

A CROSS-CULTURAL RE-ASSESSMENT OF THE "CONSUMER SUSCEPTIBILITY TO INTERPERSONAL INFLUENCE" TRAIT

DENVER D'ROZARIO, *Howard University*

The "Consumer Susceptibility to Interpersonal Influence Scale" was developed (Bearden, Netemeyer and Teel 1989) using samples drawn from the macro-culture (i.e., Americans of European Ancestry, hereinafter referred to as Euro-Americans). Consequently, we do not know what the structure and properties of this scale are for non-Euro-Americans. We investigated these issues in this paper, using samples of African-, Asian and Hispanic-Americans. For comparative purposes, we also included a sample of Euro-Americans in this study. From an analysis of Bearden et al.'s (1989) scale in these four samples, we found that the underlying structure and properties of the susceptibility to interpersonal influence trait were: (a) largely the same for Euro- and Chinese-Americans, and comparable with those reported in the original study, but, (b) different for African- and Hispanic-Americans from that reported in the original study. Implications for marketers of these findings are discussed.

INTRODUCTION

Interpersonal influence has long (e.g., Bourne 1956) been recognized as an important influence on an individual's consumption behavior. Consequently, it has been widely studied in the marketing literature. However until recently (i.e., Childers and Rao 1992), this influence on consumption behavior has not been investigated in a non-Euro-American context. The results of this recent study (i.e., Childers and Rao 1992) have shown us that while this influence operates in much the same manner on Thai as on U.S. consumers, the *sources* of this influence vary sufficiently across the two national cultures as to warrant a modification of the original theory itself.

Studies such as that of Childers and Rao (1992), as well as those in other areas of the marketing literature (e.g., Durvasula, Andrews, Lysonski and Netemeyer 1993) have time and again shown that while constructs and theories of behavior that have been developed in Western/Euro-American cultures often generalize to non-Western/non-Euro-American

cultures, they do vary often enough (e.g., Alden, Hoyer and Lee 1993) in key aspects as to warrant a re-test and modification of the original construct or theory itself.

Thus, there are two objectives in this study. The primary objective is to investigate whether Bearden, et al.'s (1989) Consumer Susceptibility to Interpersonal Influence measure is valid in a population other than that in which it was originally developed. What is not apparent from Bearden, et al.'s (1989) study is the extent to which the structure and properties of their measure carry over into non-Euro-American populations. To answer this question, we chose to test Bearden, et al.'s (1989) measure in samples chosen from the African-, Asian- and Hispanic-American populations in the U.S.. A secondary objective is to re-test the structure and properties of Bearden, et al.'s (1989) measure in a sample chosen from the Euro-American population. From all four populations, we chose student samples, so that the results from this study may be compared with the results from the second (and final) student sample that Bearden, et al. (1989, Table 1) used in finalizing their measure.

THEORY

Consumer Susceptibility to Interpersonal Influence

Susceptibility to interpersonal influence has long been recognized as a relatively stable trait that varies across individuals and is believed to be an aspect of McGuire's (1968) general construct of influenceability (Bearden, et al. 1989). Based on the early work of Deutsch and Gerard (1955), three broad subtypes of this trait have been widely recognized. Though the nomenclature used to describe these influence types varies slightly from study to study, the following is perhaps the most widely used.

The first, namely, *utilitarian*-influence, operates when an individual complies with the expectations of another to gain a reward or avoid a punishment. In this type of influence situation, the individual adopts a certain behavior not because it is congruent with: (a) his own belief system, nor (b) that of another individual or group of individuals with whom he identifies, but because it is "prescribed" for him by some external agent.

The second, namely, *value-expressive*-influence, operates when an individual accepts influence from another agent with whom he identifies. In this type of influence situation, the individual adopts a certain behavior not because it is: (a) "imposed" on him externally, nor (b) because it is congruent with his own belief system, but because doing so allows him to act as if he actually were the agent that he identifies with or as if he were in a reciprocal role relationship with it.

The third and final type, namely, *informational*-influence, operates when an individual accepts influence from another who is perceived to mediate reality for him. This mediation may take place actively, whereby the individual solicits information from this other, or passively, whereby he obtains it by the mere observation of this other. In this type of influence situation, the individual adopts a certain behavior not because it is: (a) "imposed" on him externally, nor (b) because it is congruent with the value system of another with whom he identifies, but

because doing so allows him to react to this mediated reality, as dictated by his own beliefs. In other words, he believes in what he does.

Bearden, et al. (1989) developed a measure of *informational*- and *normative*-influence respectively. They found this trait to be two-dimensional. The first dimension was susceptibility to normative-influence and the second was susceptibility to informational-influence. Further, they found that, contrary to earlier studies (e.g., Park and Lessig 1977), the normative dimension subsumed both utilitarian and value-expressive influence and hence they developed one (eight-item) sub-scale to measure these two types of influence together. Their other (four-item) sub-scale measured susceptibility to informational influence. However this measure too was developed on macro-culture (i.e., Euro-American) consumers and thus its underlying structure and properties in micro-culture populations is unknown. There is reason to believe however, that both of these may be different in at least some non-Euro-American samples, as discussed in the next section. Further, this was the first measure of this trait in a non-product-specific context. Bearden, Netemeyer and Teel (1990) replicated their original study and re-validated their original measure, but they did this too using mostly Euro-American samples.

