Is Cultural Assimilation Related to Environmental Attitudes and Behaviors?

Jyotsna Mukherji, Texas A&M International University

ABSTRACT - Research in environmentalism (Lynch 1993 and Schultz, Unipan, and Gamba 2000) suggests that culture is an important determinant of environmental attitudes. This paper applies ethnic-assimilation theory to analyze intra-cultural differences within the Hispanic cultural group. Results indicated that acculturation was negatively related to environmental attitudes like importance, effort, and inconvenience. These results are contrary to conventional thinking, which posits that environmental concerns are post-materialistic concerns associated with higher levels of economic development and immigrants; especially those coming from developing societies are not likely to have these concerns. These findings also suggest that the design of environmental strategies for ethnic groups must recognize the importance of acculturation and not treat cultural groups as one composite entity.

[to cite]:

[url]:
http://www.acrwebsite.org/volumes/9111/volumes/v32/NA-32

[copyright notice]:
This work is copyrighted by The Association for Consumer Research. For permission to copy or use this work in whole or in part, please contact the Copyright Clearance Center at http://www.copyright.com/.
Is Cultural Assimilation Related to Environmental Attitudes and Behaviors?
Jyotsna Mukherji, Texas A&M International University

ABSTRACT
Research in environmentalism (Lynch 1993 and Schultz, Unipan, and Gamba 2000) suggests that culture is an important determinant of environmental attitudes. This paper applies ethnic-assimilation theory to analyze intra-cultural differences within the Hispanic cultural group. Results indicated that acculturation was negatively related to environmental attitudes like importance, effort, and inconvenienct. These results are contrary to conventional thinking, which posits that environmental concerns are post-materialistic concerns associated with higher levels of economic development and immigrants; especially those coming from developing societies are not likely to have these concerns. These findings also suggest that the design of environmental strategies for ethnic groups must recognize the importance of acculturation and not treat cultural groups as one composite entity.

INTRODUCTION
The US society faces the challenges associated with receiving newcomers who represent a plurality of ethnic, linguistic, and racial groups (Glazer 1997; Taylor and Lambert 1996). An element of this plurality is the concern that different ethnic groups who migrate to this country may come from cultures in which certain pro-environmental behaviors are not common as they are in the US. It is suggested that environmentalism has become an important part of American culture and performing certain pro-environmental behaviors is a form of cultural praxis or ritual forms of participation in civic life (McCarthy 1996).

In 1997/1998, the Sierra Club policy debate drew attention to the influence of the immigration on environmental issues (Zuckerman 1999). At the heart of this debate was the concern that population pressure due to immigration would contribute to environmental degradation and the growing consumption of natural resources. It was argued that immigrants from poor countries would have less concern for the environment. More recently, Huntington in his new book “Who are we?” writes that the new immigrants (especially from Mexico) have little interest in assimilating and feel comfortable within their own culture (as quoted in “The Americano Dream” by Brooks 2004), thus contributing to the debate of Hispanic assimilation.

Why would immigrants’ environmental attitudes and behaviors be different from native –born residents? A post-materialist thesis argues that the higher standards of living of industrialized nations permitted the development of environmental concerns, and that individuals from poorer nations were likely to be preoccupied with issues of economic security rather than to issues of quality-of-life concerns such as the environment (Pfeffer and Stykos 2002). When material well-being is sustained for several years, second and third generations can give priority to post-materialistic values such as environmentalism. This argument leads one to suggest that acculturation into the host culture is positively related to environmental attitudes and behaviors.

There are competing views regarding the above assertion. The post-materialistic thesis argues that environmentalism and quality-of-life issues are possible in societies where economic security has been achieved. Thus, immigrants from poor countries are likely to have less concern than US residents. Assimilation in the mainstream culture would enable immigrants to adopt environmental attitudes and behavior representative of a post-materialistic culture. The competing argument is that poor environmental conditions in the immigrants’ home countries would have sensitized them to environmental awareness, thus there would be no difference between immigrants and US residents’ environmental attitudes and behaviors (Martinez-Alier and Hershberg 1992).

