both types of cultures. However, the nature of the self mediates the relationship between culture-based values and expressed preferences.

Discussion

Study 1 examined the hypothesis that attitudes formed based on self-expressive reasons should systematically differ across cultures. Consistent with predictions, individuals with a dominant independent self stated attitudes that were consistent with a self-expression process that highlights the self as differentiated from others. Those with a dominant interdependent self stated attitudes that were consistent with a self-expression process centered around the self as similar to others (see also, Han & Shavitt, 1994; Kim & Markus, 1999). The convergent evidence provided based on the cultural variable as well as the measured self view variable (Singelis, 1994), helps to rule out socio-demographic explanations as potential alternative explanations of the effects.

However, there are alternative reasons why the attitude shifts may have occurred. For example, cultural differences in

the perceived importance or heightened accessibility of the two sets of values (differentiation and assimilation) may account for the results. In this light, it is possible that attitudes toward consumption symbols found in Study 1 may have little to do with expressing one's self, but more to do with the conscious or subconscious endorsement of a set of values. While the results of the mediation analysis argue against this interpretation, Study 2 was conducted to garner further evidence for the premise that members of North American and East Asian cultural groups vary in the way they see themselves and that this variation in self view accounts for the differences in attitudes.

One way to provide evidence for this premise is by examining the relative recall of information that indicates how similar one is to others relative to that which indicates how different one is from others. Research on the false uniqueness effect, in particular, provides insight on how recall measure may differ. The false uniqueness effect refers to the perception that one's positions or attributes are more uncommon than is actually the case (e.g., Nisbett & Valins, 1987), particularly when the attribute is desirable (Suls & Wan, 1987).⁴ To illustrate, McGuire and his colleagues (e.g., McGuire & McGuire, 1982) investigated the contents of the spontaneous self-concept by categorizing responses to the query, "Tell us about yourself". Positively valenced attributes distinguishing the self from others in the general population or in a specific testing environment were especially likely to be mentioned (see also Kitayama, Markus, Matsumoto & Norasakkunkit, 1997 on more general self-enhancement processes).

This effect, however, may be culturally bound. For example, in one study, Trafimow, Triandis, and Goto (1991) had American and Chinese participants complete 20 sentences that began, "I am." Conceptually replicating the findings in McGuire & McGuire (1982), American respondents were likely to mention cognitions that refer to distinctive personal attributes or qualities. However, Chinese participants were more likely to refer to categories or groups with which the individual experiences a common fate or a common experience (e.g., I am an employee, I am a daughter). In other words, while individuals with a dominant independent self were likely to list attributes that demonstrated their uniqueness, individuals with a dominant independent self were likely to cite attributes that demonstrated their relationship or similarity with others (cf. Kim & Markus, 1999).

If true, individuals should form expectations and remember information in a way that reflects their beliefs or self views. That is, if an assimilation schema is held, information suggesting that individuals' positions are different from others should be particularly salient. Conversely, if a differentiation schema is held, information suggesting that individuals' positions are the same as others should be salient. The salience of these incongruent items should attract greater attention and result in deeper processing in the encoding process (Craik & Lockhart, 1972), and should therefore be more likely to be recalled

(Rojahn & Pettigrew, 1992). Thus, we predict that recall should be greater for assimilation information (or that which indicates that they are similar to others) relative to that differentiation information (or that which indicates that they are distinct from others) for individuals with a dominant independent self. The converse should occur for those with a dominant interdependent self. Study 2 tests these hypotheses, and in doing so, aims to provide further evidence for the schematic processing hypothesized to underlie the results of Study 1.