HYPOTHESES

The following are two clear implications of Childers and Rao (1992). First, the interpersonal influence process differs significantly enough across cultures as to warrant a similar re-examination of other constructs and theories that have been advanced in this area of the marketing literature. Second, Childers and Rao (1992) examined differences in interpersonal influence across national cultures. This however leaves the question of differences within a national culture still unanswered.

We tackle both of these issues in this study. Bearden, et al.'s (1989) consumer susceptibility to interpersonal-influence scale was developed and tested in the U.S. using samples of macro-culture (i.e., Euro-American) consumers. Though there is no direct evidence that shows that the structure and/or

properties of this scale are different in micro-culture populations in the U.S. in comparison with the macro-culture, there is much circumstantial evidence that suggests that this might be so, as we discuss later in this section. Thus, in this study, we do two things. First, we re-test Bearden, et al.'s (1989) scale in separate samples drawn from the African-, Asian- and Hispanic-American student populations in the U.S. This allows a test of the stability of the relationships originally reported by Bearden, et al. (1989) across contexts (i.e., across U.S. micro-cultures). Second, we also re-test Bearden, et al.'s (1989) measure using an Euro-American student sample similar to that used in the original study. This allows a test of the stability of the relationships originally reported by Bearden, et al. (1989) across time.

For Euro-Americans, since, as pointed out earlier, Bearden, et al. (1989) demonstrated that the structure of the susceptibility to interpersonal influence trait is two-dimensional, we merely, re-state their findings here, as the following null hypothesis,

H₁: A two-factor structure of normative and informational influence will produce a significantly better fit to the data than any other model of the factor structure underlying susceptibility to interpersonal influence in the Euro-American sample.

Since the literature on the structure of African- and Hispanic-American susceptibility to interpersonal influence is non-existent, we assume for now (in the absence of information to the contrary) that the structure of the susceptibility to interpersonal influence trait in these two populations is the same as it for Euro-Americans. Hence,

H₂: A two-factor structure of normative and informational influence will produce a significantly better fit to the data than any other model of the factor structure underlying susceptibility to interpersonal influence in the African-American sample.

H₃: A two-factor structure of normative and informational influence will produce a

significantly better fit to the data than any other model of the factor structure underlying susceptibility to interpersonal influence in the Hispanic-American sample.

For Chinese-Americans there has been at least one study (i.e., D'Rozario 1992) that has specifically compared individuals in this population group with their counterparts in the Euro-American population both in the degree of their susceptibility to and in the factor-structure underlying their susceptibility to interpersonal influence. Using samples of adult consumers, D'Rozario (1992) showed that even though Chinese-Americans are much more susceptible to normative (and just slightly more to informational) influence than are Euro-Americans: (a) these differences are not significant, and (b) more importantly for this study, there are no significant differences between the two groups in terms of the factor structure underlying their susceptibility to interpersonal influence. Thus in this study, we expect to find a two-factor structure underlying Chinese-American susceptibility to interpersonal influence. Hence,

H₄: A two-factor structure of normative and informational influence will produce a significantly better fit to the data than any other model of the factor structure underlying susceptibility to interpersonal influence in the Chinese-American sample.

METHODOLOGY

Sampling

Since Bearden, et al. (1989) used a convenience sample of undergraduate student subjects in the second and final administration of their scale, where it was refined, undergraduate students were used in this study as well, so that the results of this study might be most easily compared with the final version of Bearden, et al.'s (1989) scale.

From the Fall of 1989 to the Fall of 1997, in forty-one separate undergraduate classes, in three major universities in three major metropolises on the East coast of the U.S., students voluntarily participated in a study (for extra credit) that involved responding to

three sequential, self-administered questionnaires. Questionnaire administrations were separated by three to four-week intervals. Two of these questionnaires each included among other items, the entire twelve-item Bearden, et al. (1989) scale. A total of 1,845 respondents participated in this study, of which 256 (13.88%) were foreign-students and were excluded from further analyses.

One question (in the third questionnaire) required the student to self-select into an ethnic category that he/she felt best described his/her ethnicity. Based on their response to this question, we then grouped respondents into five categories: African-, Chinese-, Hispanic-, Euro-American and Other. Given the objectives of this paper, stated earlier, the first four categories mentioned were retained for further analyses. The Chinese- and Hispanic-American samples included both U.S. and foreign-born (but, not foreign-students) students. The foreign-born Chinese were from 15 different countries and the foreign-born Hispanics were from 11 different countries. Though we recognize that there might be differences between individuals from each of these countries, we felt it was appropriate to put them into these two large, albeit eclectic, ethnic groupings, because what we are testing in this study are differences between broadly-defined ethnic groupings (e.g., Chinese-Americans vs. Hispanic-Americans) and not differences between specific country-of-origin groups (e.g., Vietnamese-Chinese-Americans vs. Malaysian-Chinese-Americans). We leave it to future studies to test for possible further differences between specific country-of-origin groups. This is, however, beyond the scope of this study.

