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The World Leisure Journal is the official fully refereed journal of the World Leisure Organization
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Examining the dimensionality of values for culturally diverse customers in parks and recreation

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Abstract

The purpose of this study was to examine the dimensionality and usefulness of Hofstede’s measure of values and Kahle’s List of Values (LOV) in the context of parks and recreation. Parks and recreation areas around the world increasingly serve as international visitor attractions and play an important role in the international tourism industry. Since values presumably differ among members of different cultures and purportedly influence people’s perceptions and behaviours, studying values among culturally diverse visitors is important if we are to understand their influence on parks and recreation perceptions and behaviour. In 2005-2006, visitors to Pokfulam Country Park near metropolitan Hong Kong were surveyed. Using a purposive on-site convenience sampling approach at sites known to be heavily used by visitors with diverse ethnic backgrounds, a sample of 253 Hong Kong residents, 153 Mainland Chinese Visitors and 233 Westerners (including American, British, Australian, and European) was obtained. Analyses showed that when employed in a park and recreation context, Hofstede’s measure of values must be further refined to provide acceptable validity, reliability, and utility. On the other hand, Kahle’s List of Values (LOV) was found to be a meaningful and useful measure of values in a park set-
ting. Two dimensions of values, external and internal, were extracted from the original four-dimension model and were compared among groups. Discussion of the findings and research implications are provided.

Keywords: values, culture, ethnicity, Hofstede’s measure of values, Kahle’s List of Values, parks and recreation

Introduction

The parks, recreation, and tourism industry has rapidly grown during the last few decades. Parks and recreation areas around the world increasingly serve as international visitor attractions and play an important role in the international tourism industry. The World Tourism Organization (WTO) has reported that receipts from international tourism grew by an average annual rate of nine per cent between 1988 and 1997. The number of international tourist arrivals reached more than 664 million in 1999 (well over 10 per cent of the world’s population), and international arrivals are expected to reach one billion by 2010 (WTO, 2008). Given the increasingly diverse visitor population, changes in racial and ethnic composition have confronted the management of parks and recreation areas. Cultural values are presumably central to cultural differences that may exist among ethnic and national groups (e.g., Swartz, 2001) and may ostensibly influence perceptions and behaviours. We assume that this holds true with respect to park visitation behaviour and engaging in recreation. Hence, studying values among culturally diverse visitors is important if we are to understand their influence on perceptions and behaviour in parks and recreation (Vaske, Donnelly, & Petruzi, 1996). The specific purpose of this study was to determine whether Hofstede’s (1980) measure of values and Kahle’s (1986) List of Values (LOV) are valid, reliable, and useful in the context of parks and recreation.

We are not aware of any measure of recreation or leisure-specific values that has been validated cross culturally. Therefore, in order to better understand the structure of values among park visitors, we explore the dimensionality of values for presumably culturally diverse customers using measures of values that have previously been validated cross culturally in other contexts. We are interested in a dimensional framework for these measures because it gives a skeletal structure for cultural values and provides a parsimonious approach to interpreting their complexity. Research on factors which contribute to a better understanding of values among diverse clienteles will help improve park management on the one hand and promote positive cultural understanding on the other (Chick, 2000).

The dimension framework also offers parks and recreation managers an evaluation tool that can translate the abstract constructs of values into meaningful actionable portraits on which service and management can be based (Li, Absher, Graefe, & Hsu, 2008). Understanding the dimensions of values among diverse visitors may facilitate managers’ ability to predict visitors’ recreation behaviour, thus permitting the customization of services for particular market niches (Absher, 1998). For customers with particular value orientations, managers could provide niche services to meet their expectations (Johnson, Bowker, Bergstrom, & Cordell, 2004). We expect, for example, that values should relate to perceptions of service quality and subsequent variables in park and recreation settings (Li, 2006). Thus, in this study, we examine two different measures of values – Hofstede’s measure of values and Kahle’s LOV – which have been utilized numerous times in comparative cross-cultural studies, but not previously in a parks and recreation setting in Hong Kong.

Literature Review

Ethnic groups, culture, and values

We define ethnic groups as being culture-based entities and use ethnic and national
groups as proxies for different cultures, a common practice in leisure and other areas of research (Gobster, 2007; Li, Absher, Hsu, & Graefe, 2008; Li, Chick, Zinn, Absher, & Graefe, 2007; Li, Zinn, Chick, Absher, Graefe, & Hsu, 2007). Furthermore, we use values to operationalize culture since values are generally thought to be one of the two major components of culture, with beliefs being the other (e.g., Hofstede, 1980; Swartz, 2001), and have been operationalized and measured in a variety of ways. Values presumably differ cross culturally, including among racial and ethnic groups (Cross & Madson, 1997). Thus, in this study, the term cultural values refers to the values shared by specific ethnic groups (Kroeber & Kluckhohn, 1952). It therefore makes sense to measure cultural values to explain ethnic similarities or differences in terms of people’s perceptions or behaviours in the context of parks and recreation.