STUDY 2

Overview

Two groups of participants, those with an accessible independent self (Anglo American participants) and those with an accessible interdependent self (Chinese American participants), participated in this study. They were asked to make a choice between two brands in 20 product categories. All participants were then given feedback indicating that half of their brand choices (randomly selected) were the same as the majority of those of their peers. After a delay, participants were asked to recall their own choices between two brands in 20 product categories. To determine the extent to which the members of the distinct cultural backgrounds differ in their self views, we examined the relative recall for items that are schema inconsistent (i.e. "similar" items for Anglo American participants, "distinct" items for Chinese American participants) versus schema consistent (i.e., "distinct" items for Anglo American participants, "similar" items for Chinese American participants). We expect Anglo American participants to have greater recall for the similar than the distinct items, and the opposite pattern to occur for Chinese American participants. It should be noted that the experimental conditions are created to provide a context conducive to such a pattern of results. For example, processing demands are low (e.g., participants are run individually and given no time constraints), and the cover story focuses on evaluation goals for the participants rather than descriptive goals or memory tasks. In conditions where processing demands are high and the goals may differ, a different pattern of results may occur, one that documents heightened recall for consistent rather than inconsistent self-relevant information (Rojahn & Pettigrew, 1992).

Method

Participants and Procedure

Participants with the same age and gender profile as in Study 1 were selected. However, to provide generalizability of the underlying effects, another operationalization of culture was used, one that relied on ethnocultural background: Chinese American and Anglo American. Two points should be noted regarding this change in sample, however. First, the hypothesis tests involving these two groups may be conservative as within-country operationalizations tend to

provide less variance than between-country operationalizations (Triandis, 1993). Second and relatedly, the life experiences of a Chinese individual (Study 1) and a Chinese American individual (Study 2) vary considerably on many variables (e.g., differential exposure to Chinese and U.S. education, political and economic systems; Yamada & Singelis, 1999). Therefore, by drawing on a very different sample in Study 1 relative to Study 2, we may gain confidence that other factors, besides the relative accessibility of the independent or interdependent self, are not driving the results documented in Study 1.

Students attending a summer session at a large Western university in the United States were invited to participate in a study on brand evaluations. A random set of students with Chinese last names and non-Chinese last names were selected from two sources: a summer school session directory and a list of fraternity and sororities on campus. Individual e-mails were sent to the students offering them \$15 to participate. Out of the 200 students, 85% ($N = 155$) agreed to take part in the study. A total of 80 Chinese American participants ($M = 21.67$ years; 69% male) and 75 Anglo American participants ($M = 19.60$ years; 51% male) participated. Additional evidence for the participants' ethnic background was obtained from self-reported demographic information on a post-manipulation questionnaire. (There was 100% correspondence between the self-reports and the last name selection criteria). Further, to ensure equal levels of English knowledge, any participants who scored less than 4.0 when rating their written English knowledge (1 = *extremely limited*, 5 = *extremely good*) were eliminated ($n = 1$), leaving 79 Chinese American participants. In the group of 79, 28 were born and raised in mainland China; 51 were born and raised in the United States. Of those who were born in the U.S., 81% had at least one parent who was born in mainland China. In the group of 75 Anglo American participants, 100% had parents who were born in the U.S. In addition, a second operationalization of independence and interdependence was used to replicate the effect and to control for the heterogeneity in ethno-cultural background. As in Study 1, the SCS measure (Singelis, 1994) was included.

Participants were given the cover story that the sponsor of the study was interested in understanding the types of brands liked by 18-24 year old individuals, a group termed "Generation Y". Therefore, they would be asked to evaluate a series of brands in a variety of product categories. Specifically, participants were given two brands (e.g., Reebok and Nike athletic shoes) in 20 product categories (e.g., athletic shoes, juice, cellular phones), and instructed to circle which of the two brands in each category that they would want to buy. While the majority of Chinese American participants were born in the United States, product categories that are commonly used in both China and the U.S. were selected to avoid potential asymmetric levels of product familiarity in the two cultures. Moreover, the brands in each category were market leaders in their respective cultures to ensure that the feedback, suggesting

that referent others that did or did not select the same brand, was credible. Based on an internet search, the two brands with high market share in the 20 product categories in China and the United States were selected (total of 40 brands). In the final set of brands used as stimuli, 20 were common to both the U.S. and China lists (e.g., Coca Cola soft drinks, Motorola cell phones) and 20 were distinct (e.g., Qingfei cosmetics versus L'Oreal cosmetics).