This paper applies the ethnic-assimilation theory to explore differences within the Hispanic group in their environmental attitudes and behaviors. Specifically, we argue that there may be as much cultural diversity within an ethnic group that it makes it necessary to explore other variables like levels of acculturation rather than rely on ethnicity. We conclude by offering suggestions for social marketing strategies designed to impact pro-environmental attitudes and behaviors especially among Hispanic consumers with varying levels of acculturation.

Cultural Assimilation
Keefe and Padilla (1987, p. 18) have defined assimilation as the “social, economic, and political integration of an ethnic minority group into mainstream society.” According to Gordon (1964), assimilation is a seven-step process beginning with acculturation or behavioral assimilation and ending with civic assimilation or the absence of value and power conflict. Acculturation occurs when an ethnic group’s cultural patterns change to those of the host society. This process is labeled ‘Anglo-conformity’ to distinguish it from other models of assimilation namely the ‘melting-pot’ metaphor or cultural pluralism (McLemore 1991). Keefe and Padilla (1987) suggest that Gordon’s description of the assimilation process i.e., Anglo-conformity, may not reflect the assimilation process of Hispanics for whom assimilation may not always lead to a complete replacement of one culture by another. What may happen is that different parts of a culture are transferred with varying degrees of success and speed (Yinger 1981) with material culture being relatively easy to share and the adoption of a host culture’s values being a slower process (Shaull and Gramann 1998).

An understanding of the acculturation process of immigrants would be valuable to domestic and international marketers operating in such culturally heterogeneous societies.

According to the US Census (2000), the percentage of foreign-born persons is 13.9% for Texas as compared to 11.1% for the US as a whole. Further, in Texas 31.2% speak a language other than English at home compared to 17.9% in the US. Clearly while the US society is becoming diverse and multi ethnic, in states like Texas diversity is more predominant. According to Surro (1999), nearly half of all immigrants today-legal and illegal-come from Spanish-speaking countries. Based on their high birth rates, the US Census Bureau predicts that native and foreign-born Latinos will account for more than 40% of US population growth in the next decade, compared to less than 25% for non-Hispanic whites. Unfortunately, the melting pot metaphor does not help much in understanding this group’s acculturation process.

Investigation of the role of acculturation on consumer behavior had resulted in an impressive body of research (Golden, et. al. 1996). Studies have typically focused on changes in behavior patterns of Hispanics in areas such as food, dress, and information search (Webster 1994). Another stream of research has focused on strategies for reaching Hispanic consumers through efficient segmentation. Segal and Sosa (1983) suggested strategies based on media preferences and O’Guinn and Mayer (1984) suggested language use as an effective segmentation variable. A third stream of research has compared Hispanic and Anglo consumers and found
significant differences in intergenerational influences (Hoyer and Deshpande 1982) and brand loyalty (Donthu and Cherian 1992).

Environmental attitudes are influenced by culture. Lynch (1993) suggested that there are differences in Anglo and Latino environmental views. For example, Anglo environmentalism is characterized by a reliance on technical solutions while Latino environmentalism relies on communal solutions. Anglos and Latinos differ in their views of the wilderness; Anglos view the wilderness to be pristines and Latino environmentalism is described as “human-in-nature” view. “Humans are seen as an integral part of nature rather than as protectors or consumers” (Schlutz, et al. 2000, p. 23.). Finally, Carr and Williams (1993) reported a relationship between assimilation and views on “showing respect for the forest.” U.S. born Hispanics interpreted “respect for the forest” to mean specific behaviors such as “not littering” and picking up trash, while respondents born in Mexico mentioned respect in more abstract terms and as an extension of respect for one’s home. The implication of these findings is that there is variation not only between ethnic groups, but also within an ethnic group and one potential source of this variation could be explained by the degree of cultural assimilation.

Recycling Attitudes

Environmental issues have attracted the attention of researchers in the social sciences and marketing (Berger 1997 and Pieters et al. 1998). Marketers have researched recycling issues in an effort at understanding consumer motivations underlying the purchase of environmentally friendly products and services (Bagozzi and Dabholkar 1994), exploring the relationship between general psychological constructs and environmental behavior (Biswas et al. 2000; Dietz, et al. 1998), and identifying the antecedents of post-purchase/post-consumption behavior (Alwitt and Pitts 1996 and Shrum, McCarty, and Lowrey 1995). Interestingly, most of the research has been on Anglo consumers and with only a small number of studies focusing on African Americans and Hispanics (Howenstine 1993 and Golden, Frels, Vincent, and Santos 1996).