Hofstede’s measure of values

Cultural values are shared by members of cultural groups and can influence ways of thinking and behaving (Hofstede, 1991). In the most exhaustive cross-cultural study of values to date, Hofstede (1980) and his colleagues distributed 117,000 questionnaires, called the Values Survey Module, translated into 20 languages, to IBM employees in 70 countries. Hofstede’s Value Survey Module is designed for measuring cultural differences in values. It consists of 20 content questions (measured on bi-polar Likert-type scales) and 6 demographic questions. Based on the data from 88,000 returned surveys, Hofstede established four dimensions of national cultural values: power distance, individualism, masculinity, and uncertainty avoidance. Later, Hofstede and Bond (1984) developed a fifth dimension, long-term orientation (i.e., Confucian dynamics). These five dimensions of national cultural values are now widely used by scholars in international management, marketing, and other fields.

Numerous researchers have validated Hofstede’s measure of cultural values with a variety of different samples (Sondergaard, 1994). For instance, Hofstede and Bond (1984) used Rokeach’s value survey (1973) to provide construct validity to Hofstede’s measure. Evidence suggests that Hofstede’s dimensions of values are applicable not only to work-related values but to cultural values generally (Forgas & Bond, 1985; Hofstede & Bond, 1984). Hofstede’s measure seems to be generalizable across multiple contexts and societies (e.g., Donthu & Yoo, 1998; Furrer, Liu, & Sudharshan, 2000; Mattila, 1999). Clark (1990) argued that Hofstede’s inventory might account for many cultural differences among individuals, suggesting that such a measure might also prove useful for assessing ethnic cultural differences in parks and recreation settings (Donthu & Yoo, 1998).

While Hofstede’s measure of values has been widely used, some researchers (e.g., McSweeney, 2002) have questioned its validity and reliability. But, as Hofstede suggested “… my theory of cultural differentiation is like a product of a research laboratory, which awaits the efforts of development technicians to elaborate it into something of particular use” (2001, p. 462). Hence, analyses of the measure are needed to determine its validity and usefulness in the parks and recreation context.

Kahle’s List of Values

Personal values evolve from circumstances with the external world and can provide enduring principles to guide behaviour (Rokeach, 1973). Kahle’s (1983) List of Values (LOV) is another instrument that is widely used for measuring values cross culturally (Madrigal, 1995). From an international business perspective, Kahle sought to explain consumer behaviour in different nations and contended that consumer behaviour can be largely determined by the knowledge of the potential consumers’ psychographics, including their values. The LOV has been frequently used in consumer research in the prediction of fashion preferences, shopping and spending behaviours, risky sports consumption, and tourism behaviour (see, e.g., Kahle, Beatty, & Homer, 1986).

The LOV is a widely accepted tool for cross-cultural comparison of values since it is pars-
monious in its approach, easy to administer, has been validated by numerous studies, and has been shown to be reliable (e.g., Kahle, 1986; Kahle, Poulos, & Sukhdial, 1988). The LOV consists of nine items collapsed into four dimensions including harmony (security, sense of belonging, and warm relationship with others), respect (being well respected by others and self-respected), achievement (self-fulfillment and sense of accomplishment) and hedonism (fun and enjoyment in life and excitement).

We selected Hofstede’s dimensions of values and Kahle’s List of Values as they provide two of the most commonly used measures of values in cross-cultural research. We believe that examining the different structures of cultural values as they apply to parks and recreation will help address the gap in the parks and recreation literature as cross-cultural customer services research moves forward.

The relationships between values and perceptions of service quality, satisfaction, and behavioural intentions

Previous research has revealed evidence for the relationships between values and perception of service quality, satisfaction, and behavioural intentions (Li, 2006, 2009; Liu, Furrer, & Sudharshan, 2001). For instance, Li (2006) found that perceptions of service quality differed among various values segments in a U.S. national forest tourism visitor study. Taken from the perspective of Inglehart’s (1997) concepts of modernization and postmodernization, three segments of values were identified and labelled Modernist, Mixed, and Postmodernist. The author further pointed out that, among the three homogeneous values segments, the Mixed segment perceived lower service quality than did the Modernist segment. Later, in the Hong Kong Country Park and Taiwan National Park recreationist studies, Li and his colleagues (Li, 2009; Li, Lai, Chick, Zinn & Graefe, 2007) found that cultural values significantly and positively influenced perceived service quality, satisfaction, and behavioural intentions.