Once the questionnaire was handed to the participant, the researcher verbally told the participant to hand it back to the researcher when they were done, at which point they were given a filler task that involved a series of mathematical questions and trivia questions. The filler task took 35-45 minutes. Although participants were not told that they would get their questionnaire returned to them, the researcher handed the participant a sheet entitled, "Peer Feedback: Percentage of Students in this University Who Selected Each Brand" approximately 20 minutes into the filler task, and asked him/her if they were interested in reviewing it before they finished the remainder of the filler task. All participants responded affirmatively. The process of reviewing the brand choices in each product category of other students, one by one, typically took 3-4 minutes. The feedback sheet highlighted the participants' own choice in the left column. In the right column, there was the percentage of students at the same university who also chose each of the two brands. On a randomly selected set of 10 of 20 items, the participant reviewed information indicating that they were similar to others in their brand choice. Similarity consisted of feedback showing that 70% or more of the individuals in the group choosing the same brand as the participant. For example, if the participant picked Mitsubishi over Motorola cell phones, the participant would see their choice in the left column, and "70%" for Mitsubishi would be in the right column. On the other set of 10 items, the feedback sheet indicated dissimilarity between the participants' own choice and that of others. Dissimilarity (or distinction) consisted of less than 30% of the individuals in the group choosing the same brand. By providing feedback regarding brand choices in this way, the similar feedback empirically occurred to the same degree as distinct feedback.

After reviewing the feedback, each participant was asked to complete the remainder of the filler task and then hand in both the filler task and feedback sheet. However, before leaving, the researcher asked each participant to complete a one-page questionnaire, entitled "Memory Task". On this sheet, participants were asked to recall which of the two brands in each category they chose. Finally, participants completed demographic information and the Singelis (1994) scale.

Results

The hypotheses were tested based on a 2 (Culture: Chinese American vs. Anglo American) x 2 (Response type: similar vs. distinct items) ANOVA. Culture was between-subjects; response type was within-subjects. We predicted

that Chinese American participants have better recall for brands in which their evaluations and those of referent others are dissimilar relative to that indicating that their evaluations and those of reference others are similar. We also predicted the reverse pattern for Anglo American participants. To test these predictions, we examined the number of items recalled in the Memory Task. Based on these recall measures, two numbers were calculated: (1) the number of 10 similar items correctly recalled ("Similar" items), (2) the number of 10 distinct items correctly recalled ("Distinct" items). The 2 x 2 ANOVA indicated a significant interaction effect, $F(1, 154) = 32.11, p < .01$, between culture and response type. Next, a difference score was calculated (DIFF = Distinct – Similar items), and t-tests were used to compare the degree to which participants in the two ethnocultural groups had differential levels of recall for the two types of information. Follow-up contrasts showed that, as predicted, Chinese American participants had better recall for Distinct items ($M = 9.35$) than Similar items ($M = 8.02$), $t(77) = 5.04, p < .001$. In contrast, as expected, Anglo American participants had better recall for Similar items ($M = 9.73$) than Distinct items ($M = 8.77$), $t(74) = 3.15, p < .01$.

To provide further evidence for this effect, we then examined the results by relying on the independence variable ($\alpha = .66$ for Anglo American participants, $\alpha = .74$ for Chinese American participants) and interdependence variable ($\alpha = .66$ for Anglo American participants, $\alpha = .74$ for Chinese American participants). The items in the SCS measures (Singelis, 1994) were identical to those used in Study 1. In line with prior research (e.g., Yamada & Singelis, 1999), Chinese American participants were more likely to be more interdependent and less independent in their self-construal than the Anglo American participants ($M = .78$ vs. $-.01$, $F(1, 152) = 53.41, p < .001$).⁵ As in Study 1, we applied a z-transformation within the two ethnocultural groups to the SCS measure, and examined the relationship of independence/interdependence and differential levels of recall (DIFF). Corroborating the results reported above, interdependence/independence was associated with variation on the difference between the Similar and Distinct items (coefficient = $.50, p < .01$). Together these results indicate that the difference between the types of items that represent assimilation (or similarity with others) versus differentiation (or distinction from others) varies for individuals with a dominant independent self relative to those with a dominant interdependent self. The evidence stemming from the culture-based effects, as well as the within-culture measured variable of independence/interdependence, provide further confidence of the basic effect.