We chose African- and Hispanic-American respondents for inclusion in this study because they are the two largest micro-cultures in the U.S. (Bodovitz 1991a,b). We chose Chinese-American respondents because: (a) Asian-Americans are the third-largest (Bodovitz and Edmondson 1991), but fastest-growing micro-culture in the U.S. and, (b) Chinese-Americans are the largest sub-group (Riche 1991) within this micro-culture.

Samples

Of the 1589 non-foreign-student respondents, 922 (58.02%) identified themselves as being Euro-American, 179 (11.27%) identified themselves as being African-American, 132 (8.31%) identified themselves as being Chinese-American and 119 (7.49%) identified themselves as being Hispanic-American.

We compared these four groups on several background demographics, with the exception of educational status (since all four groups were comprised of undergraduates). There were no significant differences (at the $p < .01$ level) between all four groups on occupational status or gender. However, there were significant differences (at the $p < .01$ level) between Chinese- and African-Americans and between Euro-Americans and African- and Hispanic-Americans on income level. In addition, there were significant differences in terms of age (at the $p < .01$ level) between Chinese-Americans and African- and Hispanic-Americans and between Euro-Americans and Chinese-, African- and Hispanic-Americans. In light of these findings, we controlled for age and income level differences across all four groups in the rest of our analyses.

Instrument

Since this study was part of a larger comparative survey of various micro-cultures in the U.S. on several key constructs of interest to marketers, the "Consumer Susceptibility to Interpersonal Influence" scale was included, along with a number of other consumption-related and demographic questions in the original survey instrument. Since all respondents were undergraduates studying in the U.S., all questionnaires were administered in English.

RESULTS

Overview

First, to establish the dimensionality of the "Consumer Susceptibility to Interpersonal Influence" construct in each of the three micro-

cultures of this study, we conducted a separate exploratory factor analysis of this scale in the Chinese-, African- and Hispanic-American samples. It must be remembered that Bearden, et al. (1989) did not investigate these three groups in their study. For ease of comparison with the Euro-American sample in Bearden, et al.'s (1989) study, we also performed an exploratory factor analysis of this scale in the Euro-American sample of this study.

Next, following approaches advocated in the cross-cultural psychology literature (e.g., Hui and Triandis 1985) and demonstrated in the marketing literature (Durvasula, et al. 1993), we conducted the following sets of analyses. First, we examined the metric equivalence of the measure being investigated, separately in each of the four groups of this study. Next, we examined the metric equivalence of this measure across all four groups simultaneously. That is, we looked for an invariant pattern of measurement and relationships between constructs across all four groups. Finally, for groups in which this invariant pattern was established, we "decultured" the data (by standardizing the responses to each variable in each group separately), pooled it across groups, and examined model fits for the invariant pattern versus alternate patterns of measurement. Finally, we established the properties (e.g., reliabilities) of the original/modified measure in each of the four groups.

Dimensionality

A common factor analysis of the twelve-item "Consumer Susceptibility to Interpersonal Influence" scale performed in each of the four samples of this study revealed the following. First, in terms of the number of factors: two factors emerged in the Euro- and Chinese-American samples, but three factors appeared in the African- and Hispanic-American samples (see Table 1).

Second, in the African- and Hispanic-American samples, Bearden, et al.'s (1989) original eight-item normative factor broke up into two separate factors. Further, these two factors were not the same in these two groups. In the African-American sample, the first factor was comprised of four utilitarian-influence items and two value-expressive items and so hereafter we refer to it as the normative (U-V) factor.

The second was a two-item value-expressive factor. In the Hispanic-American sample, the first was a three-item value-expressive-influence factor. The second was comprised of four utilitarian-influence items and one value-expressive item. We hereafter refer to it as the normative (U-V) factor.

Third, in each of these groups one of the four informational-influence items loaded more strongly on a normative factor than on the informational-influence factor it was intended to be an indicator of.

Fourth, in the Euro-, Chinese- and African-American groups, this cross-loading, informational-influence item was the same (item # 4). We therefore dropped item # 4 in the subsequent analyses in each of these groups. But, in the Hispanic-American group it was a different item (item # 1). We therefore dropped item # 1 in the subsequent analyses in this group.

Bearing these results in mind, we next proceeded to the confirmatory stage of our analyses. Our intention here was to run a series of congeneric factor models in each of the four groups of this study to do the following: (a) test the robustness of the two-factor dimensionality assumption originally proposed by Bearden, et al. (1989) across these groups, (b) check the discriminant validity of the two measures originally proposed by Bearden, et al. (1989) in each of these groups, (c) ascertain the robustness of an invariate factor-structure (i.e., item-to-factor loadings) assumption across those groups that meet the first two robustness criteria, and (d) compare construct means across those groups that meet the first two robustness criteria.

