

Ethnicity as a Variable in Leisure Research

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The purpose of this study is to examine the usefulness of ethnicity as a construct in leisure research. In particular, we are interested in the degree to which presumed ethnic groups exhibit internal cultural homogeneity. In 2002, the visitors to the Angeles National Forest (ANF) near metropolitan Los Angeles were surveyed. Using purposive sampling at sites known to be heavily used by visitors with diverse ethnic backgrounds, we obtained a sample of 444 Anglos, 312 Hispanics, and 319 Asians (overall $n = 1,174$). We examined whether the three nominal ethnic groups, Anglos, Hispanics, and Asians, were homogeneous in terms of cultural values as measured by Hofstede's (1980) instrument. We assume that if distinctive ethnic subcultures exist then they should be identifiable by specific measures of languages, religion, family structure, cultural values, and the like. We used cultural consensus analyses to test the homogeneity of the three ethnic groups. The results of cultural consensus analyses showed that none of the three ethnic groups and none of the subgroups we examined within the three ethnic groups were homogeneous in terms of the cultural values. Discussion of the findings and research implications are suggested.

KEYWORDS: *Ethnicity, culture, cultural consensus analyses, forest recreation.*

Introduction

Research interest in possible differences in leisure based on ethnic and/or racial diversity has accelerated since Washburne's (1978) seminal article on underrepresentation of blacks in wildland recreation. While earlier authors (e.g., Jones, 1927) had addressed differences in recreation participation among racial and/or ethnic groups, Washburne's singular contribution was to provide a theoretical basis for examining such differences. He pro-

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posed two perspectives, marginality and ethnicity, as possible causes for observed variation in leisure participation among racial and/or ethnic groups. Many authors (e.g., Allison, 1988; Allison & Geiger, 1993; Bass, Ewert, & Chavez, 1993; Dragon, 1986; Dwyer, 1994; Dwyer & Hutchison, 1990; Kelly, 1980; Klobus-Edwards, 1981; O'Leary & Benjamin, 1982; Stamps & Stamps, 1985) have tested these hypotheses, usually with mixed results but perhaps somewhat more support for ethnicity than marginality (e.g., Floyd, Gramann, & Saenz, 1993; Floyd, Shinew, & McGuire, 1994; Hutchison, 1987; Irwin, Gartner, & Phelps, 1990; Jaakson, 1973; Williams & Carr, 1993). However, as noted by Gramann & Allison (1999), a problem with some studies is that rather small differences between groups are emphasized over their similarities. For example, Dwyer (1994) found that white Americans and Asian-Americans differed in participation in only 3 of 24 activities examined while whites and Hispanics differed in only 4 of the 24. In addition, we agree with Floyd's (1998) concern over "accepting ethnicity and subculture as given rather than as concepts in need of definition and explication" (p. 6).

We propose an alternate explanation for the fact that many studies have found few differences in recreation participation or recreation activities among ethnic groups. Specifically, we suggest that the cultural variability within purported ethnic groups may be as great, or greater, than the cultural variability between them. Like Floyd (1998), we are suspicious of simply accepting ethnic labels as meaningful markers of genuine cultural differences. We feel that the cultural homogeneity of ethnic groups should be put to empirical test rather than simply assumed, as they may lack the internal consistency to be groups other than in name only. Fortunately, a development in cultural anthropology, cultural consensus analysis (Romney, Weller, and Batchelder, 1986), provides a method that permits empirical tests of the cultural homogeneity of alleged social groups. The purpose of this paper is to examine whether three commonly used ethnic labels, namely "Anglo," "Hispanic," and "Asian," delineate homogenous cultural groups in a forest recreation setting.

This paper builds on previous research on leisure and ethnicity as part of a larger study of customer service in a forest recreation setting. Compared to the white majority, Cordell (1999), for example, has claimed that ethnic minorities are under-served in parks and outdoor recreation venues. More generally, whites tend to dominate visitation to parks and other outdoor recreation settings in the U.S. Why is that? We are interested in the possibility that leisure choices, in general, and decisions to recreate in park and wild-land locations, in particular, may be influenced by cultural values.

We have chosen to look broadly at cultural values rather than "leisure values" or other constructs that might be regarded as more directly relevant to leisure. We have done so for several reasons. For one, we are not aware of any measure of leisure values that has been validated cross-culturally. Hence, we selected a measure of cultural values that has been validated numerous times in comparative cross-cultural studies. Second, since we undertook the study in a forest recreation context, that context serves as a constant,

rather than a variable that might influence responses had the data been gathered in other contexts or in unknown contexts via a mailed survey. Finally, we feel that a measure of general cultural values would permit us to compare our results with data collected in other contexts because such values are remarkably stable over time and serve as important standards of conduct (Kahle, Beatty & Homer, 1986; Rokeach, 1973; Schwartz, 1975).

We feel that comparative leisure research among racial, ethnic, and other presumably distinctive social groups is very valuable. However, if racial, ethnic, and other sorts of social groups display within-group variance that equals or exceeds between-group variance in terms of culture content, then it seems to us that there is no basis for making comparisons of cultural content, or behavior patterns attributed to culture. We feel that much, if not most, extant leisure research is based on the assumption that variously named groups, racial, ethnic, and otherwise, are somehow culturally homogeneous (e.g., Johnson, Bowker, English & Worthen, 1998). We contend that if this assumption does not hold empirically, then research based on it is fundamentally flawed.

Literature Review

A Historical View of Ethnicity in the U.S.

The legal roots of ethnicity in the U.S. go back to at least three very early laws. First, in the 1780s, the original U.S. Constitution specified that a census of the population be taken every 10 years in order to accurately apportion representation to the U.S. Congress and the Electoral College. The Electoral College casts the "official" votes for president with each state allocated as many electors as it has senators and representatives in Congress. Hence, there are currently 535 state electors plus 3 from the District of Columbia. The Founding Fathers were afraid States might exaggerate their populations in order to get more representatives and, thus, more votes. Beginning with the first U.S. Census in 1790, race was recorded because white freemen and black slaves were not counted equally; a black slave was "equal to" only three-fifths of a white freeman.

Second, in 1850, Congress directed the U.S. Census to ask if people's parents were "native born" or "foreign born" (Gauthier, 2002). "Native born" meant born in the United States of white European ancestry. Native Americans, or Indians, were not even counted by the Census until many years later. The 1850 law was passed because "native born" Americans were beginning to fear being overrun by immigrants from new countries. There had been an enormous increase in immigration during the 1830s and 1840s, and for the first time, most immigrants were not from England. Instead, most of them came from Ireland and Germany, and many English-Americans regarded them as savages. The big boom in immigration from eastern and southern Europe started a bit later, and the "native born" Americans found it even more frightening.

Third, in the wake of the Civil War, the 14th Amendment to the U.S. Constitution was proposed in 1866 and ratified in 1868. This amendment contained the following language, which became known as the "equal protection clause":

No State shall make or enforce any law which shall abridge the privileges or immunities of citizens of the United States; nor shall any State deprive any person of life, liberty, or property, without due process of law; nor deny to any person within its jurisdiction the equal protection of the laws. (U.S. National Archives and Records Administration, 2006)

Notice that the 14th Amendment did not actually mention race, but race was implied by the amendment's link to the Civil War and the end of slavery. Decades later, people extended the equal protection principle to include ethnicity. These laws resulted in the collection of race and ethnicity data every ten years, and this information began to be used to compare ethnic groups' rates of poverty, education, employment and unemployment, salaries, housing, etc. As new laws and policies about equal rights were passed, Census data about race and ethnicity became one of the key tools used to measure equal protection under law. Partly by law and partly by a simple process of imitation, the U.S. Forest Service, National Park Service, and other federal and state agencies began to use ethnicity the same way Congress, the President, and the courts were using it.

Defining Ethnicity

In order to conduct an empirical examination of the homogeneity of ethnic groups, we first need a relatively clear and unambiguous definition of ethnicity.¹ Like many other central constructs in social science, ethnicity has multiple definitions but most include a basic core of features. For Barth (1996, orig. 1969), an ethnic group is typically regarded as: (1) "largely biologically self-perpetuating," (2) sharing "fundamental cultural values, realized in overt unity in cultural forms," (3) made up of "a field of communication and interaction," and (4) having "a membership which identifies itself, and is identified by others, as constituting a category distinguishable from other categories of the same type" (pp. 10-11). Similarly, Nagel (1994) indicated,

Ethnicity is socially constructed out of the material of language, religion, culture, appearance, ancestry or regionality. The location and meaning of particular ethnic boundaries are continuously negotiated, revised, and revitalized,

¹We are not going to specifically address race in this paper as our data do not include race. As many authors (e.g., Gomez, 2002) have noted, however, race and ethnicity are often conflated even though the former is usually used to refer to biological characteristics of individuals or groups while the latter refers to sociocultural characteristics (Sasidharan, 2002). However, members of racial categories such as black, white, Pacific Islander, Native American, and so on, are often treated as having distinctive cultures without any empirical evidence to support that assumption.

both by ethnic group members themselves as well as by outside observers. (p. 154)

Finally, Van den Berghe (1976) defined ethnicity in terms of national origin, religion, language, and culture.

The three definitions of ethnicity above, while differing in detail, encompass what most researchers and laypeople alike think of when considering ethnicity. We are particularly interested in two aspects of these definitions: culture and ethnic boundaries as identified by both group members and outsiders. That is, when leisure or other researchers sample individuals who presumably represent different ethnic groups, it seems that they commonly assume that within group cultural differences are less than between group cultural differences. Second, ascription to a particular ethnic group may be more or less salient for group members and outsiders, the degree of salience depending on a variety of things, including the degree of loyalty individuals feel toward groups and, conversely, the degree to which outsiders wish to assign people to groups.