Discussion

The objective of Study 2 was to examine schematic processes in memory to provide additional evidence for the systematic variation in the schemas held by individuals with

a dominant independent self relative to those with a dominant interdependent self. As predicted, Anglo American participants had better recall of similar items relative to distinct items, while Chinese American participants had better recall of distinct items relative to similar items. These results indicate that information may be encoded or retrieved in different ways based on one's view of self, and provide indirect support for the process presumed to underlie the results of Study 1; that is, shifts in the self can be associated with differences in preference for attitude objects.

GENERAL DISCUSSION

The objective of this research was to explore cultural differences in self-expressive processes, as reflected in stated preferences for consumption symbols. In Study 1, we examined differences in the nature of self-expression. Across two operationalizations of self-construal, national culture and individual differences (Singelis, 1994), the results indicated that those with a dominant independent self tend to self express by demonstrating their points of differentiation, while those with an interdependent self tend to self express by demonstrating points of similarity. Evidence for the mediating role of the self between culture and individual's preferences was also found. The results of Study 2 complemented these findings by showing that memory measures for individuals with dominant independent and interdependent selves differed: individuals with a dominant independent self recalled more items indicating similarity with others relative to items indicating that they differed with others. A different pattern emerged for individuals with a dominant interdependent self: better recall for distinct than similar self-relevant items was found. These results provide support for the process hypothesized to underlie the results of Study 1, and complement past research showing cultural differences in self view by focusing on cognitive consequences and memory processes associated with differing self views. Further, the results of these studies provide evidence that stated preferences toward brands (absolute preferences; Study 1, one's preferences relative to others; Study 2) can be seen as indirect modes of self-expression (Swann, 1987).

Together, these studies support recent findings in the literature on culture-driven attitudinal effects (e.g., Han & Shavitt, 1994; Kim & Markus, 1999), and extend this stream of research in two ways. First, the results shed additional light on past findings regarding the role of culture and processes of self-expression. For example, researchers have speculated that the need or motivation for self-expression is higher in North American relative to East Asian cultures, an effect that has been tied to a difference in underlying modes of maintaining self-esteem or self regard (Heine, Lehman, Markus, & Kitayama, 1999). Further, empirical support for this premise has been found. For example, Park (1998) found that, when given the opportunity to express one's own opinion in public, Korean participants did so less than American respondents. The results of Study 1, however, tell a slightly different story – one that suggests that self-expression occurs for both

individuals with a dominant independent self and those with a dominant interdependent self. Importantly, since the nature of the self that is expressed appears to be associated with a different set of traits, those that are consistent with assimilation versus a differentiation schema, it may be difficult to detect differential tendencies for self-expression when measured through more traditional modes (e.g., stated attitudes or behavior). If true, this would suggest that a reversal of the effects found by Park (1998) might occur if small changes in the experimental stimuli were made. To illustrate, in Park (1998), the public expression of one's opinions appeared to be made to others whose opinions were unknown. In such conditions, greater magnitude of self-expressive behavior may exist for American individuals relative to Korean individuals. However, in conditions where the opinions of others are known (rather than unknown; Tetlock, Skitka, & Boetgger, 1989), a shift may occur where Korean individuals relative to American individuals express their own opinions potentially to a greater degree, particularly if the opinion of others is consistent with their own opinion. Future research is needed to extend the current findings to conditions of public expression and examine potential moderating effects involving the nature of who the public is, and what opinions they hold.