In each of our four samples, we tested the fit of a null-model (i.e., one in which it is assumed that there are no common underlying factors and each item is modelled as a separate factor), a one-factor model and a two-factor model vis-a-vis one another. In the Euro- and Chinese-American samples, we further tested the fit of a three-factor model (of separate informational, utilitarian and value-expressive influences) versus the other three factor models, discussed earlier. In the African- and Hispanic-American samples, we tested the fit of the

TABLE 1
Factor-coefficients¹ Across Samples

EURO-AMERICAN (n = 922)			CHINESE-AMERICAN (n = 132)			AFRICAN-AMERICAN (n = 179)			HISPANIC-AMERICAN (n = 119)		
Factor	Item #	Factor Coefficient	Factor	Item #	Factor Coefficient	Factor	Item #	Factor Coefficient	Factor	Item #	Factor Coefficient
Normative	8	0.74	Normative	3	0.84	Normative(U-V)	8	0.82	Value-Expressive	2	0.99
	12	0.73		8	0.83		3	0.77		9	0.57
	3	0.70		12	0.77		11	0.72		6	0.55
	6	0.65		9	0.75		5	0.67		1	0.46
	11	0.64		6	0.64		9	0.58	Informational	10	0.73
	2	0.63		4	0.63	Value-Expressive	2	0.47		7	0.62
	9	0.59		11	0.62		4	0.41		4	0.58
	4	0.56		2	0.52		12	0.74	Normative(U-V)	3	0.71
	5	0.47		5	0.39		6	0.46		11	0.64
Informational	10	0.75	Informational	7	0.79	Informational	7	0.70		8	0.51
	7	0.71		1	0.60		10	0.65		12	0.47
	1	0.51		10	0.52		1	0.14		5	0.40

¹ Item numbers used here, are the same as those used in Table 2 (Bearden, Netemeyer and Teel, 1989). Shaded cells indicate item(s) that loaded on factor(s) other than those they were intended to be measures of.

unique three-factor models found in each of these samples (as reported in Table 1) versus the other three factor models, discussed earlier. At the top of Table 2, we report several indices designed to assess the goodness of fit of all of these models, including χ^2 , χ^2/df , GFI, AGFI, CFI and the number of normalized residuals > 1.96

In both the Euro- and Chinese-American samples, the two-factor model was significantly better fitted than the one-factor model (in both samples, $p < .01$, $df = 1$) and the null-factor-model (in both samples, $p < .01$, $df = 12$). Further, the three-factor model (of separate informational, utilitarian and value-expressive influences) did not produce a better fit to the data than the two-factor model in each of these samples (in both samples, $p < .01$, $df = 2$). Thus, hypotheses H_1 and H_4 failed to be refuted. In the African- and Hispanic-American samples however, the unique three-factor models found in each of these

groups was significantly better fitted than the two-factor model (in both samples, $p < .01$, $df = 2$), the one-factor model (in both samples, $p < .01$, $df = 3$) and the null-factor model (in both samples, $p < .01$, $df = 14$). Thus, hypotheses H_2 and H_3 were refuted.

Discriminant-Validity

First, as per Anderson and Gerbing (1988), we computed the 0.01 confidence interval for the correlation(s) between the informational-influence and normative-influence factors (i.e., Φ s), to see if they included the value 1. Second, as per Fornell and Larcker (1981), we computed the average variance-extracted estimate for the various pairs of informational-influence and normative-influence construct(s) and compared it with the variance shared by these construct pairs.

TABLE 2
Confirmatory Factor-model
Tests Across Samples

	<i>Euro-American</i> (<i>n</i> = 119)	<i>Chinese-American</i> (<i>n</i> = 119)	<i>African-American</i> (<i>n</i> = 119)	<i>Hispanic-American</i> (<i>n</i> = 119)
<i>Dimensionality</i>				
χ^2 (null) ₅₅	779.98	913.02	670.66	875.32
χ^2 (1-factor) ₄₄	216.70	169.06	147.91	363.06
χ^2 (2-factor) ₄₃	119.98	110.41	106.70	333.33
χ^2 (3-factor) ₄₁	118.03	108.81	92.83	314.66
χ^2 /df (2-factor)	2.79	2.57	2.48	7.75
GFI (2-factor)	0.85	0.85	0.86	0.75
AGFI (2-factor)	0.78	0.78	0.78	0.62
CFI (2-factor)	0.89	0.92	0.90	0.65
Normalized Residuals > 1.96 (2-factor model)	9	11	13	21
χ^2 /df (3-factor)	2.88	2.65	2.26	7.68
GFI (3-factor)	0.86	0.86	0.87	0.75
AGFI (3-factor)	0.77	0.77	0.80	0.60
CFI (3-factor)	0.89	0.92	0.92	0.67
Normalized Residuals > 1.96 (3-factor model)	5	6	13	22
<i>Discriminant Validity</i>				
$\Phi_{\text{INFO,NORM}}$	0.39	0.64	0.45	0.73
$\Phi_{\text{INFO,NORM(U-V)}}$	--	--	0.44	0.80
$\Phi_{\text{INFO,Val-EXP}}$	--	--	0.40	0.62
$\Phi_{\text{NORM(U-V),Val-EXP}}$	--	--	0.78	0.86

For ease of comparison, the sample sizes used here were kept the same. I did this by choosing a random sub-sample of size 119 from the Euro-, African- and Chinese-American samples, to equal the size of our smallest sample, i.e., Hispanic-Americans.