Hence, we argue that values are conceived as a knowledge system that could influence service quality and subsequent variables. From a multi-cultural marketing perspective, more frequent intra- and inter-cultural interactions of visitors today have heightened the need to understand these relationships. Therefore, it is vital to empirically assess the nature of the above-mentioned relationships among consumers across various cultures.

Method

Study setting, design, and sampling

Study setting: We conducted a visitor survey in 2005-2006 at the Pokfulam Country Park (PCP), an urban interface park in Hong Kong covering an area of over 270 hectares (i.e., approximately 667 acres) which provides opportunities for outdoor recreation and enjoyment to both local residents and international visitors. Past research, based on a general population sample, indicated that visitors to the country parks in Hong Kong were predominantly local residents (Wong, 1997). Because a simple random sample of park visitors would not efficiently yield an adequate representation of different cultures (in the three subgroups of local residents, Mainlanders, and Westerners), a purposive on-site survey at PCP was adopted (Straus, 2009; Weisberg, Krosnick, & Bowen, 1996). The sampling sites were determined in consultation with country park officers and empirical on-site observation, as well as with reference to evidence from previous studies (Wong, 1997). Eventually, six sites known to be frequented by visitors of diverse ethnicity were identified for on-site interviews and surveys.

Design and sampling: The on-site interviews and surveys were conducted for every third visitor to avoid self-selection bias (Salant & Dillman, 1994). There were 16 survey days between September 2005 and January 2006. A total of 155 of the 857 subjects who were approached declined to participate, yielding a response rate of 82 per cent. The on-site interviews were focused on day users since this segment of users was known
to be the most diverse. Most of the respondents surveyed were in groups. When approaching a party with more than one person, each member of the party was 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, and introduced the purposes of the project and their rights as a research participant (e.g., voluntary participation). The survey protocol and questionnaires were printed in traditional Chinese as well as English and simplified Chinese.1 Participants were welcome to keep a copy of the survey protocol if they wanted further information about the visitor survey.

In the questionnaire, participants were asked, “What cultural group do you most closely identify with?” Following this question, 13 items could be checked (e.g., Hong Kong resident, Mainland China resident, U.K. resident), including the last item, Other and please specify. In answering this question, a Hong Kong resident might identify himself or herself as a Mainland China resident, or a U.K. resident might identify himself or herself as a Hong Kong resident, for example, regardless of their biological heritage. Our measure of ethnic group was based on a process of self-identification or the perceptions of individuals within each group of what outsiders thought of them (Barth, 1996).

Measurement of perceived service quality, satisfaction, and behavioural intentions: In addition to using Hofstede’s values items and the LOV to measure subjects’ values, and to assess subjects’ perceptions of service quality, 23 service quality items developed by the USDA Forest Services (Absher, 1998) were customized to fit the Hong Kong context and measured on a five-point response scale. These 23 service quality items were divided into four dimensions, i.e., facilities, service, information, and management. The Cronbach’s alphas of the four dimensions ranged from .60 to .86. Three items were used to measure satisfaction (Naylor, 1996). The Cronbach’s alpha value of these satisfaction items was .90. Four items (Cronin, Brady, & Hult, 2000), measured on a five-point scale, were used to operationalize behavioural intentions, including passive, active, private, and self-recommendations. The Cronbach’s alpha value of the items was .87. Informants were asked to complete both Hofstede’s instrument and the LOV as well as the measures of perceived service quality, satisfaction, and behavioural intentions.

Statistical analysis: Five types of statistical tests were used. Descriptive analysis, confirmatory factor analysis (CFA), exploratory factor analysis (EFA), reliability analysis, and multiple regression analysis were used to test Hofstede’s measure of values and the LOV in a park and recreation context. Demographic variables (e.g., age, gender) were also examined. Descriptive analysis was used to calculate the socio-demographic and recreation behavioural profiles of the sample and to report the means and standard deviations of Hofstede’s measure of values and the LOV. CFA was used to test validity. We used CFA to confirm the theoretical models and hypothetical premises such as Hofstede’s (1980) five dimensions and Kahle’s four dimensions of values. When CFA failed to confirm the claimed dimensional structure of either measure, we used EFA to examine characteristic features, discover interesting and interpretable relationships, and reduce the number of variables in the data. Reliability analysis was employed to find the internal consistency of values dimensions using Cronbach’s alpha. Finally, multiple regression analysis was used to test the predictive relationships between values dimensions and service quality, satisfaction, and behavioural intentions.