Psychological constructs such as attitude and beliefs are important and often researched antecedents because they are more amenable to influence and thus actionable. A well-known attitude in the ecological literature is the concern for environmental problems and a perception of their severity. Ecologically conscious consumers believe that current environmental conditions are deteriorating and represent serious problems facing the security of the world, whereas consumers who are less sensitive to ecological issues perceive that environmental problems in the long run will resolve themselves (Banerjee and McKeage 1994). Environmental attitudes are conceptualized as abstract orientations and it is argued that recycling behaviors are influenced by more specific psychological constructs such as beliefs related to recycling. Laroche, et al., (2001), found that the two beliefs that are most consistently related to recycling are a general attitude or belief about the importance of recycling, and a specific belief about the inconvenience of recycling. Importance, with respect to the environment, can be defined as the degree to which one relates recycling to being environmentally conscious. This construct also relates to the benefits of engaging in behaviors that could have possible long-term outcomes such as reduction in number of landfills.

Inconvenience refers to how inconvenient it is perceived by the individual to behave in an ecologically compatible fashion. For example, one may think that recycling is important, but one does not recycle because it takes too much time or requires extra space. Inconvenience of recycling relates to costs or the difficulty associated with performing environmental behaviors. Included are perceptions of how easy or hard it is to perform the recycling behavior. Effort is defined as the degree of difficulty in executing the behavior. The amount of effort required for a behavior functions as an impediment to action (Bagozzi et al. 1990). Although decreased perceptions of difficulty have been generally associated with increased environmental behavior, mixed results have been reported in the literature (Oskamp et al. 1991).

Hypotheses

The above discussion on cultural assimilation, acculturation, and environmental attitudes suggests that the process of acculturation is thought to help immigrants learn the behavioral expectations of American culture (e.g. recycling attitudes and behaviors). Padilla (1980) calls this immigrant environmental acculturation. Since the research on Hispanic culture and environmentalism has competing viewpoints, I choose to explore the influence of levels of acculturation on environmental attitudes through non-directional hypothesis:

Acculturation, Attitudes, and Recycling Behaviors

H1: There are differences in attitudes toward environmental concern among Hispanics with different acculturation levels.

H2: There are differences in attitude toward importance of recycling among Hispanics with different acculturation levels.

H3: There are differences in attitudes toward inconvenience of recycling among Hispanics with different acculturation levels.

H4: There are differences in attitudes toward recycling effort among Hispanics with different acculturation levels.

H5: There are differences in recycling behavior among Hispanics with different acculturation levels.

RESEARCH DESIGN

Sample and Procedure

The survey was administered in person to a convenience sample of 262 residents of a mid-size city on the U.S. side of the Mexico-US border. Students were recruited as principal investigators and they conducted the survey. Malls and grocery stores in different parts of the city were chosen as locations to conduct the interviews. The choice of locations enabled us to have a fair representation of most of the geographical locations of the city. The questionnaire was translated into Spanish and back translated to check for consistency. The interviewers, depending on the language requirements of the respondents, used both versions of the questionnaire. Respondents needed to be one of the heads of household and over 18 years of age. The sample was 77% female and 23% male; 20% were high school graduates, 72% were college graduates and 8% had a master’s degree. 34% reported income less than $25,000, 40% were in the $25,000 to $50,000 range and 26% reported earning more than $50,000. The demographics of the sample reflect the area, which is among the ten poorest counties in the country.