Regarding the generalizability of these findings and future research, there are at least two limitations that might be considered. First, the task focus of both studies and the key dependent variables focused only on individual behavior (brand preferences in Study 1; recall of brand choices in Study 2), which has been the focus of much of the research in cultural psychology (Ongel & Smith, 1994). However, the question arises: Could the results of the present research be replicated for group choices? That is, will groups in East Asian cultures assimilate to the same degree as individuals in East Asian cultures when they receive feedback about their characteristics or performance relative to other groups? Conversely, will groups in Western cultures seek a point of differentiation? The answer may depend on whether the comparison group constitutes an in-group or out-group from the perspective of the target group (Iyengar, Lepper, & Ross, 1999). This in-group/out-group issue may be examined empirically, for example, by using a gift-giving choice context that highlights the ethnocultural background of the recipient as "Chinese/non-Chinese" or "American/non-American." Moreover, members of Chinese cultures tend to feel close and tightly integrated with the immediate face-to-face group of the family and close relatives but considerably less open to strangers, whereas such a distinction may not exist as sharply within a North American cultural context (Gau, Ting-Toomey, & Gudykunst, 1996). Therefore, Chinese individuals may demonstrate patterns of assimilation with the immediate reference group but differentiation from more distant reference groups, whereas North American individuals may not be subject to this effect.

A second issue concerns the nature of the stimuli

presented in the studies where brand evaluations were the focus. The nature of the stimuli was thus individual rather than social in nature. Will these results replicate for social choice situations (e.g., who to choose for a date, whether to join a group activity; cf. Snyder & Ickes, 1985)? In social choices, individuals do not only compare themselves to others but may consider whether they can meet others' expectations and fit their preferences. Future research is needed to expand the present conceptualization toward social rather than merely individual identities.

Finally, beyond raising these questions, the data discussed in this paper indicate a pattern that is consistent with a recent focus in cultural psychology; that is, when meaning (of stimuli) is controlled for, many of cross-cultural differences may dissipate (Hong et al., 2000). For example, while the results of Study 1 indicate that significant differences in evaluations of brands exist, we argue that these effects might be interpreted within the common tendency of self-expression that all individuals follow. The difference, as seen through the lens of self-construal, is associated with the nature of the self-expression. In Study 2, a similar pattern of recall occurred in the two cultures. Distinct relative to similar self-relevant information was recalled to a greater degree by individuals with a dominant independent self, while the converse was true for those with a dominant interdependent self. The cognitive processes that underlie the encoding of self-relevant information and the subsequent retrieval of that information appear quite similar across individuals. In this light, this research aims to add to a growing trend in cultural psychology, one that focuses on patterns of similarities as well as differences in processes and outcomes.