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1 The survey protocol and questionnaire were back-translated from the simplified Chinese and English into the traditional Chinese by bilingual students from Hong Kong and Mainland China, respectively. The translation discrepancies were discussed and revised to ensure accuracy of the meanings in different languages.
**Results**

*Socio-demographic and recreation behavioural profiles*: The sample demographic information indicated that there were more males (53 per cent, n = 362) than females (47 per cent, n = 322) and largely young adults (mean age = 37). Half of the participants were married with 46 per cent single and the remaining 4 per cent either divorced or widowed. While the average number of children (21 or under) living in the household was 1, a large proportion of the participants (58 per cent) had no children in the household. More than 61 per cent of the subjects were employed outside the home, 16 per cent were full-time students, and the remaining 23 per cent were full-time homemakers, retirees, or others. The level of education showed that 93 per cent of the participants completed formal education beyond high school. Thirty per cent had already earned a college degree and 23 per cent a graduate degree. The annual household income indicated that 46 per cent of the participants reported an income of over HK$250,000 and 23 per cent of over HK$400,000. A significant majority of the participants were day users (97 per cent), whose average length of stay in the PCP was around four hours. The visit to the PCP was made alone (15 per cent), with family (38 per cent), friends (39 per cent), and family and friends (8 per cent). The tests of the subgroups revealed significant differences regarding age, employed status, formal education, and annual household income among three subgroups. For example, the result showed Westerners were more likely to have graduate degrees, higher annual household income, and travel longer distances to PCP. Moreover, compared to Mainlanders, Westerners also tended to be older.

*Analysis of Hofstede’s measure of values*: The first step of the analyses was to use CFA to confirm Hofstede’s five dimensions: power distance, individualism, masculinity, uncertainty avoidance, and long term orientation. This test (with four items per dimension), using the LISREL 8.72 program, revealed a poor fit according to several indicators, such as Goodness of Fit Index (GFI = 0.53) and Root Mean Square Residual (RMR = 0.15, see Table 1). Given the poor fit of the original five-dimensional cultural values model, EFA was used to explore the dimensionality of the items in the parks and recreation context. Both orthogonal (uncorrelated factors) and oblique (correlated factors) solutions, via Varimax and Direct Oblimin rotation, were considered. The results of both the orthogonal and the oblique solutions were very similar (e.g., showed six factors, but with poor alpha values2) and suggested no interpretable patterns of dimensionality.

*Analysis of the LOV*: As with the analysis of Hofstede’s measure of values, CFA was used to confirm the LOV’s four dimensions: harmony, respect, achievement, and hedonism. The result revealed a poor fit of the

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2 Further analyses of Hofstede’s values indices showed that three out of the six Cronbach’s alpha values were negative. When derived Cronbach’s alpha values were negative, the reliability model broke.
Table 2. Goodness of fit statistics for List of Values model

<table>
<thead>
<tr>
<th>Model</th>
<th>$\chi^2$</th>
<th>$\chi^2$/df</th>
<th>GFI</th>
<th>NFI</th>
<th>CFI</th>
<th>RMR</th>
</tr>
</thead>
<tbody>
<tr>
<td>4 dimensions</td>
<td>530.43</td>
<td>25.26</td>
<td>0.81</td>
<td>0.73</td>
<td>0.74</td>
<td>0.13</td>
</tr>
</tbody>
</table>

Note: a GFI: Goodness of Fit Index. 
b NFI: Normed Fit Index. 
c CFI: Comparative Fit Index. 
d RMR: Root Mean Square Residual.
Acceptable fit: Rule of thumb, when $\chi^2$/df = 2 to 5; GFI ≥ 0.90; NFI > 0.90; CFI > 0.90; RMR = 0.05 to 0.10 (Bollen, 1989).

Table 3. Analysis of List of Values with exploratory factor analysis

<table>
<thead>
<tr>
<th></th>
<th>Factor 1 loading</th>
<th>Factor 2 loading</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Being well respected</td>
<td>0.80</td>
<td>0.09</td>
</tr>
<tr>
<td>2. Self-respect</td>
<td>0.85</td>
<td>0.15</td>
</tr>
<tr>
<td>3. Security</td>
<td>0.69</td>
<td>0.24</td>
</tr>
<tr>
<td>4. Sense of belonging</td>
<td>0.67</td>
<td>0.29</td>
</tr>
<tr>
<td>5. Warm relationships with others</td>
<td>0.72</td>
<td>0.21</td>
</tr>
<tr>
<td>6. Self-fulfillment</td>
<td>0.37</td>
<td>0.68</td>
</tr>
<tr>
<td>7. Sense of accomplishment</td>
<td>0.30</td>
<td>0.75</td>
</tr>
<tr>
<td>8. Fun and enjoyment in life</td>
<td>0.17</td>
<td>0.80</td>
</tr>
<tr>
<td>9. Excitement</td>
<td>0.05</td>
<td>0.81</td>
</tr>
</tbody>
</table>

Total variance explained is 62.20%. Factor 1, **External oriented**, explained 34.01%; factor 2, **Internal oriented**, explained, 28.19%. N=500. Cases were excluded listwise. Principal component analysis and Varimax rotation methods were used.