For the Euro- and Chinese-American samples, the 0.01 confidence intervals for the correlation between the informational- and normative-influence factors did not include the value 1. Further, for these two samples, the average of the variance-extracted estimates for these two constructs was 0.575 and 0.58 respectively, which were each greater than the variance shared (Φ_{21}^2) by these two constructs which were 0.15 and 0.41 respectively.

However, for the African- and Hispanic-American samples, the two tests we referred to above had to be computed for the two- and three-factor models we fitted in these two groups. First, we discuss the

results for the two-factor model. The 0.01 confidence intervals for the correlation between the informational- and normative-influence factors in each of these samples did not include the value 1. Further, the average of the variance-extracted estimates for these two constructs in the African-American sample was 0.445, which was greater than the variance shared (Φ_{21}^2) by these two constructs which was 0.20. However, in the Hispanic-American sample, the average of the variance-extracted estimates for these two constructs was 0.49, which was less than the variance shared (Φ_{21}^2) by these two constructs of 0.53.

For the three-factor model, in the African-American sample, the 0.01 confidence intervals for the three correlations between the informational-, the normative (U-V) factor and the value-expressive factors each did not include the value 1. The averages of the variance-extracted estimates for the informational-normative (U-V) construct pair and the informational-value-expressive construct pair, were 0.475 and 0.455 respectively, which were greater than the variance shared (Φ_{21}^2 and Φ_{31}^2) by these construct pairs of 0.19 and 0.16 respectively. However, the average of the variance-extracted estimates for the normative (U-V) and value-expressive constructs, which was 0.58 was less than the variance shared (Φ_{32}^2) by these two constructs of 0.61.

For the Hispanic-American sample, the 0.01 confidence interval for the correlation between the informational- and value-expressive factors did not include the value 1. However, the 0.01 confidence intervals for the correlations between the informational- and the normative (U-V) factor on the one hand and the normative (U-V) and value-expressive factors on the other hand both included the value 1. Similarly, only the average of the variance-extracted estimates for the informational- and normative (U-V) constructs which was 0.505, was greater than the variance shared (Φ_{31}^2) by this construct pair, of 0.38. However, the average of the variance-extracted estimates for the informational- and value-expressive construct pair and the value-expressive and normative (U-V) construct pairs, which were 0.52 and 0.545 respectively were each less than the variance shared (Φ_{21}^2 and Φ_{32}^2) by

these construct pairs of 0.64 and 0.74 respectively (see Tables 2 and 3).

TABLE 3
Scale Properties Across Samples

Micro-culture (Construct)	Number of items	Reliability			Variance extracted
		Alpha	Construct	Retest	
Euro-American					
(Informational)	3	0.72	0.80	0.61	0.58
(Normative)	8	0.86	0.91	0.80	0.57
Chinese-American					
(Informational)	3	0.70	0.78	0.70	0.55
(Normative)	8	0.89	0.93	0.81	0.61
African-American					
(Informational)	3	0.49	0.56	0.62	0.35
(Normative)	8	0.85	0.90	0.41	0.54
{Normative (U-V)}	6	0.84	0.90	0.30	0.60
{Value- Expressive}	2	0.59	0.71	0.71	0.56
Hispanic- American					
(Informational)	3	0.70	0.72	0.29	0.48
(Normative)	8	0.83	0.89	0.71	0.50
{Normative (U-V)}	5	0.73	0.85	0.68	0.53
{Value- Expressive}	3	0.80	0.79	0.60	0.56

Factor-Structure Invariance

From the above set of analyses it was seen that properties of the reduced eleven-item Bearden, et al. (1989) scale could be compared only in the Euro- and the Chinese-American samples. This comparison could not be carried out in the African- and Hispanic-American samples because of the differing underlying factor-dimensions, factor-item response patterns and lack of discriminant validities for one or more of the constructs of this scale in these two samples. A test of the equivalence of the factor-structures (item-to-factor loadings) in the Euro- and Chinese-American samples only was undertaken. As per Durvasula, et al. (1993), we first performed a multi-group test of metric equivalence for this measure in these two groups. If this test proved that

this measure was metrically-equivalent in these two groups, we would then proceed to an even more rigorous test of metric equivalence, which is the pooled analysis, referred to earlier.