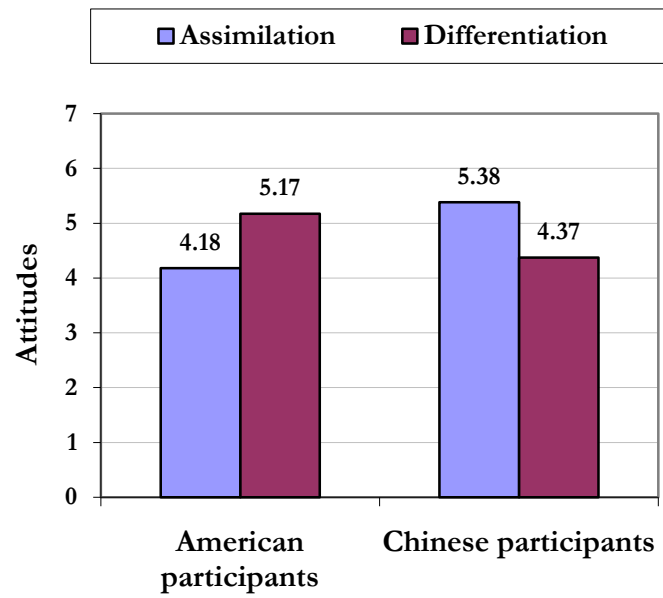
REFERENCES

- Aaker, J. (1999). The malleable self: The role of self-expression in persuasion. *Journal of Marketing Research*, 36, 45-57.
- Aaker, J., & Williams, P. (1998). Empathy versus pride: The influence of emotional appeals across cultures. *Journal of Consumer Research*, 25, 241-261.
- Baron, R. M., & Kenny, D. A. (1986). The moderator-mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. *Journal of Personality and Social Psychology*, 51, 1173-1182.
- Bellah, R. N., Madsen, R., Sullivan, W. M., Swidler, A., & Tipton, S. M. (1985). *Habits of the heart: Individualism and commitment in American life*. New York: Harper & Row.
- Bond, M. H. (1998). Social psychology across cultures: Two ways forward. In J. G. Adair & D. Belanger, et al. (Eds.), *Advances in psychological science*, (Vol. 1, pp. 137-150). Hove, England: Psychology Press.
- Craik, F. I., & Lockhart, R. S. (1972). Levels of processing: A framework for memory research. *Journal of Verbal Learning and Verbal Behavior*, 11, 671-684.
- Gau, G., Ting-Toomey, S., & Gudykunst, W. B. (1996). Chinese communication processes. In M. Bond (Ed.), *The handbook of Chinese psychology* (pp. 280-293). Hong Kong: Oxford University Press.
- Greenwald, A., & Pratkanis, A. (1984). The self. In R. S. Wyer & T. K. Srull (Eds.), *Handbook of social cognition* (pp. 129-178). Hillsdale, NJ: Erlbaum.
- Gudykunst, W. B., Matsumoto, Y., Ting-Toomey, S., Nishida, T., Kim, K. S., & Heyman, S. (1996). The influence of cultural individualism-collectivism, self-construal, and values on communications styles across cultures. *Human Communication Research*, 22, 510-543.
- Han, S., & Shavitt, S. (1994). Persuasion and culture: Advertising appeals in individualistic and collectivistic societies. *Journal of Experimental Social Psychology*, 30, 326-350.
- Heine, S. J., Lehman, D. R., Markus, H. R., & Kitayama, S. (in press). Is there a universal need for positive self-regard? *Psychological Review*.
- Hong, Y., Morris, M. W., Chiu, C., & Benet-Martínez, V. (in press). Multicultural minds: A dynamic constructivist approach to culture and cognition. *American Psychologist*.
- Hui, H. C., & Triandis, H. C. (1985). Measurement in cross-cultural psychology: A review and comparison of strategies. *Journal of Cross Cultural Psychology*, 16, 131-152.
- Iyengar, S. S., Lepper, M. R., & Ross, L. (1999). Independence from whom? Interdependence with whom? Cultural perspectives on ingroups versus outgroups. In D. Miller (Ed.), *Cultural divides: The social psychology of cultural identity*. New York: Sage Publications.
- Katz, D. (1960). The functional approach to the study of attitudes. *Public Opinion Quarterly*, 24, 163-204.
- Kim, H., & Markus, H. R. (1999). Deviance or uniqueness, harmony or conformity? A cultural analysis. *Journal of Personality and Social Psychology*, 77, 785-796.
- Kitayama, S., Markus, H. R., Matsumoto, H., & Norasakkunkit, V. (1997). Individual and collective processes in the construction of the self: Self-enhancement in the United States and self-criticism in Japan. *Journal of Personality and Social Psychology*, 72, 1245-1267.
- Kwan, V. S. Y., Bond, M. H., & Singelis, T. M. (1997). Pancultural explanations for life satisfaction: Adding relationship harmony to self-esteem. *Journal of Personality and Social Psychology*, 73, 1038-1051.
- Lee, A., Aaker, J., & Gardner, W. (2000). The pleasures and pains of distinct self-construal: The role of interdependence in regulatory focus. *Journal of Personality and Social Psychology*, 78, 1122-1134.
- Lonner, W. J., & Adamopoulos, J. (1997). Culture as an antecedent to behavior. In J. W. Berry, Y. H. Poortinga, J. Pandey (Eds.), *The handbook of cross-cultural psychology* (pp. 45-81). Boston: Allyn and Bacon.
- Markus, H. R., & Kitayama, S. (1991). The cultural construction of self and emotion: Implications for social behavior. In S. Kitayama & H. R. Markus (Eds.), *Emotion and culture: Empirical studies of mutual influence* (pp. 89-132). Washington, DC: American Psychological Assoc.
- Markus, H. R., Kitayama, S., & Heiman, R. J. (1996). Culture and "basic" psychological principles. In E. T. Higgins & A. W. Kruglanski et al. (Eds.) *Social psychology: Handbook of basic principles* (pp. 857-913). New York, NY: The Guilford Press.
- McGuire, W., & McGuire, C. (1982). Significant others in self-space. In J. Suls (Ed.), *Psychological perspectives on the self* (Vol. 1, pp. 73-120). Hillsdale, NJ: Erlbaum.
- McGuire, W. (1984). Search for the self: Going beyond self-esteem and the reactive self. In R. A. Zucker, J. Aronoff, & A. I. Rabin (Eds.), *Personality and the prediction of behavior* (pp. 73-120). New York: Academic Press.
- Nisbett, R. E., & Valins, S. (1987). Perceiving the causes of one's own behavior. In E. E. Jones & D. E. Kanouse, et al. (Eds.), *Attribution: Perceiving the causes of behavior* (pp. 63-78) Hillsdale, NJ: Lawrence Erlbaum Associates.
- Ongel, U., & Smith, P. (1994). Who are we and where are we going? *Journal of Cross-Cultural Psychology*, 25, 25-53.
- Park, E. (1998). *Individualism/collectivism, self-concept, and social behavior: False-uniqueness and the spiral of silence hypothesis*. Unpublished dissertation, Stanford University.
- Prentice, D. A. (1987). Psychological attitudes, correspondence of possessions and values. *Journal of Personality and Social Psychology*, 53, 993-1003.
- Robinson, D. T., & Smith-Lovin, L. (1992). Selective interaction as a strategy for identity maintenance: An affect control model. *Social Psychology Quarterly*, 55, 12-28.
- Rojahn, K., & Pettigrew, T. F. (1992). Memory for schema-relevant information: A meta-analytic resolution. *British Journal of Social Psychology*, 31, 81-109.