While few researchers actually make claims about which of these has priority, it is likely that most assume that cultural differences between groups lead members to ascribe themselves to a particular ethnicity and outsiders to ascribe them, as well, to that ethnicity. Barth (1996), on the other hand, takes cultural differences to be more the result of ethnic boundaries rather than the primary definitional component of ethnicity. As such, he regards ethnicity as a means of organizing social relationships between members and between the group and outsiders. In addition, he claimed, "It is important to recognize that although ethnic categories take cultural differences into account, we can assume no simple one-to-one relationship between ethnic units and cultural similarities and differences" (p. 14). Further, "The critical focus of investigation from this point of view becomes the ethnic *boundary* [emphasis in original] that defines the group, not the cultural stuff that it encloses" (p. 15). We argue, however, that leisure researchers much more often distinguish ethnic groups by "cultural stuff" than by boundary creation and maintenance processes and, that "cultural stuff" is almost always assumed to be homogeneous within groups rather than empirically determined to be so. As Gramann and Allison (1999) noted,

[E]thnic populations are not homogenous, either in race, ethnicity, or class. Yet categories such as "Black or African American" are used to characterize and reify stereotypical images of one group of people. This overlooks the fact that most minority cultures, just as is true of the "White" culture, are composed of a combination of peoples of different backgrounds. (p. 288)

If cultural differences are taken into account in the definition of ethnic groups and researchers presume that ethnic groups differ culturally, what is culture such that it can differ between groups of people?

Defining Culture

It should not come as a surprise that there are even more definitions of culture than of ethnicity. Kroeber and Kluckhohn (1963) listed 164 and

many more have appeared since their compendium appeared. In the 19th century, the concept was largely synonymous with the notion of "civilization" (Goodenough, 1996), what E. B. Tylor (1871) evidently had in mind when he penned his famous definition of culture as "that complex whole which includes knowledge, belief, art, morals, law, custom, and any other capabilities acquired by man as a member of society" (p. 1). In the early 20th century, the founder of American anthropology, Franz Boas, was using the term to refer to the beliefs, customs, and social institutions that appeared to distinguish different societies. While this is generally the way that the term is currently used, for much of the 20th century, social scientists, although aware that people, materials, and cultural knowledge pass back and forth between different societies and especially between those in close proximity—tended to regard cultures as relatively discrete, bounded and stable entities. This view is no longer sustained. Anthropologists and other social scientists recognize that cultures grade into one another with continuous cultural variation (e.g., Caulkins, 2001).

Definitions of culture come in several varieties. For example, Chick (1997) grouped them on the basis of their inclusiveness. "Culture as mental" definitions refer to cultures as basically contained in the heads of members of societies and consisting of things such as knowledge, beliefs, and values. "Culture as mental and behavior" definitions add behavior to the previous items while "culture as mental, behavioral, and material" definitions include artifacts, as well. Finally, "culture as information" definitions hold that culture is information that can be created, stored, and utilized without regard to form. The distinct disadvantage of the second and third definitions is that behavior, in the second, and neither behavior nor artifacts, in the third, can be explained in terms of culture since they are part of the definition. The final definition, while comprehensive, is problematic as it is difficult, and sometimes impossible, to extract the information content from observed behaviors or from artifacts (although the latter is the basis of archeology) and we lack a good unit of cultural content (Chick, 2001).

On the other hand, Goodenough (1996) categorized definitions of culture as ideational or phenomenal. From an ideational perspective, culture is what people need to know in order to think and behave as proper members of the social group of which they are members (Goodenough, 1996). Culture as phenomenal, on the other hand, is what an outside observer sees going on in the conduct of affairs of a social group. These are very similar to Harris's (1979) use of the terms "emic" and "etic", where the former refers to a cultural insider's understanding, while the latter refers to an outsider's observation of social phenomena.

For this study, we use Goodenough's (1957) highly influential definition of culture:

A society's culture consists of whatever it is one has to know or believe in order to operate in a manner acceptable to its members. Culture is not a material phenomenon; it does not consist of things, behavior, or emotions. It is rather an organization of these things. It is the form of things that people have in

mind, their models for perceiving, relating, and otherwise interpreting them.
(p. 167)

Values, along with knowledge and beliefs, are a major component of culture, as defined by Goodenough. Hence, if ethnic group members share cultural content, they should share values as part of that content. In other words, members of particular ethnic groups should agree on, or share, a distinct set of cultural values and more difference should exist between groups, in terms of values, than within groups. Finally, if culture accounts for systematic behavioral similarities within groups, such as ethnic groups, as well as differences between groups, then it is reasonable to assume cultural differences between groups that exhibit consistent behavioral differences.

Cultural Values and their Measurement

Social psychologist Florence Kluckhohn's theory of cultural value orientations (Kluckhohn & Strodtbeck, 1961) was designed to allow the analysis of systematic variation both within and between cultures. The theory is based on the premise that all humans face a limited number of common problems for which some solution must be found. Moreover, although the solutions selected by different groups may vary, the scope of that variation is neither random nor infinite. Solutions must, therefore, be selected from a limited range of possibilities. Finally, Kluckhohn claimed that all possible solutions exist in all societies at all times but are differentially preferred in individual societies. Hence, societies have both dominant and subordinate profiles of values. Kluckhohn's value classification scheme was based on the following five, presumably universal, problems: (1) What is the nature of human nature? (2) What is the relation of humans to nature (and the supernatural)? (3) What is the temporal focus of human groups? (4) What is the modality of human activity? and (5) What is the modality of people's relations with others? Researchers called these five concerns "value orientations." We might also refer to them as the "core values" that give a culture its character.

Hofstede (1980) identified four dimensions of national cultural values from 117,000 questionnaires, administered in 20 languages, from IBM company employees in 71 countries. One of the strengths of Hofstede's study was that the IBM employees assessed in each country were very similar in terms of socio-economic status (Hofstede & McCrae, 2004). Hofstede assumed that his national samples were homogeneous to some degree in order to permit cross-national comparisons. The cultural values that Hofstede found were: (1) power distance, (2) individualism, (3) masculinity, and (4) uncertainty avoidance. Power distance refers to the distribution of "power" among individuals and groups in society, and how inequalities in power are dealt with in societies. Individualism focuses on the integration of individuals within various primary groups and the degree to which welfare of the individual is valued over that of the group. Masculinity addresses the gender role and masculine/feminine concepts in individuals and societies. Finally, un-

certainty avoidance relates to the intolerance of risk and the level of stress people expressed for an unknown future.²

Other well known and commonly used measures of values include Rokeach's (1973) Rokeach Value Survey (RVS), developed in order to measure the relative importance that respondents consciously attach to 18 "terminal" and 18 "instrumental" values (e.g., self-respect, true friendship, inner harmony). However, the RVS is not designed as an instrument for cross-cultural research. The List of Values ([LOV], Kahle, 1983) is appealing as it is parsimonious in its approach and easy to administer. Examples of values included on the scale are sense of belonging, sense of accomplishment, and self-fulfillment. Finally, Schwartz (1992, 1999) developed schemes of both individual and cultural values. The latter includes conservatism, intellectual autonomy, affective autonomy, hierarchy, egalitarianism, mastery, and harmony.

Ethnic Group Research in Leisure Studies

Thapa, Graefe, and Absher (2002) indicate that the majority of research dealing with the participation of ethnic groups in outdoor recreation has focused on African-Americans and Hispanics, usually as compared to white Americans. They further point out that comparative research with Asian Americans has been rare. Finally, they note that several researchers have examined subgroups such as Hispanics born in the United States and those who immigrated from Mexico and Central America (Chavez, 1992), or national groups, such as Chinese, Filipinos, Koreans, and Vietnamese, who are generally lumped together as Asian Americans (Jeong & Godbey, 2000). Taylor (1992) examined leisure participation among blacks who she subdivided into those of Jamaican and African-American descent, and contrasted them with individuals of Italian descent and with "other" whites. Dwyer (1993) looked at outdoor recreation participation among blacks, whites, Hispanics, and Asians in Illinois, while Floyd and Noe (1993) examined environmental attitudes among Hispanics of Cuban ancestry. Gobster (2002) evaluated recreational resource use patterns, activities, and preferences among blacks, Latinos, Asians, and whites, but also examined differences and similarities among subgroups (e.g., Latino immigrants from Mexico, Cuba, Puerto Rico, the Central American countries and a couple of South American countries) when he had adequate sample sizes. Tinsley, Tinsley, and Croskeys (2002) looked at park use, the social milieu, and perceptions of psychosocial benefits of park use among older African-Americans, Hispanic-Americans, Asian-Americans, and Caucasian-Americans. So, comparative research on leisure and ethnicity has focused on what presumably constitute the largest ethnic groups in North America.

²Later, Hofstede cooperated with Michael Bond (1988) and developed a fifth dimension, long-term orientation (Confucian dynamics).

There are a small number of studies of other groups, however. For instance, Hutchison (1993) looked at leisure among Hmong residing in the United States while Tirone and Shaw (1997) examined leisure and family life among Indian women living in Canada. McDonald and McAvoy (1997) evaluated the state of leisure research among Native Americans. Nevertheless, it should not be surprising that the majority of studies were addressed at the largest ethnic/minority groups.