Measurement Purification

All measures were assessed through confirmatory factor analysis using LISREL 8 with item correlations as input (Joreskog and Sorbom 1996). An iterative approach was adopted to arrive at the final measurement model with items that did not meet the qualifying criteria being deleted. For example, items with low or extremely high factor loadings and those with high modification indices were deleted. The measurement model performed well: standardized
factor loadings ranged from .55 to .90 with t-values greater than 6.32 (Ford, MacCallum and Tait 1986). The construct reliabilities ranged from .70 to .87 exceeding the recommended minimum of .60 and the average variance extracted (AVE) was greater than .40 for all of the study constructs. Thus, all of the constructs exhibited good internal consistency and reliability (Bagozzi and Yi 1988). The final measurement model exhibited satisfactory fit. The chi-square value for the measurement model was significant ($X^2 = 155.430, p < .000$). Since chi-square statistic is sensitive to sample size we examined other fit indices. The root mean square error of approximation (RMSEA) was .06; the goodness-of-fit (GFI) and adjusted goodness-of-fit (AGFI) indices were .89 and .85 respectively; Bentler’s comparative fit index (CFI) was .94; and the non-normed fit index (NNFI) was .93. All the above fit indices are within acceptable ranges (Byrne 1998). Given the relatively small sample size, we found the fit indices quite satisfactory for the number of parameters being tested. Finally, two tests of discriminant validity were performed for all study constructs. First, the mean AVE for each construct pair was compared with the squared phi estimate (maximum likelihood estimate of correlation) for the pair. All pairs of constructs with the exception of inconvenience and effort had mean AVEs larger than the squared phi estimate (Fornell and Larcker 1981). Second, confidence interval tests were conducted (Anderson and Gerbing 1988). When a confidence interval constructed around the correlation estimate between two constructs does not include 1.0, then discriminant validity is demonstrated. In this study, all factor correlations demonstrated discriminant validity. Details of the various measurement items and constructs used, and their operationalization are summarized in Table 1. The mean, standard deviation, and correlation values of the latent variables are given in Table 2.

**Measures**

Environmental concern is a four-item scale that has been adapted from previous research (Ellen 1994). Respondents were asked to express their disagreement or agreement to items such as: “compared to other things in my life, environmental problems are not that important to me.” The items for the importance and inconvenience constructs were taken from McCarthy and Shrum, (1994). Recycling effort (Ellen 1994) was measured by asking respondents if recycling required a lot of extra time. Responses for all the above scales were measured on nine-point Likert scales anchored by strongly disagree=1 to strongly agree =9. Recycling behavior (Biswas et al. 2000) was measured by asking respondents to indicate the extent to which they recycled aluminum cans, newspapers and magazines, and glass (never recycle=1 to always recycle=9). Acculturation was measured by asking respondents to answer the question “What language is mostly spoken in the home?” The response choices were English, Spanish, and English and Spanish equally (Webster 1994). English language use, which measures functional integration into the United States mainstream, is recognized as one of the most powerful indicators of acculturation (Betancourt and Lopez 1993). Demographic variables requested were age, gender, education, and income.

<table>
<thead>
<tr>
<th>TABLE 1</th>
<th>Measurement Model Details</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Composite Reliability</td>
</tr>
<tr>
<td><strong>Environmental Concern</strong> (Schultz and Oskamp, 1996))</td>
<td></td>
</tr>
<tr>
<td>1. Environmental problems are of great concern to me</td>
<td>.77</td>
</tr>
<tr>
<td>2. Environmental problems are not that important to me (R)</td>
<td></td>
</tr>
<tr>
<td>3. Things will balance out (R)</td>
<td></td>
</tr>
<tr>
<td>4. I’d rather do other work (R)</td>
<td></td>
</tr>
<tr>
<td><strong>Importance</strong> (McCarty and Shrum, 1994)</td>
<td></td>
</tr>
<tr>
<td>1. Recycling will save land</td>
<td></td>
</tr>
<tr>
<td>2. Recycling will reduce pollution</td>
<td></td>
</tr>
<tr>
<td>3. Recycling is important to save resources</td>
<td>.82</td>
</tr>
<tr>
<td><strong>Inconvenience</strong> (McCarty and Shrum, 1994)</td>
<td></td>
</tr>
<tr>
<td>1. Recycling is inconvenient</td>
<td></td>
</tr>
<tr>
<td>2. Recycling is too much trouble</td>
<td></td>
</tr>
<tr>
<td>3. I hate to sort materials</td>
<td>.82</td>
</tr>
<tr>
<td><strong>Effort</strong> (Effort, 1994)</td>
<td></td>
</tr>
<tr>
<td>1. Recycling requires a lot of extra time</td>
<td></td>
</tr>
<tr>
<td>2. Recycling requires a lot of extra space</td>
<td>.87</td>
</tr>
<tr>
<td><strong>Recycling Behavior</strong> (McCarty and Shrum, 1994)</td>
<td></td>
</tr>
<tr>
<td>1. I recycle aluminum cans</td>
<td></td>
</tr>
<tr>
<td>2. I recycle paper and newspapers</td>
<td></td>
</tr>
<tr>
<td>3. I recycle glass</td>
<td>.72</td>
</tr>
</tbody>
</table>
**Findings**