- Ross, L., Greene, D., & House, P. (1977). The false consensus effect: An egocentric bias in social perception and attribution processes. *Journal of Experimental Social Psychology*, 13, 279-301.
- Sanders, G. S. & Mullen, B. (1983). Accuracy in perceptions of consensus: Differential tendencies of people with majority and minority positions. *European Journal of Social Psychology*, 13, 57-70.
- Schlenker, B. (1980). *Impression management*. Belmont, CA: Wadsworth.
- Shavitt, S. (1990). The role of attitude objects in attitude functions. *Journal of Experimental Social Psychology*, 26, 124-148.
- Singelis, T. M. (1994). The measurement of independent and interdependent self-construal. *Personality and Social Psychology Bulletin*, 20, 580-591.
- Singelis, T. M., & Brown, W. J. (1995). Culture, self and collectivist communication: Linking culture to individual behavior. *Human Communication Research*, 21, 354-389.
- Singelis, T. M. & Sharkey, W. F. (1995). Culture, self-construal, and embarrassability. *Journal of Cross-Cultural Psychology*, 26, 622-644.
- Singelis, T. M., Bond, M. H., Sharkey, W.F., & Lai, C. S. (1999). Unpackaging culture's influence on self-esteem and embarrassability: The role of self-construal. *Journal of Cross-Cultural Psychology*, 30, 315-341.
- Smith, M. B., Bruner, J. S., & White, R. W. (1956). *Opinions and personality*. New York: Wiley.
- Snyder, M., & Ickes, W. (1985). Personality and social behavior. In G. Lindzey & E. Aronson (Eds.), *Handbook of social psychology* (pp. 883-947). New York: Random House.
- Suls, J., & Wan, C. K. (1987). In search of the false-uniqueness phenomenon: Fear and estimates of social consensus. *Journal of Personality and Social Psychology*, 52, 211-217.
- Swann, W. (1987). Identity negotiation: Where two roads meet. *Journal of Personality and Social Psychology*, 53, 1038-1051.
- Swann, W., & Read, S. (1981). Acquiring self-knowledge: The search for feedback that fits. *Journal of Personality and Social Psychology*, 41, 1119-1128.
- Swann, W., Stein-Seroussi, A., & Giesler, R. B. (1992). Why people self-verify. *Journal of Personality and Social Psychology*, 62, 392-401.
- Tabachnik, N., Crocker, J., & Alloy, L. B. (1983). Depression, social comparison, and the false-consensus effect. *Journal of Personality and Social Psychology*, 45, 688-699.
- Tetlock, P. E., Skitka, L., & Boettger, R. (1989). Social and cognitive strategies for coping with accountability: Conformity, complexity, and bolstering. *Journal of Personality and Social Psychology*, 57, 632-640.
- Trafimow, D., Triandis, H. C., & Goto, S. G. (1991). Some tests of the distinction between the private self and the collective self. *Journal of Personality and Social Psychology*, 60, 649-655.
- Triandis, H. C. (1989). The self and behavior in differing cultural contexts. *Psychological Review*, 96, 506-52.
- Triandis, H. C. (1993). Collectivism, individualism as cultural syndromes. *Cross Cultural Research*, 27, 166-80.
- Wicklund, R. A., & Gollwitzer, P. M. (1982). *Symbolic self-completion*. Hillsdale, NJ: Erlbaum.
- Wu, C. (1996). Chinese childhood socialization. In M. Bond (Ed.), *The handbook of Chinese psychology* (pp. 143-154). Hong Kong: Oxford University Press.
- Van de Vijver, F. & Leung, K. (1997). *Methods and data analysis of comparative research*. Thousand Oaks, CA: Sage Publications, Inc.
- Yamada, A., & Singelis, T. M. (1999). Biculturalism and self-construal. *International Journal of Intercultural Relations*, 23, 697-709.
- Yu, A. (1996). Ultimate life concerns, self and Chinese achievement motivation. In M. Bond (Ed.), *The handbook of Chinese psychology* (pp. 227-246). Hong Kong: Oxford Press.