Cultural Consensus Analysis and its Application to Ethnicity

Anthropologists have understood for many years that members of the same cultures vary among themselves despite the fact that they have then typically treated those cultures as essentialized, reified, and homogenous entities (Bidney, 1944; Keesing, 1994; Pelto and Pelto, 1975; Wallace, 1961). Chick (1981) faced this problem in his study of the organization of the religious festival system in a Mexican village. Specifically, he was interested in how festival sponsorships were ranked in terms of what villagers called the *escalafón*, or graded list or scale. Second, he was interested in the degree to which villagers agreed on the hierarchical organization of festival sponsorships (i.e., the *escalafón*) because it was clear from preliminary field work that individual villagers held somewhat different conceptions of the hierarchy. Chick asked 31 informants to rank order 20 festival offices (sponsored by villagers on a rotating basis) in terms of their understanding of the *escalafón*. The informants were permitted to create as many or as few ranks as they desired. The maximum number of ranks by any informant was 15 while the minimum was 3 and none of the informants ranked the sponsorships identically. However, using various non-parametric statistics, Chick was able to show that, overall, informants agreed substantially, although not perfectly, on the ranking of festival sponsorships and that an ethnographically meaningful composite ranking of the festival offices could be derived from the individual rankings. Finally, he showed that individual informant rankings all correlated significantly with the overall ranking but that some informants were considerably more knowledgeable than others. Similarly, Boster (1985) showed that Aguaruna women (from northern Peru) who were most knowledgeable about manioc plants agreed more with each other on a series of questions about manioc while less knowledgeable individuals agreed less often with others.

Romney et al. (1986) formalized observations such as these with their theory of culture as consensus. Using a conceptualization of culture similar to Goodenough's (1957) presented above, Romney et al. argued that patterns of agreement among informants can be used to determine "culturally correct" answers to questions about specific cultural domains. Similar to Chick's (1981) procedure, a cultural consensus analysis involves the examination of the correlations between each informant's responses to a series of questions and those of everyone else. This is accomplished by factor analyzing a person-by-person correlation matrix rather than the variable-by-variable

correlation matrix (hence, cases, rather than variables, are factored). Consensus analysis provides an estimate of the culturally appropriate answers to questions about particular knowledge domains and the degree to which individual informants share that knowledge (Weller, 1998). Consensus analysis has been applied to many different domains of culture, including beliefs about illness (e.g., Garro, 1986, 1987; Weller, Ruebush, & Klein, 1997), plant naming (e.g., Boster, 1985, 1986), status and prestige (Magana, Evans, & Romney, 1995), environmental values (Kempton, Boster, & Hartley, 1995), festival sponsorship (Chick, 2002), reasons for poverty (Dressler, 1996, 1997), and lifestyle (Dressler, dos Santos, & Campos Balierio, 1996).

Romney et al. (1986) used minimum residual factor analysis (MINRES) for cultural consensus analysis. Later, Handwerker (2001) redefined cultural consensus as an issue of construct validity (of cultures) and showed that principal components analysis (PCA) with an unrotated solution can be used, rather than MINRES, with fewer restrictive assumptions. PCA first identifies the factor, or principal component, which has the largest common variance among a set of variables. Additional factors account, in turn, for the largest remaining groups of shared variance. Factor loadings provide the (Pearson's) correlation between individuals and the underlying factor. The eigenvalue of a factor (the sum of square of loadings of variables for that factor) indicates how much variance all the cases or variables account for with respect to the total variation being accounted for in the PCA extraction. Handwerker's (2002), rules of thumb for a valid single factor solution, indicating cultural consensus, consist of the following:

1. The first factor should account for 50 percent or more of the total variance.
2. The eigenvalue of the first factor must be at least 3 times larger than that of the second factor.
3. There should be no negative loadings on factor one.
4. There should be no high (+/- .50) loadings on factor two.
5. The eigenvalue of the second factor should lie at the top of the scree plot. That is, there should be an "elbow" at the second factor on the scree plot.

The assumption underlying many, and perhaps most, studies that use ethnicity as an independent variable is that ethnic differences reflect differences in culture (e.g., Johnson et al., 1998). Cultural consensus analysis permits us to investigate empirically the degree to which populations or ethnic groups share cultural content. If distinctive ethnic subcultures exist, then those subcultures should show cultural consensus in terms of language, religion, family structure, cultural values, and similar domains (Hutchison, 1988). If, however, ethnic groups fail to show consensus in cultural values or some other indicator presumed to constitute ethnicity, then the assumption of cultural homogeneity of the ethnic group is violated. If ethnic groups lack cultural consensus on any particular domain, comparing them on that domain is not appropriate.

Methods

Study Design, Setting, and Sampling

Study design and setting. During the summer of 2002, visitors to the Angeles National Forest (ANF) near metropolitan Los Angeles were surveyed. The ANF is an urban interface forest that covers over 650,000 acres and provides opportunities for outdoor recreation and enjoyment to the over 22 million residents of the greater Los Angeles metropolitan area. Past recreation research, based on general population samples, showed that the ANF visitor population was predominantly white (e.g., Chavez, 2001; Ewert, Gramann, & Floyd, 1991). In this study, we intend to examine the relationship between ethnicity and cultural values. Because a simple random sample of all visitors would not efficiently yield adequate respondents from specific ethnic groups, an on-site survey was administered at ANF sites frequented by ethnically diverse populations.

Sampling. Purposive sampling was used at sites frequently visited by individuals and groups of particular ethnic backgrounds (Weisberg, Krosnick, & Bowen, 1996). The sampling sites were chosen in consultation with USDA Forest Service officers, on-site Forest Service rangers and volunteers, as well as through a literature review of previous studies about ethnic diversity in southern California (e.g., Carr & Williams, 1992, 1993; Chavez, 2001). Eventually, 14 out of the 22 sites, known to be heavily used by visitors of diverse ethnic backgrounds, were identified and used in the sampling procedures.

Interviewing was conducted on 26 days during June, July and August 2002. Sixty-nine percent of the data collection (eighteen days) took place on weekends (Saturday and Sunday) and holidays, and 31% (eight days) took place on weekdays and non-holidays.³ The on-site interviews were focused on day users. The focus on weekend or holidays day users was based on the information from Forest Service officers, rangers, as well as volunteers, since this segment of users was known to be more diverse.

Normally, the field researcher stayed at the trailheads, scenic overlooks, picnic areas, campgrounds, visitor centers, and parking lots and waited for the visitors coming back from their forest trips. We adopted a systematically random selected approach, that is, at each site, every third visitor was asked to complete the on-site questionnaire to maintain a random selected manner (Salant & Dillman, 1994). In addition, the field researcher also gave priority to minority parties in order to ensure the success of the data collection. In general, the field researcher initially asked visitors "which country do you come from?" If they answered that they came from country other than the U.S., they were surveyed as a priority.

Most of the respondents surveyed were in groups. When approaching a party with more than one person, each member of the party was asked to

³Originally, on-site interviewers were scheduled on weekends. Later (for July and August surveys), we also included Friday afternoon to capture the early "weekenders".

fill out a questionnaire. In most cases, however, one member of the party filled out a single questionnaire.⁴ The visitors were asked if they were willing to take about 10 minutes for a visitor survey. If they were willing to participate, they were asked first to read the survey protocol. The survey protocol was attached on the back of the survey clipboard, introduced the purposes of the project and their rights as a research participant (e.g., voluntary participant). The survey protocol was printed in English as well as Spanish, Chinese, and Korean. Participants were welcome to keep a copy of the survey protocol if they wanted further information about the visitor survey.

Although the survey protocol was printed in four languages, the questionnaire was printed only in English. Participants who could not read English but could understand were surveyed with an interview conversation. Those who were unable to read and understand spoken English were not included in this study. Nine potential informants were unable to read English, including 4 senior citizens who did not have their reading glasses. In addition, five potential informants were unable to read and to understand spoken English.

In the questionnaire, participants were asked, "what cultural group do you most closely identify with?" Following this question, 12 items can be checked (e.g., Anglo American, Chinese American), including the last item, "other and please specify." In answering this question, an Anglo might identify himself or herself as a Hispanic or an Asian might identify himself or herself as an Anglo regardless of their biological heritages. A few respondents replied that they were just Americans, or they were mixed or a little bit of everything. Some of the respondents were not willing to put themselves into any category. In addition, the 8% "other" was excluded in the data analysis in this study." Our measure of ethnic group was based on a process of self-identification or the perceptions of individuals within the same group perceived that outsiders thought of them (Barth, 1996).

Ninety percent ($n = 1,057$) of the responses were from weekend and holiday sampling days, and 94 percent ($n = 1,104$) were day users. Among the 14 sampling sites in the ANF, over 90 percent of the responses came from three developed sites close to Los Angeles metropolitan area. At sampling sites further from the urban edge, fewer visitors were encountered, especially on weekdays.

A total of 1,332 visitors were approached, 154 of whom declined or were unable to participate the on-site survey. Of the 1,178 informants who responded, four survey questionnaires were incomplete. This resulted in 1,174 usable surveys, with a net response rate of 88 percent. Overall, 38% were Anglo ($n = 444$), 27% Hispanic ($n = 312$), 27% Asian ($n = 319$), and 8%

⁴We did not count the total number of parties from which individuals were asked to participate nor the number of people per party who completed questionnaires. But we have a group composition question in the questionnaire; we asked participants whether she or he visited Angels National Forest alone, with family, with friends, or with family and friends.

"other" including African-American, American-Indian, "other," and missing values ($n = 97$).

Data Analyses

In this study, we use Handwerker's (2001) generalization of cultural consensus analysis via PCA to determine whether the ethnic groups (defined as Anglos, Hispanics, and Asians) exhibited cultural consensus in terms of cultural values as measured by Hofstede's (1980) instrument. Before running the PCA to examine Hofstede's 16 items of cultural values (Appendix A) for cultural consensus, we reverse coded the latter two items in each dimension to preserve a consistent measurement direction. The data analyses followed a sequence of analyses. First, we assessed cultural consensus within each broadly-defined ethnic group, namely, Anglos, Hispanics, and Asians. Second, we assessed cultural consensus within more narrowly defined groups that correspond to nation of origin. Third, we assessed cultural consensus within socio-demographic subgroups (splitting the ethnic groups by gender, age, and generation in the U.S.).