Multivariate analysis of covariance (MANCOVA) for a single factor was used to examine the hypothesis. MANCOVA was used because of multiple dependent variables, and to control or partial out the effects of certain covariates like education and income. Further, all the dependent variables were correlated significantly with p values <.01. For example, the correlation between environmental concern and importance of environment was .454 (p<.000), and between effort and length of recycling the correlation was –.310 (p<.000). Wilks’ lambda results indicated significant main effects for the acculturation construct (F=4.762, p<.000). The effects of education (Wilks’ λ5,000 =.892, F=6.039, p<.000) and income (Wilks’ λ5,000 =.924, F=4.094, p<.001) were also significant. Multivariate and univariate results of the analyses are reported in Table 3.

The overall F-tests for all dependent variables except environmental concern was significant (p<.01). Further, the education covariate was significant for inconvenience and recycling behavior at p<.00, and for effort at p<.05 level of significance. The income covariate was also significant for inconvenience (p<.000) and effort (p<.01). Thus education moderated the effect of inconvenience, effort, and behavior, while income moderated the effect of inconvenience and effort. An analysis of the univariate results shows support for all hypotheses except H1.

**Results**

This research had posited that acculturation levels would influence environmental attitudes and recycling behaviors among Hispanic respondents. MANCOVA results provide support for H2–H5. H2 had posited that there would be differences among Hispanics with different acculturation levels and their attitudes toward the importance of recycling. Cell means in Table 4 reveal that the English only group was statistically different from the Spanish only and the bi-lingual group. H3 had stated that there would be differences among Hispanics with different acculturation levels and their attitudes toward inconvenience of recycling and H4 had stated that there would be differences among Hispanics with different acculturation levels and their attitudes toward recycling effort. Cell means in Table 4 show that for both H3 and H4 the English only group is statistically different from the Spanish only and the bi-lingual group. Finally, H5 had stated that English only, bi-lingual, and Spanish only groups would be different in their recycling behavior. Cell means shows partial support for this hypothesis since the English only group is statistically different from the bi-lingual group but not from the Spanish only group.

**Discussion**

Our analysis of the influence of acculturation on environmental attitudes and recycling behaviors revealed that the level of
Acculturation did influence attitudes and behaviors. For example, the most acculturated group (English only) had the lowest scores on the environmental attitudes and recycling behavior scales. This group did not think recycling was important for the environment. Further, this group felt that recycling was inconvenient and required a lot of effort. The most acculturated group (English only) was statistically different from the least acculturated group (Spanish only), and the bi-lingual group with regard to all the above scales. Our analysis shows that the least acculturated group (Spanish only) had the most positive attitudes toward the environment; they did not think recycling was inconvenient nor did it require effort.

The results of this study are in line with research in environmentalism (Lynch 1993 and Schultz, et. al. 2000) that suggests that culture is an important determinant of environmental attitudes. These authors found that less acculturated Latino immigrants scored higher on the New Environmental Paradigm than more acculturated Latino immigrants. As an explanation, Lynch (1993) suggests that Latino environmentalism is characterized by a greater perception of the interrelatedness of humans with the natural environment. This suggestion may be surprising given the environmental degradation in countries like Mexico. However, Schultz, et. al., (2000) explain that the differences in environmental attitudes between more and less acculturated Mexican immigrants is because of the salience of the environmental problems. Concern for these problems among more acculturated Hispanic immigrants may decline over time since environmental degradation is less of an issue in the United States. Consistent with research by Schultz and colleagues our study too failed to find a positive relationship between acculturation and recycling behavior. Results show that low acculturated and bi-lingual respondents are statistically different from high acculturated respondents on importance, inconvenience, and effort related attitudes.