FIGURE

STUDY 1: ATTITUDINAL RATINGS AS A FUNCTION OF CULTURE AND FRAME TYPE



FOOTNOTES

¹ Data for Study 1 were collected in two waves with participants from the same subject pool ($n = 57$; $n = 14$). Since a group variable was not significant in the overall analysis, the data were collapsed.

² Three items in the independent scale (“I’d rather say ‘No’ directly, than risk being misunderstood”, “I value being in good health above everything”, “I feel comfortable with being singled out for praise or rewards”) and one item in the interdependent scale (“Even when I strongly disagree with group members, I avoid an argument”) were dropped due to low item total correlations ($< .20$) in one of the cultural groups. All other items had high item-to-total correlations ($> .40$) in both groups, thereby demonstrating higher levels of metric equivalence across the constituent cultures.

³ To determine whether the persuasion appeal influenced the participants’ ratings on independence or interdependence, a 2 (Frame) X 2 (Culture) MANOVA was run on the SCS measures. Frame had no significant main or interactive effect with either measure ($F_s < 1$).

⁴ In contrast, when the attribute is undesirable, individuals often overestimate the typicality of their attribute or position (Tabachnik, Crocker & Alloy; 1983; Sanders & Mullen, 1983, see also Ross, Greene & House, 1977 on the false consensus effect).

⁵ To shed additional insight on the self views held by the two types of Chinese American participants, a set of ancillary analyses were run. Specifically, a one-level MANOVA was run on independence and interdependence. While Chinese American participants born in China scored directionally higher on the interdependence variable ($M = 1.99$, $F(1, 78) = 1.97$, $p = .16$) than Chinese American participants born in the United States ($M = 1.78$), no significant effects were found on the independence variable. In addition, a 2 (Country of birth) x 2 (Response type) ANOVA was run on the recall measures to examine whether country of birth influenced the focal dependent variable. No significant effects resulted ($p_s > .10$).