Results

Sample Characteristics

Participants were more likely to be male (60%, $n = 685$) than female (40%, $n = 460$). They were largely young adults (mean age = 36), with only 5% 60-years or older. Forty-seven percent ($n = 521$) of the participants were married, and 46% ($n = 518$) single, and the remaining 7% ($n = 82$) of participants were divorced or widowed. The mean number of children (21 or under) living in the household was 1, with 53% ($n = 466$) of the participants having no children in the household. More than 70% ($n = 731$) were employed outside the home, 12% ($n = 119$) were full-time students, and 14% ($n = 138$) were full-time homemakers, retired, or others. The level of education was fairly high; 81% ($n = 818$) of the participants had formal education beyond high school, 34% ($n = 344$) earned a college degree, and 24% ($n = 238$) owned a graduate degree. The household incomes were also high; with 54% ($n = 501$) of the participants having household incomes over \$50,000, and 26% ($n = 246$) over \$80,000. Mean years lived in the U.S. was 18 ($SD = 11.75$). Mean generations in the U.S. was 3 ($SD = 1.33$). Over half of the participants were born in the U.S., and over 20% were born in Asian countries. Mean travel distance from home was 51 miles ($SD = 33.35$), and median travel distance from home was 20 miles. Nine percent ($n = 103$) of participants visited the ANF alone, 32% ($n = 373$) visited with family, 36% ($n = 420$) visited with friends, and 19% ($n = 223$) visited with family and friends (Appendix B).

Cultural Consensus Analyses

The results for the three major ethnic groups (i.e., Anglos, Hispanics, and Asians) showed that the ratios of the first factor eigenvalue divided by

the second factor eigenvalue were less than 3.0 for both the Anglo and Asian groups, while that of Hispanic group was 4.3. However, the amounts of variance explained by the first factor were less than 50 percent for each of the three groups. Moreover, all three groups had negative loadings on factor one, and the Anglo and Asian groups had high (+/- .50) loadings on factor two. Hence, none of the nominal ethnic groups exhibited cultural consensus in terms of cultural values as measured by Hofstede's (1980) instrument and interpreted based on Handwerker's (2001) standards of comparison. The analyses of subgroups within the Hispanic and Asian groups created by splitting by nationality showed that the ratios of the first factor eigenvalue divided by the second factor eigenvalue were all less than 3.0, except for Hispanic-Americans,⁵ Mexican-Americans, and Vietnamese-Americans. The subgroup variances explained by the first factor were less than 50 percent except for Vietnamese-Americans. In addition, there were negative loadings on the first factor for all the subgroups and there were high (+/- .50) loadings on the second factor for all the subgroups, except for Hispanic-Americans and Mexican-Americans. Since none of the subgroups meet Handwerker's criteria of indicating cultural consensus, we therefore concluded that the overall sample, Anglo, Hispanic, and Asian subgroups as well as subgroups split by nationality were not homogeneous in terms of Hofstede's measure of cultural values (Table 1).

Next, we used consensus analyses to test subgroups within the three major groups split by gender, age, and their generation in the U.S. For the Anglo subgroups, the results showed that all the ratios of the first factor eigenvalue divided by the second factor eigenvalue were less than 3.0. All the subgroup variances explained by factor one were less than 50 percent. All the Anglo subgroups had negative loadings on factor one, and high (+/- .50) loadings on factor two. We therefore concluded that all the Anglo subgroups split by gender, age, and their generation in the U.S. were not homogeneous in terms of Hofstede's (1980) measure of cultural values (Table 2).

We also split the Hispanic group by gender, age, and the generation in the U.S. and tested the subgroups. Unlike the Anglo subgroups, the cultural consensus analyses showed that all of the ratios of the first factor eigenvalue divided by the second factor eigenvalue were greater than 3.0, except for the third generation subgroup. All the subgroups variances explained by factor one were less than 50 percent, except for the female subgroup, the age over 39 subgroup, the fourth generation subgroup, the combination of the third and fourth generation subgroup, and the combination of the second, third and fourth generation subgroup. All subgroups had negative loadings on factor one, and almost all subgroups had high (+/- .50) loadings on factor two, except for the combination of the first, second, and third generation

⁵We divided the overall Hispanic group into a generic Hispanic-American group, a Mexican-American group, and a Central American-American group based on informants' indication of their ancestry. The Hispanic-American group included individuals from South America and the Caribbean.

TABLE 1
Cultural Consensus Analyses of Anglo, Hispanic, and Asian Groups
Splitting by Nationality

Ethnic group (<i>n</i>)	Ratio of Eigenvalue factor 1/factor 2	Variance explained by factor 1	Numbers of negative loadings on factor 1	Numbers of high (+/- .50) loadings on factor 2
Anglos (444)	1.3	23.0%	8	4
Hispanics (312)	4.3	46.3%	8	0
Hispanic American (183)	4.1	48.4%	8	0
Mexican American (111)	4.5	45.4%	8	0
Central American (18)	2.1	39.7%	8	5
Asians (319)	2.0	31.9%	8	3
Chinese American (123)	1.8	33.0%	8	6
Taiwanese American (69)	2.9	41.9%	8	4
Filipino American (32)	1.2	25.7%	5	6
Korean American (70)	1.2	24.7%	8	7
Vietnamese American (14)	3.1	55.5%	8	5
Japanese American (11)	1.5	38.0%	8	6
Total (1075)	2.0	31.6%	8	4

The Bold and Italic cells indicate the evidence of cultural consensus or valid single cultural factor.

subgroup. We therefore concluded that all the Hispanic subgroups split by gender, age, and their generation in the U.S. were not homogeneous in terms of Hofstede's (1980) measure of cultural values (Table 3).

Lastly, for the Asian subgroups, again, we split the Asian groups by gender, age, and the generation in the US. The cultural consensus analyses showed that the ratios of the first factor eigenvalue divided by the second factor eigenvalue were all less than 3.0. All the subgroup variances explained by factor one were less than 50 percent. All subgroups had negative loadings on factor one, and all subgroups had high (+/- .50) loadings on factor two, except for the male subgroup (see Table 4). We therefore concluded that all the Asian subgroups split by gender, age, and their generation in the U.S. were not homogeneous in terms of Hofstede's measure of cultural values (Table 4). Overall, the findings showed that the Anglo, Hispanic, and Asian groups and subgroups demonstrated similar patterns and none exhibited consensus in cultural values as measured by Hofstede's (1980) instrument and evaluated according to Handwerker's (2001) criteria.

Discussion

Many, perhaps most, studies of leisure differences among ethnic groups are based on the assumption of cultural homogeneity within each ethnic

TABLE 2
Cultural Consensus Analyses of Anglo Group Splitting by Gender, Age, and the Generation in the U.S.

Anglo subgroup (n)	Ratio of Eigenvalue factor 1/factor 2	Variance explained by factor 1	Numbers of negative loadings on factor 1	Numbers of high (+/- .50) loadings on factor 2
Male (291)	1.4	24.1%	8	4
Female (149)	1.4	24.3%	8	3
Age > 39 (191) ^a	1.2	21.1%	4	4
Age ≤ 39 (219)	1.4	25.2%	8	4
1 st generation in the U.S. (32)	1.9	40.0%	8	4
2 nd generation in the U.S. (44)	1.2	18.4%	6	4
3 rd generation in the U.S. (81)	1.6	27.6%	8	5
4 th generation in the U.S. (172)	1.5	26.5%	8	4
1 st & 2 nd generations in the U.S. (76)	1.2	22.0%	8	5
3 rd & 4 th generations in the U.S. (253)	1.3	25.2%	8	4
1 st , 2 nd , & 3 rd generations in the U.S. (157)	1.5	24.7%	8	6
2 nd , 3 rd , & 4 th generations in the U.S. (297)	1.3	23.5%	8	4

^a Mean age = 39

TABLE 3
Cultural Consensus Analyses of Hispanic Group Splitting by Gender, Age, and the Generation in the U.S.

Hispanic subgroup (n)	Ratio of Eigenvalue factor 1/factor 2	Variance explained by factor 1	Numbers of negative loadings on factor 1	Numbers of high (+/- .50) loadings on factor 2
Male (176)	3.8	39.9%	8	1
Female (134)	4.3	53.0%	8	1
Age > 31 (133) ^a	3.9	53.3%	8	2
Age ≤ 31 (240)	4.2	45.3%	8	2
1 st generation in the U.S. (86)	3.7	42.4%	8	3
2 nd generation in the U.S. (48)	3.6	45.5%	8	3
3 rd generation in the U.S. (22)	2.1	43.5%	7	7
4 th generation in the U.S. (26)	4.7	62.6%	8	4
1 st & 2 nd generations in the U.S. (134)	3.8	43.1%	8	1
3 rd & 4 th generations in the U.S. (48)	5.5	56.0%	8	1
1 st , 2 nd , & 3 rd generations in the U.S. (156)	4.0	42.5%	8	0
2 nd , 3 rd , & 4 th generations in the U.S. (96)	4.9	50.2%	8	1

^aMean age = 31

The Bold and Italic cells indicate the evidence of cultural consensus or valid single cultural factor.

TABLE 4
Cultural Consensus Analyses of Asian Group Splitting by Gender, Age, and the Generation in the U.S.