Multi-group Analysis. To test for factor-structure invariance across the Euro- and Chinese-American samples, we tested the fit of three separate models in both samples. The first model we estimated was a fully-unconstrained one, in which the item-to-factor loadings (L_{xs}) and the correlations between the scale constructs (Φ_s) was allowed to vary across the two samples. This model was then compared to a second (partially-constrained) model in which only the correlations between the scale constructs (Φ_s) was allowed to vary across the two samples. The item-to-factor loadings (L_{xs}) are declared invariant across the two samples in this model. We also estimated the fit of a third (fully-constrained) model in which both the item-to-factor loadings (L_{xs}) and the correlations between the scale constructs (Φ_s) were not allowed to vary across the two samples. For a two-factor model of informational-influence (three items) and normative influence (eight items), the fully-unconstrained model's χ^2 value was 230.39 ($df = 86$), the partially-constrained model's χ^2 value was 240.91 ($df = 95$) and the fully-constrained model's χ^2 value was 245.91 ($df = 98$). The difference in χ^2 between the first and second models was 10.52 ($df = 9$) and the difference in χ^2 between the second and third models was 15.39 ($df = 12$). Both of these differences were not significant ($p < .01$). These results indicate that both the factor structure and the underlying dimensionality of the Bearden, et al. (1989) scale are invariant across the two samples.

Pooled Analysis. As a final, more stringent test of the metric-equivalence of this measure, we conducted a pooled test of the invariance of the factor structure (L_{xs}) and inter-factor correlations (Φ_s). We first "decultured" the data in both samples (i.e., within each sample we standardized the responses to each variable). We then pooled the data from both samples and assessed the fit of a one-factor model and a two-factor model in this combined data-set. The χ^2 value for the one factor model was 148.24 ($df = 44$), its GFI was 0.89 and its AGFI was 0.83. For the two-factor model, the χ^2

value was 53.42 ($df = 43$), its GFI was 0.96 and its AGFI was 0.94. Thus, it can be said that the two-factor model produced a much better fit than the one-factor model. The correlation between the informational- and normative influence (Φ_{31}) constructs was 0.45 and it was significantly less than one, once again supporting the discriminant validity of these two construct.

Reliability

Finally, we computed all of the indicators of reliability for each of the constructs of this scale in each of the four samples (see Table 3). In the African- and Hispanic-American samples, we report these reliabilities for both the normative (U-V) and value-expressive measures which are idiosyncratic to these two samples. We also report these values for the eight-item normative measure for these two samples simply because they might then be compared with the corresponding values for this construct in the Euro-American sample (i.e., second administration) in the original study (Bearden, et al. 1989).

First, in the Euro-American sample in this study, coefficient- α and test-retest reliability for informational influence are lower than the comparable values for this sub-scale as reported in Bearden, et al. (1989).

Second, in the Chinese-American sample, coefficient- α for informational influence is lower than the comparable value for this sub-scale as reported in Bearden, et al. (1989).

Third, in the African-American sample, coefficient- α , construct reliability, test-retest reliability and variance-extracted estimates for informational influence are much lower than the comparable values for this sub-scale as reported in Bearden, et al. (1989). Also, test-retest reliability for normative influence in this sample is much lower than the comparable values for this sub-scale as reported in Bearden, et al. (1989). Further, these values fall far below the 0.8 to 0.9 range deemed acceptable (Churchill 1979) for an established measure, which Bearden, et al.'s (1989) measure is. Further, the variance-extracted estimate for informational

influence falls much below the 0.50 level deemed necessary to support the assumption of consistency between the items in a measure (Fornell and Larcker 1981).

Finally, in the Hispanic-American sample, coefficient- α , construct reliability, test-retest reliability and variance-extracted estimates for informational influence are much lower than the comparable values for this sub-scale as reported in Bearden, et al. (1989). Further, these values also fall far below the 0.8 to 0.9 range deemed acceptable (Churchill 1979) for an established measure, which Bearden, et al.'s (1989) measure is. Further, the variance-extracted estimates for both informational- and normative-influence fall much below the 0.50 level deemed necessary to support the assumption of consistency between the items in a measure (Fornell and Larcker 1981).

DISCUSSION

The purpose of this study was to examine the properties of Bearden, et al.'s (1989) scale in three of the major micro-cultures in the U.S., in addition to re-examining the properties of this scale in a macro-culture sample. In doing so, we sought to extend the findings of the original study by assessing the stability of the properties of the "Consumer Susceptibility to Interpersonal Influence" scale: (a) over time (the original scale was developed more than a decade ago), and (b) across contexts (the original scale was developed using only macro-culture samples).

The preceding analyses demonstrated that the findings of this study (for the portion that used an Euro-American sample) are largely consistent with those of the original study (i.e., Bearden, et al. 1989). However, interestingly, there were a few differences between the results of the two studies for this sample. There were also more similarities than differences between the findings in this study for the Chinese-American sample and that of the original study (that used a macro-culture sample). However, the reverse was true of the comparison between the findings in the original study and the African- and Hispanic-American samples of this study.