### Public Policy Implications

The importance of these findings to marketing and public policy is to emphasize the concept of acculturation when exploring attitudes and behaviors among ethnic groups such as Hispanics. Recognition of intra-group diversity means that it is not useful to design environmental strategies that would suit all members of an ethnic group. A managerial implication of this finding is the need to deliver communications in both Spanish and English in order to reach Hispanics of all acculturation levels. Policy officials need to understand the negative acculturation hypothesis (Vincent and Guinn 2003), which states that in some areas such as health, acculturation may lead to the adoption of behaviors like smoking and consuming fatty foods. Negative acculturation could be an explanation for low scores on environmental attitudes and behavior scales of the most acculturated group. For acculturated Hispanics (those who have the least favorable environmental attitudes), a possible strategy could be one that involves promoting positive environmental attitudes of his/her ethnic group in order to help neutralize the less positive socializing influence he/she experiences in American culture. If successfully engaged, the traditional Hispanic environmental values might help more acculturated Hispanics to readopt the positive environmental attitudes reflected by low acculturated Hispanics.

Finally, it is possible that the differences in environmental attitudes observed in this study could be due to the salience of environmental problems in the United States. Because of less salience, concern for these issues may decline over time. This decline in concern for the environment and environmental issues could be a problem since positive attitudes are important antecedents to pro-environmental behaviors.

### Limitations

This study has some limitations that must be considered when drawing conclusions from the results. First, the focus of this study is narrow; we concentrated on a limited set of psychological constructs. Future work could include constructs like social norms and normative feedback, as well as the role of incentives. In this study we choose recycling of household garbage as the pro-environmental behavior, however, future research could include other behaviors such as conservation behaviors and purchase of green products as examples of pro-environmental behaviors. The results of this study can be generalized only to Hispanics living along the US-Mexico border since the sample was not chosen randomly. One should exercise caution in generalizing to all Hispanics especially those who are not from Mexico. This study demonstrated the need to include the acculturation level of members of ethnic groups when investigating their attitudes and behaviors. As this study demonstrates, acculturation does have an influence and contrary to popular sentiment acculturation into the American culture may not lead to positive environmental attitudes.

<table>
<thead>
<tr>
<th></th>
<th>English&lt;sub&gt;a&lt;/sub&gt; (n=54)</th>
<th>Spanish&lt;sub&gt;b&lt;/sub&gt; (n=62)</th>
<th>Both English and Spanish&lt;sub&gt;c&lt;/sub&gt; (n=54)</th>
<th>F-Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Environmental Concern</td>
<td>6.29</td>
<td>6.09</td>
<td>6.44</td>
<td>.081 (.922)</td>
</tr>
<tr>
<td>Importance of Environment</td>
<td>7.49&lt;sub&gt;bc&lt;/sub&gt;</td>
<td>8.12&lt;sub&gt;a&lt;/sub&gt;</td>
<td>8.02&lt;sub&gt;a&lt;/sub&gt;</td>
<td>4.732 (.010)</td>
</tr>
<tr>
<td>Inconvenience</td>
<td>4.47&lt;sub&gt;bc&lt;/sub&gt;</td>
<td>2.93&lt;sub&gt;a&lt;/sub&gt;</td>
<td>3.60&lt;sub&gt;a&lt;/sub&gt;</td>
<td>10.848 (.000)</td>
</tr>
<tr>
<td>Effort</td>
<td>5.02&lt;sub&gt;bc&lt;/sub&gt;</td>
<td>3.43&lt;sub&gt;a&lt;/sub&gt;</td>
<td>3.78&lt;sub&gt;a&lt;/sub&gt;</td>
<td>10.572 (.003)</td>
</tr>
<tr>
<td>Recycling Behavior</td>
<td>3.92&lt;sub&gt;c&lt;/sub&gt;</td>
<td>4.47</td>
<td>4.93&lt;sub&gt;a&lt;/sub&gt;</td>
<td>4.683 (.010)</td>
</tr>
</tbody>
</table>

1. significantly different at p<.05 where a=English is spoken, b=Spanish is spoken, c=English and Spanish are spoken
REFERENCES
Glazer, N. (1997), We are all Multiculturalists Now, Cambridge, MA: Harvard University Press.