Asian subgroup (n)	Ratio of Eigenvalue factor 1/factor 2	Variance explained by factor 1	Numbers of negative loadings on factor 1	Numbers of high (+/- .50) loadings on factor 2
Male (178)	2.8	34.1%	8	0
Female (140)	1.5	30.3%	8	7
Age > 31 (144) ^a	2.2	38.9%	8	2
Age ≤ 31 (167)	1.8	29.9%	8	6
1 st generation in the U.S. (77)	1.1	22.3%	8	7
2 nd generation in the U.S. (22)	1.3	36.8%	5	8
3 rd generation in the U.S. (7) ^b	NA	NA	NA	NA
4 th generation in the U.S. (5)	1.7	41.7%	7	5
1 st & 2 nd generations in the U.S. (99)	1.1	24.4%	8	5
3 rd & 4 th generations in the U.S. (12)	1.2	30.3%	7	6
1 st , 2 nd , & 3 rd generations in the U.S. (106)	1.1	24.2%	6	7
2 nd , 3 rd , & 4 th generations in the U.S. (34)	1.4	33.9%	5	6

^aMean age = 35

^bThere is at least one of the variables has zero variance and correlation coefficients could not be computed for all pairs of variables.
 The Bold and Italic cell indicates the evidence of cultural consensus or valid single cultural factor.

group and cultural or subcultural heterogeneity between ethnic groups. In turn, culture is assumed to influence, if not necessarily fully determine, differences in recreational behavior and preferences among ethnic groups. Johnson et al., (1998), for example, stated, with respect to the ethnicity hypothesis: "Ethnicity attributes differences in recreation behavior to value differences based on subcultural norms. The theory postulates that subcultures or ethnic minorities possess unique cultural value systems which influence their recreation behavior" (p. 102). We claim, however, that simply to assume within-group cultural homogeneity in nominal ethnic groups is unwarranted. Instead, we believe that within-group homogeneity must be empirically demonstrated. The evidence we present here indicates that none of the presumed ethnic groups in this study—Anglos, Hispanics, or Asians—exhibit internal homogeneity with respect to cultural values as measured by Hofstede's instrument and evaluated according to Handwerker's standards. Moreover, even subgroups, within which greater homogeneity might be expected, fail to exhibit cultural consensus in terms of values. How can these results be explained? We feel that there are several possibilities.

1. The Hofstede instrument is a valid measure of cultural values, one important domain of the cultural content of ethnic groups. Additionally, cultural consensus analysis theory and method are appropriate for addressing the homogeneity of ethnic groups in terms of values. Therefore, the assumption of cultural homogeneity with respect to values in at least some nominal ethnic groups is erroneous.
2. The Hofstede instrument is not a valid measure of the cultural values of ethnic groups although consensus analysis theory and Handwerker's method of ascertaining consensus are appropriate for addressing the homogeneity of ethnic groups in terms of values. Therefore, our results are an artifact of an invalid or inappropriate instrument.
3. The Hofstede instrument is a valid measure of the cultural values of ethnic groups. However, cultural consensus analysis theory and method are not appropriate for addressing the homogeneity of ethnic groups in terms of values. While this is possible, the fact that cultural consensus analysis has been used in more than 200 studies since 1986, addressing numerous cultural domains, makes this explanation highly unlikely. Indeed, the original cultural consensus paper by Romney et al. (1986) is the most-cited publication to appear in the *American Anthropologist* since 1980 (A. K. Romney, personal communication, July 16, 2005).
4. The Hofstede instrument is not a valid measure of the cultural values of ethnic groups and cultural consensus analysis theory and method are not appropriate for addressing the homogeneity of ethnic groups. Again, while this is possible, we feel that the evidence against options 2 and 3 above rule out this explanation.
5. The Hofstede instrument is a valid measure of the cultural values of ethnic groups and consensus analysis theory and method are appro-

priate for addressing the homogeneity of ethnic groups. However, there is something unique about the sample or context that led to the observed results.

6. Analysis of cultural values is not a valid means of determining the homogeneity of ethnic groups. This would suggest either values alone are inadequate for determining cultural (or subcultural) content or cultural content alone is not a viable indicator of ethnicity.

While we regard each of these to be possible, we feel that number one is the most likely and the most important of the six to research on leisure and ethnicity. The first and last alternatives represent major theoretical problems, while two through five represent what are largely technical or conceptual difficulties. We favor alternative one because Hofstede's instrument has been validated numerous times and is currently one of the most popular measures of cultural values in existence, particularly among international business researchers. Similarly, although cultural consensus theory is not universally accepted among anthropologists (e.g., Aunger, 1999; 2003), especially those who take a humanistic or interpretive, rather than scientific, perspective toward culture, it has nevertheless been used with excellent results in numerous studies and we feel that it is especially appropriate here. The sixth possibility would require a rather complete overhaul of what nearly everyone means by "ethnic group" (but see Stodolska and Yi, 2003). It must be remembered, however, that Barth (1996) claimed that self-ascription and ascription by others are more crucial than culture content in ethnic identification. The problem here, however, is that many, if not most, studies of ethnic differences in leisure address behaviors which, if we accept Goodenough's (1957) definition of culture, implies cultural differences among groups.

Lumping Cultures

One of our concerns is over how cultural groups previously regarded as distinct, such as Vietnamese, Chinese, Koreans, and Japanese, somehow become culturally homogenous when labeled as "Asians" or "Asian-Americans." In their study of leisure among adolescent Mexican, Korean, and Polish immigrants to the U.S., Stodolska and Yi (2003) claimed,

While both Korea and Poland are over 99.9% and 97.6% respectively ethnically homogenous countries (CIA, World Factbook, 2001), Mexico is inhabited by a number of distinct ethnic and racial groups. We argue, however, that the transition to the multicultural environment of the United States where ethnic groups maintain their language distinctiveness and represent immigrants from different countries made adolescent Mexicans realize their distinctiveness, and at the same time, common traits of their culture. (p. 59)

This can be referred to as "emergent ethnicity" and Stodolska and Yi present evidence in support of their position. However, for Mexicans, Koreans, or Poles to recognize their own national ethnic identities is quite different from

a situation where Vietnamese, Chinese, Koreans, and Japanese are agglomerated by researchers to become ethnically "Asian." Similarly, people described as Anglo-American, white, or Caucasian, despite having English, Scotch, Irish, Polish, Italian, Norwegian, German, or various other European backgrounds, are commonly assumed to be ethnically homogenous enough to be contrasted with other groups. The problem, as Floyd (1998) pointed out, is,

Researchers have tended to be content with accepting ethnicity and subculture as givens rather than as concepts in need of definition and explication. This is reflected in the reliance on racial categories and ethnic labels as measures of "culture" to test for ethnic differences (Hutchinson and Fidel, 1984). The conventional approach has been to interpret significant differences in participation rates that remain after controlling for socioeconomic factors as cultural differences, without specifying which aspects of ethnic culture affect leisure behavior. (p. 6)

We agree wholeheartedly with Floyd (1988). However, we also feel that more than simply defining and explicating ethnicity and (sub) culture is needed. We believe that it is also necessary to determine whether or not groups that are categorized and labeled as ethnic in fact share a subculture. We believe that our findings indicate, at least in terms of the cultural values as measured by Hofstede's instrument in our sample, that groups labeled as "Anglos," Hispanics," and "Asians" lack the degree of within-group cultural consensus to make between-group comparisons meaningful. The overwhelming majority of research on ethnicity (and race) and leisure has been directed at the recreation behavior of groups distinguished by ethnic (or racial) labels.

We see several problems here. First, the relationship between culture and behavior is amazingly understudied, even by anthropologists (Chick, 2002; Roberts & Chick, 2006), and in those studies that have directly addressed the issue, the influence of culture on behavior has been far from perfect.⁶ That is, people often do not do what they say they should do, in accord with cultural norms. Second, we believe that ethnic labels have been applied willy-nilly to groups that often share few or none of the traits, such as language, religion, nation of origin, and so on, that are common to definitions of ethnicity. Perhaps the most egregious example of this is "Asian." Asia is the largest and most populous continent on the planet and is home to hundreds of groups that are commonly held to be culturally distinct. Yet, when it comes to studying Asian immigrants to the United States, or their descendants, these disparate groups are miraculously transformed into one,

⁶Many authors include behavior as part of their definition of culture. The problem with doing this is that culture can no longer be considered as either a prescription or proscription for behavior since doing so would be succumbing to a tautology: saying that people's behavior is a result of the way they behave. Where culture and behavior have been systematically studied, in some domains the relationship is very strong (i.e., correlations above .9) while, in others, it has been much more modest (i.e., correlations of .4-.5).

presumably homogenous, cultural entity. The problem entails even among groups with the same national origin, such as Mexican-American or Vietnamese-American. National boundaries are political, not cultural, entities and fail to represent the degree of cultural differences even in relatively homogenous countries, such as Japan. Mexican-Americans may trace their ancestry to the Mayan areas of southern Mexico or to the linguistically and culturally distinct Nahua areas of highland Mexico, for example.

The Problem of Significant Results

If ethnic groups cannot be legitimately distinguished by their culture content, how can the results of the many studies wherein significant differences between ethnic groups were found in terms of leisure preferences, interests, or behavior be explained? We feel that there are several possibilities. First, some studies report statistically significant findings but account for very little variance. For example, Tinsley et al. (2002) found statistically significant differences among African-American, Hispanic, Asian, and Caucasian visitors to Lincoln Park in Chicago in terms of a variety of variables. However, few of the significant relationships found accounted for much of the observed variance. Travel time to parks differed significantly between Caucasians and the other groups, for example, but ethnicity accounted for only two percent of the variance. Similarly, Caucasians visited the park more often than members of the other groups but, again, ethnicity again accounted for just two percent of the variance. Tinsley et al., (2002, p. 210) claimed, "ethnic heritage is of moderate importance in explaining the difference in the park facilities used" by the different groups. However, the variance accounted for in their analyses was below 10% except for use of bicycle and footpaths (24%). With respect to psychosocial benefits of leisure, ethnicity accounted for the greatest amount of variance in pleasure seeking. However, that was only 12%. Ethnicity explained less than 10% of the variance for each of the other variables tested.