First, in all four samples of our study, one of the informational-influence items cross-loaded more strongly on the normative factor than on the informational-influence factor that it was intended to be a measure of. In the Euro-, Chinese- and African-American samples this was item #4, whereas in the Hispanic-American sample it was item #1. Perhaps the wordings of both these items hold a more normative connotation (as perceived by respondents) than intended by the original scale-developers. For item # 4, among Euro-Americans, Chinese-Americans and African-Americans it appears that the process of "observation" of other people conveys normative rather than informational influence to the observer. Interestingly, Schroeder (1996) in his analysis of Bearden, et al.'s (1989) scale changed the wording of this same item from "..., I often observe what others are buying and using", to "..., I often ask my friends about the product". However, Schroeder (1996) did not offer any explanation for why this wording was changed (by him) as indicated. In this paper however, we have shown that the wording of the original item (#4) is problematic and needs to be re-examined. Perhaps the re-wording of Schroeder (1996) might work better, but rather than simply assuming this away, this re-wording needs to be subjected to the same psychometric scrutiny that the other 11 items received in Bearden, et al.'s (1989) original scale development effort. Likewise, the word "consult" (item #1) might also connote a source of normative-influence for Hispanic-Americans. Perhaps the process of "consultation" of others among Hispanic-Americans conveys more normative rather than informational influence to the one who does the consulting. This issue also needs to be re-examined.

Second, in the Euro- and Chinese-American samples the 'Susceptibility to Interpersonal Influence' trait was found to be two dimensional, consistent with the findings in this regard in the original study. However, in the African- and Hispanic-American samples, this trait was found to be three-dimensional. Hence, the assumption of an invariant dimensionality to this trait is not supported across two of the four samples in this study.

Third, across the Euro- and Chinese-American samples, we found no significant differences between

their respective factor-structures (the 11 item-to-factor loadings) and their inter-factor correlations (Φ_{21s}). This means that there are similarities not only in the patterns of susceptibility to the different sources of interpersonal influence across these two samples, but also in their magnitudes. That is, Euro- and Chinese-Americans not only respond similarly to interpersonal influences, but they also respond to the same degree to these influences.

Fourth, in the African- and Hispanic-American samples, the normative factor fragmented into two sub-factors. Across the two samples, there were similarities as well as differences in this fragmentation. In both samples, the smaller factor was comprised purely of 'value-expressive' items, whereas the larger factor was comprised of all four 'utilitarian' items, plus some value-expressive items. Thus, it appears that utilitarian and value expressive influences cannot be assumed to operate as one monolithic influence among African- and Hispanic-Americans as they do among Euro- and Chinese-Americans. The reasons for why susceptibility to normative and value-expressive influence do not operate monolithically among African- and Hispanic-Americans need to be investigated more thoroughly, but are beyond the scope of the present study.

Fifth, the reliabilities of the 'Susceptibility to Interpersonal Influence' scale in the Euro- and Chinese-American samples in this study were largely consistent with that reported in Bearden, et al. (1989). However, for the informational influence construct, the coefficient- α estimates were lower in both the Euro- and Chinese American samples of this study in comparison with the value reported for this construct in the original study. Interestingly, these coefficient- α values, for both these samples are closer to the values reported by Childers and Rao (1992) for this construct in their U.S. and Thai samples. Additionally, the test-retest reliability for the informational-influence construct in our Euro-American sample was substantially below the corresponding value for this construct in the original study. However, these lowered values could have been due to the fact that we dropped item #4 as an indicator of this construct, as discussed earlier.

Finally, in the African- and Hispanic-American samples all the reliability estimates for the informational-influence construct were below that reported in the original study. Again, these lowered values could have been due to the fact that we dropped one item (#4 in the African-American sample and #1 in the Hispanic-American sample) as an indicator of this construct, as discussed earlier. Further, in the Hispanic-American sample this scale may need to be re-built from scratch, given the fact that as presently constituted, its indicators are not consistent with one another (judging by its variance-extracted estimate). But, perhaps most importantly, the uni-dimensionality assumption underlying the original, eight-item normative-influence sub-scale needs to be seriously re-examined in both the African- and Hispanic-American groups (but especially in the latter, judging by its variance-extracted estimate). Perhaps this sub-scale needs to be completely re-built in both these groups. But before this task is undertaken, we need to first understand how utilitarian and value-expressive influences operate in both of these groups. As mentioned earlier, though we understand quite well how interpersonal influence operates on Euro- and (now) Chinese-American consumers, we currently lack this understanding in African- and Hispanic-American consumers.

IMPLICATIONS

Theoretical

Consistent with the call in the literature for: (a) improved measures of reference-group influence (Childers and Rao, 1992, p 209) in particular, (b) improved measures in use in marketing in general (Jacoby 1978), and (c) for the examination of the applicability of concepts, measures and models developed in the U.S. to other countries and cultural contexts (e.g., Durvasula, et al. 1993), we have shown the following in this study.

First, Bearden, et al.'s (1989) 'Susceptibility to Interpersonal Influence' scale is still largely valid (with the exception of one of its twelve indicators) in the original cultural context in which it was developed, namely among Euro-Americans. However, some of the properties of this scale in the

Euro-American sample in our study were lower (some substantially) than that reported in the original study. Some of these, such as the lower coefficient- α for the informational-influence construct might be a cause for concern, as noted by Childers and Rao (1992, pp 208-209). Hence, further improvement in the reliability of the original scale, especially of its informational-influence construct may be warranted in future research.