In another example, Shaull and Gramann (1998) found a few statistically significant differences among Hispanics (divided into three groups in terms of language acculturation, based on Spanish and English comprehension and use) and Anglos using analysis of covariance. Again, even among the significant findings, ethnicity accounted for little of the variance and the authors concluded that two of their three groups of Hispanics (the least and the most acculturated) were quite similar to the Anglo sample in terms of family-related benefits and nature-related benefits. Although Shaull and Gramann (1998) used language, generally regarded as one of the markers of ethnicity, to differentiate their Hispanic sample, they simply assumed that Anglos who have low competence in Spanish are culturally homogenous. Researchers must look at the strength of differences or relationships, not just whether or not they are statistically significant, since, with a large enough sample, any variable will exhibit a non-chance relationship with virtually any other variable.

There is a related methodological concern, as well. Many researchers who attempt to find differences in leisure behavior based on ethnicity involve multiple comparisons, often chi-square analyses, t-tests, or analyses of variance or covariance. Gobster (2002), for example, compared black, Latino, Asian, and white groups in terms of "things they do in Lincoln Park." This list included 34 items divided into 5 categories (passive, active-individual, active-group, water sports, and miscellaneous). He showed that there were differences among the groups for most of these activities by presenting the chi-square and p-values for each of the activities across the groups. In the case of multiple related tests, as Gobster conducted, many statisticians feel that an adjustment for the alpha level is needed in order to avoid making a type 1 error (incorrectly accepting that an observed difference or relationship is true). This is because, with an alpha level of .05 and 5 related tests, for example, there is 22% chance of obtaining at least one "significant" difference or relationship that is, in fact, due to chance. As the number of tests increases, so does the likelihood of a type 1 error (e.g., with 20 tests, there is a 64% chance of getting one or more significant differences by chance alone). Given that Gobster reported tests on 34 activities (plus individual activities summed under the five groupings), the chance of obtaining one or more significant differences by chance rises to 82.5%.

The best-known correction for multiple tests is the Bonferroni procedure, which involves simply dividing the alpha level by the number of tests. However, some statisticians feel that the Bonferroni correction is too conservative and leads to type II errors; that is, not rejecting false null hypotheses and acknowledging that relationships do not exist when, in fact, they do (Perneger, 1998). Regardless, we feel that this issue should be considered in studies wherein differences or relationships among many related variables and ethnicity are examined, such as Gobster's (2002) or that of Tinsley et al (2002).

The study reported in this paper should also be interpreted with care, because we did not measure all cultural content but only values, and those only in terms of Hofstede's instrument. Thus, from the perspective of cultural content, we feel that if one measured something else, such as knowledge of leisure activities or beliefs about leisure and health, we might find consensus within the so-called ethnic groups. It is possible that the ethnic groups in this study would have exhibited cultural consensus in other domains or in cultural values measured by other means. Moreover, it is clear from other cultural consensus studies that informants exhibit relatively high consensus with respect to some domains (e.g., festival sponsorships in a Mexican village [Chick, 2002]) but modest or no consensus with respect to others (e.g., in organizational culture in a Scottish computer technology firm [Caulkins & Hyatt, 1999]; cultural values in the present study). Chick and Gonzalez (2005) show that knowledge of instrumental cultural domains (i.e., how individuals make their livings and raise their families) may have less intracultural variability than expressive domains (i.e., the arts and entertainment) so it is possible that finding consensus in leisure and recreation is

inherently more difficult than in other cultural domains. Hence, the significant differences or relationships found between ethnicity and recreational pursuits, values, or beliefs may be valid but not generalizable across cultural domains.

It may also be that our method of including individuals in ethnic groups was flawed. We observed that, while conducting the on-site survey in the ANF, a few respondents asked how they could put themselves in one or another ethnic category in the questionnaire as they were actually from mixed backgrounds.⁷ Other researchers have addressed similar situations with self-ascription to ethnic groups (e.g., Shaul & Gramann, 1998). In addition, unlike the sample with which Hofstede developed his instrument, the socio-demographic profiles of members of our sample were relatively heterogeneous.⁸ The fact that our informants were interviewed while in the ANF means that, regardless of membership in different ethnic groups, they had at least one thing in common and may have differed from their peers with respect to forest recreation interest and participation. Additionally, since few studies on ethnicity and leisure have used random samples, including this one, generalization of results is difficult, if not impossible. Nevertheless, authors tend to state their results as if they are generalizable to the ethnic groups in question.

Lastly, it might be worthwhile to examine the effect of outliers (e.g., negative loadings on factor one) on the cultural consensus of our groups. It would be always possible to achieve consensus by systematically excluding outliers since the outliers may reflect either genuine differences or measurement errors (Jolliffe, 2002). However, outliers cannot be arbitrarily excluded from analyses simply because they do not meet the needs of researchers.

Summary

We do not believe that individuals who are simply labeled as a member of an ethnic group on the basis of ancestry, language, skin color, or national origin should be expected to consistently "act in a manner acceptable to" (Goodenough, 1957, p. 167) other members of that group. At least in the circumstances we studied, ethnicity was a poor predictor of how similar people's thinking was. Our findings showed that, in at least one context and regarding at least one set of issues, there was very little consensus among people belonging to a single ethnic group.

Our recommendations are simple. First, rather than assuming cultural homogeneity within groups, ethnic, racial, or otherwise, in the domains under study, researchers should empirically examine it using cultural consensus

⁷In the sample, 97 respondents designated themselves as "other", accounting for eight percent of the total responses.

⁸The socio-demographic variables (e.g., gender, age, generation in the U.S.) significantly differed among Anglos, Hispanics, and Asians.

analysis or some other means. Not doing so will perpetuate research of questionable validity, particularly when two or more groups are compared. At the very least, the empirical demonstration of within-group homogeneity may help avoid some of the conflicting interpretations of research on ethnic differences in leisure. Second, although the racial and ethnic categories established by the U.S. Census Bureau were revised in 1997 for the 2000 census because of changes in the racial and ethnic makeup of the U.S., the new categories are still very broad (i.e., "American Indian or Alaska Native; Asian; Black or African American; Native Hawaiian or Other Pacific Islander; and White" [U.S. Census Bureau, 2006]), and mask the internal diversity of the designated groups. Our results suggest that one-size-fits-all policies based on the assumption that nominal ethnic groups, such as Asian, Hispanic, or Anglo, are culturally homogenous may neglect important within-group differences in values and possibly other aspects of culture. These differences, in turn, may lead to variation in meanings that group members associate with natural and cultural characteristics of parks, for example, or in behaviors with respect to outdoor and other forms of recreation supervised by agencies ranging from local park districts to the U.S.D.A. Forest Service or the National Park Service. Management policies should both reflect understanding of and sympathy with such intra-group diversity.

Finally, public awareness of intra- and inter-group differences among ethnic groups is important as, ultimately, public policies should reflect public opinion and support. Public support is essential for long-term success in dealing with social issues and problems that can arise from cultural friction between ethnic and racial groups. However, public opinion, like that of researchers, should be informed, not based simply on assumptions.

References

- Allison, M. T. & Geiger, C. (1993). The nature of leisure activities among the Chinese-American elderly. *Leisure Sciences*, 15, 309-319.
- Allison, M. T. (1988). Breaking boundaries and barriers: Future directions in cross-cultural research. *Leisure Sciences*, 10, 247-259.
- Aunger, R. (1999). Against idealism: Contra consensus. *Current Anthropology*, 40 (supplement), S93-S101.
- Aunger, R. (2003). *Reflexive ethnographic science*. Walnut Creek, CA : AltaMira Press.
- Baas, J. M., Ewert, A. W., & Chavez, D. J. (1993). Influence of ethnicity on recreation and natural environment use patterns: Managing recreation sites for ethnic and racial diversity. *Environmental Management*, 17, 523-529.
- Barth, F. (1996 [orig. 1969]). *Ethnic groups and boundaries*. Long Grove, IL: Waveland Press.
- Bidney, D. (1944). The concept of culture and some cultural fallacies. *American Anthropologist*, 46, 30-44.
- Boster, J. (1985). Requiem for the omniscient informant: There's life in the old girl yet. In J. Dougherty (Ed.), *Directions in cognitive anthropology* (pp. 177-179). Urbana: University of Illinois Press.
- Boster, J. S. (1986). Exchange of varieties and information between Aguaruna manioc cultivators. *American Anthropologist*, 88, 428-436.

- Carr, D., & Williams, D. (1992, May). *Sources of intra- and inter-ethnic variation among visitors to the forest of southern California: The influence of social, structural, and ancestral variables on recreation site preferences and behavior*. Paper presented at the 4th North American Symposium on Society and Resource Management, Madison, WI.
- Carr, D., & Williams, D. (1993). Understanding the role of ethnicity in outdoor recreation experiences. *Journal of Leisure Research*, 25, 22-38.
- Caulkins, D. & Hyatt, S. B. (1999). Using consensus analysis to measure cultural diversity in organizations and social movements. *Field Methods*, 11, 5-26.
- Caulkins, D. (2001). Consensus, clines, and edges in Celtic cultures. *Cross-Cultural Research*, 35, 109-126.
- Chavez, D. J. (1992). Hispanic recreationists in the wildland-urban interface. *Trends*, 29, 4, 23-25.
- Chavez, D. J. (2001). *Managing outdoor recreation in California: Visitor contact studies 1989-1998* (General Technical Report PSW-GTR-180). Albany, CA: Pacific Southwest Research Station, Forest Service, U.S. Department of Agriculture.
- Chick, G. (1981). Concept and behavior in Tlaxcalan cargo hierarchy. *Ethnology*, 20, 217-228.
- Chick, G. (1997). Cultural complexity: The concept and its measurement. *Cross-Cultural Research*, 31, 275-307.
- Chick, G. (2001). Culture-bearing units and the units of culture: An introduction. *Cross-Cultural Research*, 35, 91-108.
- Chick, G. (2002). Cultural consonance in a Mexican festival system. *Field Methods*, 14, 26-45.
- Chick, G. & Gonzalez, L. (2005). Case Studies in Cultural Control: John M. Roberts' *Four Southwestern Men*. *Cross-Cultural Research*, 39, 322-346.
- CIA The World Factbook (2001). Available at: <http://www.cia.gov/cia/publications/factbook>.
- Cordell, K. H. (1999). *Outdoor recreation in American life: A national assessment of demand and supply trends*. Champaign, IL: Sagamore.
- Dragon, C. (1986). *Native American under-representation in national parks: Tests of marginality and ethnicity hypotheses*. Unpublished master's thesis, University of Idaho, Department of Wildland Recreation Management, Moscow, ID.
- Dressler, W. W. (1996). Culture and blood pressure: Using consensus analysis to create a measurement. *Cultural Anthropology Methods*, 8, 3, 6-8.
- Dressler, W. W. (1997). *Culture and patterns of poverty*. Paper presented at the 1997 meeting of the Society for Applied Anthropology, Seattle.
- Dressler, W. W., dos Santos, J. E., & Campos Balierio, M. (1996). Studying diversity and sharing in culture: An example of lifestyle in Brazil. *Journal of Anthropological Research*, 52, 331-353.
- Dwyer, J. F. (1993). Outdoor recreation participation: An update on Blacks, Whites, Hispanics, and Asians in Illinois. In P. Gobster (Ed.), *Managing urban and high-use recreation settings* (pp. 119-121). General Technical Report NC-163, U.S. Department of Agriculture Forest Service. St. Paul, MN: North Central Forest Service Experiment Station.
- Dwyer, J. F. (1994). *Customer Diversity and the Future Demand for Outdoor Recreation*. General Technical Report RM-252. USDA Forest Service, Rocky Mountain Forest and Range Experiment Sta., Fort Collins, CO.
- Dwyer, J. F., & Hutchison, R. (1990). Outdoor recreation participation and preferences by black and white Chicago households. *Social Science and Natural Resource Recreation Management*. Boulder, CO: Westview Press, 49-67.
- Ewert, A. W., Gramann, J. H., & Floyd, M. F. (1991). Ethnic patterns in creational uses of natural resources: Rethinking the marginality-ethnicity paradigm. Paper presented at the annual meeting of the Rural Sociological society, Norfolk, VA.
- Floyd, M. F. (1998). Getting beyond marginality and ethnicity: The challenge for race and ethnic studies in leisure research. *Journal of Leisure Research*, 30, 3-22.

- Floyd, M. F., Gramann, J., & Saenz, R. (1993). Ethnic factors and the use of public outdoor recreation areas: The case of Mexican-Americans. *Leisure Sciences*, 15, 83-98.
- Floyd, M. & Noe, F. (1993). Understanding intro-ethnic environmental attitude variations: Cuban origin population views. In P. Gobster (Ed.), *Managing urban and high-use recreation settings* (pp. 127-129). General Technical Report NC-163, U.S. Department of Agriculture Forest Service. St. Paul, MN: North Central Forest Service Experiment Station.
- Floyd, M. F., Shinew, K. J., & McGuire, F. A. (1994). Race, class awareness, and leisure activity preferences: Marginality and ethnicity revisited. *Journal of Leisure Research*, 26, 158-173.
- Garro, L. C. (1986). Intracultural variation in folk medical knowledge: A comparison between curers and noncurers. *American Anthropologist*, 88, 351-370.
- Garro, L. C. (1987). Explaining high blood pressure: Variation in knowledge about illnesses. *American Ethnologist*, 15, 98-119.
- Gauthier, J. G. (2002). *Measuring America: The decennial censuses from 1790 to 2000* (Revised edition). Washington, DC: U.S. Department of Commerce, Economics and Statistics Administration, U.S. Census Bureau.
- Gobster, P. H. (2002). Managing urban parks for a racially and ethnically diverse clientele. *Leisure Sciences*, 24, 143-159.
- Gomez, E. (2002). The ethnicity and public recreation participation model. *Leisure Sciences*, 24, 123-142.
- Goodenough, W. H. (1957). Cultural anthropology and linguistics. In P. L. Garvin (Ed.), *Report of the 7th annual round table meeting on linguistics and language study, monograph series on languages and linguistics, no. 9* (pp. 167-173). Washington, DC: Georgetown University Press.
- Goodenough, W. H. (1996). "Culture." In M. Ember & D. Levinson (Eds.), *Encyclopedia of cultural anthropology*, Volume 1. New York: Henry Holt.
- Gramann, J. H., & Allison, M. T. (1999). Ethnicity, race, and leisure. In E. L. Jackson & T. L. Burton (Eds.), *Leisure studies: Prospects for the twenty-first century* (pp. 283-297). State College, PA: Venture Publishing.
- Handwerker, W. P. (2001). *Quick ethnography*. Lanham, MD: Rowman & Littlefield Publishers.
- Handwerker, W. P. (2002). The construct validity of cultures: Cultural diversity, culture theory, and a method for ethnography. *American Anthropologist*, 104, 106-122.
- Harris, M. (1979). *Cultural materialism*. New York: Random House.
- Hofstede, G. (1980). *Culture's consequences: International differences in work-related values*. Beverly Hills, CA: Sage.
- Hofstede, G. & Bond, M. H. (1988). The Confucius connection: From cultural roots to economic growth. *Organizational Dynamics*, 16(4), 4-21.
- Hofstede, G. & McCrae, R. R. (2004). Personality and culture revisited: Linking traits and dimensions of culture. *Cross-Cultural Research*, 38, 52-88.
- Hutchison, R. (1987). Ethnicity and urban recreation: Whites, blacks, and Hispanics in Chicago's public parks. *Journal of Leisure Research*, 19, 205-222.
- Hutchison, R. (1988). A critique of race, ethnicity, and social class in recent leisure-recreation research. *Journal of Leisure Research*, 20, 10-30.
- Hutchison, R. (1993). Hmong leisure and recreation activity. In P. Gobster (Ed.), *Managing urban and high-use recreation settings* (pp. 87-92). General Technical Report NC-163, U.S. Department of Agriculture Forest Service. St. Paul, MN: North Central Forest Service Experiment Station.
- Hutchison, R. & Fidel, K. (1984). Mexican American recreation activities. *Journal of Leisure Research*, 16, 344-349.
- Irwin, P., Gartner, W., & Phelps (1990). Mexican-American/Anglo cultural differences as recreation style determinants. *Leisure Sciences*, 12, 335-348.

- Jaakson, R. G. (1973). A preliminary bicultural study of value orientation and leisure attitudes. *Journal of Leisure Research*, 5(4), 10-22.
- Jeong, W. C. & Godbey, G. C. (2000). Ethnic variation in outdoor recreation use: The case of Asian-Americans. In I. Schneider, D. Chavez, W. Borrie & K. James (Comps.), *Proceedings of the 3rd symposium on social aspects and recreation research* (pp. 55-60). U.S. Department of Agriculture Forest Service, Pacific Southwest Research Station and Arizona State University.
- Johnson, C. Y., Bowker, J. M., English, D. B. K., and Worthen, D. (1998). Wildland recreation in the rural south: An examination of marginality and ethnicity theory. *Journal of Leisure Research*, 30, 101-120.
- Jolliffe, I. T. (2002). *Principal component analysis* (2nd ed.). New York: Springer.
- Jones, W. H. (1927). *Recreation and amusement among Negroes in Washington, DC*. Washington, DC: Howard University Press.
- Kahle, L. R. (1983). *Social values and social change: Adaptation to life in America*. New York: Praeger.
- Kahle, L. R., Beatty, S. E. & Homer, P. M. (1986). Alternative measurement approaches to consumer values: The List of Values (LOV) and Values and Lifestyles (VALS). *Journal of Consumer Research*, 13, 405-409.
- Keesing, R. (1994). Theories of culture revisited. In R. Borofsky (Ed.), *Assessing cultural anthropology* (pp. 301-312). New York: McGraw-Hill.
- Kelly, J. R. (1980). Outdoor recreation participation: A comparative analysis. *Leisure Sciences*, 3, 129-154.
- Kempton, W., Boster, J. S., & Hartley, J. A. (1995). *Environmental values in American culture*. Cambridge, MA: M. I. T. Press.
- Klobus-Edwards, P. (1981). Race, residence, and leisure style: Some policy implications. *Leisure Sciences*, 4, 95-112.
- Kluckhohn, F. R. & Strodtbeck, F. L. (1961). *Variation in value orientations*. Evanston, IL: Row, Peterson and Co.
- Kroeber, A. L., & Kluckhohn, C. (1963). *Culture: A critical review of concepts and definitions*. New York: Vintage.
- Magana, J. R., Burton, M., & Ferreira-Pinto, J. (1995). Occupational names in three nations. *Journal of Quantitative Anthropology*, 5, 1149-1168.
- McDonald, D. & McAvoy, L. (1997). Native Americans and leisure: State of the research and future directions. *Journal of Leisure Research*, 29, 145-166.
- Nagel, J. (1994). Constructing ethnicity: Creating and recreating ethnic identity culture. *Social Problems*, 41, 152-176.
- O'Leary, J. T. & Benjamin, P. J. (1982). *Ethnic variation in leisure behavior. The Indiana case*. Indiana Agricultural Experiment Station Bulletin. No. 349. West Lafayette, IN: Purdue University.
- Pelto, P. & Pelto, G. (1975). Intracultural diversity: Some theoretical issues. *American Ethnologist*, 2, 1-18.
- Perneger, T. V. (1998). What is wrong with Bonferroni adjustments. *British Medical Journal*, 316, 1236-1238.
- Roberts, Jr., J. M., & Chick, G. (2007). Culture and behavior: Applying log-linear models for transitions between offices in a Mexican festival system. *Social Science Research*, 36, 313-328.
- Rokeach, M. (1973). *The nature of human values*. New York: Free Press.
- Romney, A. K., Weller, S. C., & Batchelder, W. H. (1986). Culture as consensus: A theory of culture and informant accuracy. *American Anthropologist*, 88, 313-338.
- Salant, P. & Dillman, D. A. (1994). *How to conduct your own survey*. New York: Wiley Press.
- Sasidharan, V. (2002). Special issue introduction: Understanding recreation and the environment in the context of culture. *Leisure Sciences*, 24, 1-12.
- Schwartz, S. (1975). The justice of need and the activation of humanitarian norms. *Journal of Social Issues*, 31, 111-136.