Second, we have shown that the structure *and* properties of this scale are also valid in a cultural-context different from that in which it was originally developed, namely Chinese-Americans. Interestingly, some of this scale's properties were much higher (such as test-retest reliability) among Chinese-, than among Euro-Americans for which it was originally developed. This finding is consistent with that of Childers and Rao (1992) who found that the properties of this scale are comparable in the U.S. and Thailand (which has a large Chinese population).

Finally, we have shown that both the structure *and* the properties of Bearden, et al.'s (1989) scale are very markedly different in two cultural contexts (i.e., the African- and Hispanic-American micro-cultures) that are different from that in which it was originally developed (i.e., the Euro-American macro-culture). This finding thus points out the need for further development and refinement of this scale in these two micro-cultures, along the lines discussed in the previous section. However, currently, we know very little about how the interpersonal influence process operates in each of these two micro-cultures. In this study, we have at least laid the groundwork for a more advanced understanding in the future of how this construct operates in both of these populations.

The understanding of the interpersonal influence construct, as well as others like it, in micro-culture populations is important when one considers the fact that we currently (Powell 1999) know so little about micro-culture consumer behavior in general, that it often acts as a barrier to marketers interested in catering to these population groups (Miller 1993). This lack of understanding becomes even more significant when one considers the fact that the

African-, Asian- and Hispanic-American markets are currently estimated to be worth as much as \$1.15 trillion a year (Gardyn 2000). In this paper, we have increased our understanding of one aspect of minority consumption behavior, namely what the structure and properties of the interpersonal influence construct is for African-, Chinese- and Hispanic-American consumers and how similar/different these structures and properties are from that for Euro-American consumers. In the next section, we suggest how some of these similarities/ differences might be put to use by marketers interested in catering to these sizeable minority markets (Gardyn 2000) in the U.S..

Practical

There is a substantial body of anecdotal evidence to indicate why and how interpersonal influence has been used by marketers in the past to target African-Americans (see, e.g., Fisher 1996; Brooks 1997), Chinese-Americans (see, e.g., Farrell 1998; Harrington 1999; Liu 1999) and Hispanic-Americans (see, e.g., Stewart 1996; Munoz 1999). To suggest how interpersonal influence might be further used to target these populations would be inconsistent with the aims of this paper. Rather, what we intend to suggest in this section is that when interpersonal influence is used to target African-, Chinese- and Hispanic-American consumers, how different/similar must these approaches be to what is used in targeting Euro-American consumers in the U.S.

For Chinese-Americans, given that the underlying structure of their susceptibility to interpersonal influence is similar to that of Euro-Americans, these two groups can be treated similarly whenever interpersonal-influence-based marketing campaigns are contemplated in these two groups. For example, because value-expressive- and utilitarian-interpersonal-influence do not operate separately in these two groups, attempts by marketers to use separate value-expressive-influence-based appeals and utilitarian-influence-based appeals to target either one of these two types of consumers might not be empirically supported. Rather, when marketers intend to target Euro- and Chinese-American consumers with interpersonal-influence-based marketing campaigns and when these campaigns cannot (for one reason or another) use informational-

influence to target these consumers, they ought to desist from employing separate value-expressive-utilitarian-influence-based appeals in influencing the purchase of their brands, a tactic that might backfire (see, e.g., Russell 1993). Instead they ought to first see if and how consumers in these two populations influence one another in their purchase decision-making (which might vary depending on the type of product involved) and then simply encourage the use by these consumers of whatever type of influence it is that works in favor of their brand (see, e.g., Serafine 1992; Farrell 1998; Harrington 1999; Liu 1999).

For African- and Hispanic-Americans, given that their patterns of susceptibility to interpersonal influence are different from that of Euro-Americans, these two groups must be targeted differently from Euro-Americans, whenever interpersonal-influence-based marketing campaigns are contemplated in these two groups. For example, because for both African- and Hispanic-Americans, value-expressive- and utilitarian-interpersonal-influences operate separately, marketers can ascertain before-hand their individual effects on consumption behavior and then use separate value-expressive- and/or utilitarian-influence-based appeals to target consumers in these two groups. Of course, as discussed earlier for Euro- and Chinese-Americans, whether or not marketers use value-expressive- and/or utilitarian-influence-based appeals in these two groups would most likely depend on the type of product being marketed. This dependency on product-type would of course, need to be investigated further for each type of product and hence no across-the-board recommendations in this regard can be made in this study for these two groups. However, for readers interested in examples of how one or the other of the different types of interpersonal influence must be used in each of these two populations we refer them to the following sources. For examples in the Hispanic-American population, see Sanchez (1992), Johnson (1993), Stewart (1996), Maso-Fleischman (1997) and Munoz (1999), among others. For examples in the African-American population, see Marketing News (1990 a&b), Miller (1990), Whittler (1991), Bird (1993), Tat & Bejou (1994), Fisher (1996) and Brooks (1997), among others.

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