- Schwartz, S. H. (1992). The universal content and structure of values: Theoretical advances and empirical tests in 20 countries. *Advances in Experimental Social Psychology*, 25, 1-62.
- Schwartz, S. H. (1999). A theory of cultural values and some implications for work. *Applied Psychology: An International Review*, 48, 23-47.
- Shaull, S. L., & Gramann, J. H. (1998). The effect of cultural assimilation on the importance of family-related and nature-related recreation among Hispanic Americans. *Journal of Leisure Research*, 30, 47-63.
- Stamps, S. & Stamps, M. (1985). Race, class and leisure activities of urban residents. *Journal of Leisure Research*, 17, 40-56.
- Stodolska, M. & Yi, (2003). Impacts of immigration on ethnic identity and leisure behavior of adolescent immigrants from Korea, Mexico and Poland. *Journal of Leisure Research*, 35, 49-79.
- Taylor, D. E. (1992). *Identity in ethnic leisure pursuits*. San Francisco: Mellow Research University Press.
- Thapa, B., Graefe, A. R., & Absher, J. D. (2002). Information needs and search behaviors: A comparative study of ethnic groups in Angeles and San Bernardino National Forests. *Leisure Sciences*, 24, 89-107.
- Tinsley, H. E. A., Tinsley, D. J. & Croskeys, C. E. (2002). Park usage, social milieu, and psychosocial benefits of park use reported by older urban park users from four ethnic groups. *Leisure Sciences*, 24, 199-218.
- Tirone, S. C. & Shaw, S. M. (1997). At the center of their lives: Indo Canadian women, their families and leisure. *Journal of Leisure Research*, 29, 225-244.
- Tylor, E. G. (1871). *Primitive culture*. London: Murray.
- U.S. Census Bureau (2006). Racial and ethnic classifications used in Census 2000 and beyond. <http://www.Census.Gov/population/www/socdemo/race/racefactcb>. Html, Retrieved March 27, 2006, 11:32 am.
- U.S. National Archives and Records Administration (2006). Constitution of the United States, Amendments 11-27. Retrieved 2006, March 20, from http://www.Archives.Gov/national-archives-experience/charters/constitution_amendments_11-27. Html.
- Van den Berghe, P. L. (1976). Ethnic pluralism in industrial societies: A special case? *Ethnicity*, 3, 242-255.
- Wallace, A. F. C. (1961). *Culture and personality*. New York: Random House.
- Washburn, R. (1978). Black under-representation in wildland recreation: Alternative explanations. *Leisure Sciences*, 1, 175-189.
- Weisberg, H. F., Krosnick, J. A., & Bowen, B. D. (1996). *An introduction to survey research, polling, and data analysis*. Thousand Oaks, CA: Sage Publications, Inc.
- Weller, S. C. (1998). Structured interviewing and questionnaire construction. In H. R. Bernard (Ed.), *Handbook of methods in cultural anthropology* (pp. 365-410). Walnut Creek, CA: Altimira Press.
- Weller, S. C., Ruebush II, T. R., & Klein, R. E. (1997). Predicting treatment-seeking behavior in Guatemala. *Medical Anthropology Quarterly*, 11, 224-245.
- Williams, D. R., & Carr, D. S. (1993). The sociocultural meaning of outdoor recreation places. In A. Ewert, D. Chavez, & A. Magill (Eds.), *Culture, conflict and communication in the wildland-urban interface* (pp. 209-219). Boulder, CO: Westview Press.

APPENDIX A
Hofstede's Cultural Measure of Values

Cultural value dimension and item

Power Distance dimension

1. Inequalities among people are both expected and desired.
2. Less powerful people should be dependent on the more powerful.
3. Inequalities among people should be minimized¹
4. There should be, and there is to some extent, interdependencies between less and more powerful people.

Individualism dimension

5. Everyone grows up to look after him/herself and his/her immediate family only.
6. People are identified independently of the groups they belong to.
7. An extended family member should be protected by other member in exchange for loyalty.
8. People are identified by their position in the social networks to which they belong.

Masculinity dimension

9. Money and material things are important.
10. Men are supposed to be assertive, ambitious, and tough.
11. Dominant values in society are the caring for others and preservation.
12. Both men and woman are allowed to be tender and to be concerned with relationships.

Uncertainty Avoidance dimension

13. High stress and subjective feeling of anxiety are frequent among people.
 14. Fear of ambiguous situations and of unfamiliar risks is normal.
 15. Uncertainty is a normal feature of life and each day is accepted as it comes.
 16. Emotions should not be shown.
-

¹The latter two items in each dimension need to be reverse-coded to maintain consistent directional measurement. Scale from 1 strongly disagree to 5 strongly agree.

Adapted from Hofstede (2001). *Culture's consequences: Comparing values, behaviors, institutions, and organizations across nations*. 2nd Edition. Thousand Oaks, CA: Sage.

APPENDIX B
Socio-demographic and Trip Characteristic of the Overall Sample, and Anglos, Hispanics and Asians

Socio-demographics & trip characteristics	Overall (n = 1075)	Anglos (n = 444)	Hispanics (n = 312)	Asians (n = 319)	Test for difference among ethnic groups
Gender (% male) ^a	59.8	66.1	56.8	56.0	$\chi^2 = 10.4, p = 0.006$
Age (mean years) ^b	36.0	39.2 _a	31.4 _b	35.9 _c	$F = 35.6, p < 0.001$
Marital status (% married) ^a	46.5	46.8	46.4	48.9	$\chi^2 = 14.8, p = 0.005$
Children in household (mean children) ^b	1.0	0.7 _a	1.4 _b	0.9 _a	$F = 20.6, p < 0.001$
Employed status (%) ^a					$\chi^2 = 29.9, p = 0.001$
Employed outside home	74.0	77.8	75.8	67.4	
Full-time homemaker	3.7	2.6	4.9	4.3	
Retired	3.3	5.5	0	3.6	
Full-time student	12.0	8.6	11.4	16.1	
Part-time student	2.7	1.8	3.4	3.6	
Not currently employed	4.1	3.7	4.5	5.0	
Formal education (%) ^a					$\chi^2 = 137.1, p < 0.001$
Not complete high school	3.1	0.5	6.4	3.1	
High school diploma/GED	11.0	8.1	19.2	8.7	
Technical or business school	5.2	2.3	13.5	1.7	
Some college	17.2	19.7	21.8	11.1	
College degree	34.0	33.7	23.3	43.8	
Some graduate work	6.1	7.6	3.4	6.3	
Graduate degree	23.5	28.1	12.4	25.3	
Annual income (%) ^a					$\chi^2 = 89.1, p < 0.001$
Less than \$ 20,000	13.7	11.3	19.3	12.4	
\$ 20,000-\$ 34,999	16.5	12.4	25.4	15.8	
\$ 35,000-\$ 49,999	15.9	10.8	25.0	15.4	
\$ 50,000-\$ 64,999	14.1	16.0	11.1	14.3	
\$ 65,000-\$ 79,999	13.3	13.3	10.7	15.8	
\$ 80,000 or more	26.4	36.2	8.6	26.3	

APPENDIX B
(Continued)

Socio-demographics & trip characteristics	Overall (<i>n</i> = 1075)	Anglos (<i>n</i> = 444)	Hispanics (<i>n</i> = 312)	Asians (<i>n</i> = 319)	Test for difference among ethnic groups
Years lived in U.S. (mean years) ^b	18.0	20.6 _a	22.0 _a	15.4 _b	$F = 17.0, p < 0.001$ $\chi^2 = 235.1, p < 0.001$
Generation in U.S. (%) ^a					
1 st generation	28.4	9.6	46.7	69.9	
2 nd generation	17.7	13.3	33.7	19.6	
3 rd generation	16.5	24.4	12.5	6.3	
4 th generation	31.1	52.7	14.1	4.5	
Country born (% born in U.S.) ^a	60.1	85.8	67.8	60.2	$\chi^2 = 921.6, p < 0.001$
Travel distance (mean miles) ^b	50.7	76.0 _a	24.7 _b	27.8 _b	$F = 6.6, p = 0.001$
Group composition (% alone) ^a	8.8	11.8	7.6	8.0	$\chi^2 = 10.3, p = 0.11$

^a Difference among groups tested with χ^2 test of independence.

^b Difference among groups tested with one-way analysis of variance. Group means sharing the same subscript did not differ significantly at 0.05 level in a post-hoc Scheffe test.

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