Table 4. Reliability of two new dimensions model for List of Values

1. Being well respected
2. Self-respect
3. Security
4. Sense of belonging
5. Warm relationships with others
6. Self-fulfillment
7. Sense of accomplishment
8. Fun and enjoyment in life
9. Excitement

Respect

Harmony

External oriented

Alpha=0.83

Achievement

Hedonism

Internal oriented

Alpha=0.81
model according to several indicators, such as Goodness of Fit Index (GFI = 0.86) and Root Mean Square Residual (RMR = 0.13) (see Table 2) via the LISREL 8.72 program. Given the poor fit of the original four-dimensional values model, EFA was again used to explore interpretable dimensionality of the items in the parks and recreation context. Findings revealed different values dimensions and clearly showed two dimensions of values which we labelled external and internal (Table 3). The external factor accounted for 34.01 per cent of the variance and the internal factor accounted for 28.19 per cent of the variance. The total variance explained was 62.20 per cent.

Table 5. Mean and standard deviation for List of Values and intrinsic and extrinsic dimensions of values

<table>
<thead>
<tr>
<th>Mean</th>
<th>S.D.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Being well respected</td>
<td>4.03</td>
</tr>
<tr>
<td>2. Self-respect</td>
<td>4.10</td>
</tr>
<tr>
<td>3. Security</td>
<td>4.15</td>
</tr>
<tr>
<td>4. Sense of belonging</td>
<td>3.78</td>
</tr>
<tr>
<td>5. Warm relationships with others</td>
<td>3.97</td>
</tr>
<tr>
<td><strong>External oriented</strong></td>
<td><strong>4.01</strong></td>
</tr>
<tr>
<td>6. Self-fulfillment</td>
<td>3.85</td>
</tr>
<tr>
<td>7. Sense of accomplishment</td>
<td>3.82</td>
</tr>
<tr>
<td>8. Fun and enjoyment in life</td>
<td>4.03</td>
</tr>
<tr>
<td>9. Excitement</td>
<td>3.82</td>
</tr>
<tr>
<td><strong>Internal oriented</strong></td>
<td><strong>3.88</strong></td>
</tr>
</tbody>
</table>

Scale: Strongly not important (1) to Strongly important (5). Listwise N=500.
Further analysis of the LOV showed that the external dimension combined Kahle’s respect and harmony dimensions and the internal dimension combined the achievement and hedonism dimensions (see Table 4). The reliability test demonstrated acceptable Cronbach’s alpha values with the external dimension equalling .83 and the internal dimension equalling .81 (see Table 5). When testing these two dimensions with the three-level ethnic group variable using analysis of variance, we found that the external dimension of values did not significantly differ among the three ethnic groups (see Figure 1).

On the other hand, we found that the internal dimension of values significantly differed among the groups. The Westerners were more likely to rate the internal dimension of values as more important than did Hong Kongers and Mainlanders (see Figure 2). Furthermore, we checked the predictive validity of these two dimensions of values, using external and internal dimensions as the two independent variables, and perceived service quality, satisfaction, and behavioural intentions indices as the dependent variables, respectively. The results from all the multiple regression models were significant at .001 level. In particular, the internal dimension was repeatedly significant in predicting perceived service quality, satisfaction and behavioural intentions, but the model R-square ranged from 5 per cent to 12 per cent. In other words, the combined effects of external and internal dimensions of values explained the variation in perceived service quality, satisfaction and behavioural intentions ranging from 5 per cent to 12 per cent (see Table 6).

Discussion

Hofstede’s measure of values in the parks and recreation context: Originally, Hofstede’s dimensions of values (1980, 1991, 2001) were used to measure work-related values and were based on presumed national cultural differences. Given that Hofstede’s dimensions have been adopted across various contexts and societies, they have been presumed to be, to some degree, generalizable. However, in this study, responses to Hofstede’s five dimensions of values did not follow the same patterns found in other studies. One reason may
Table 6. Multiple regression of service quality, facility, service, information, management, satisfaction, and behavioural intentions on the external and internal dimensions of values

<table>
<thead>
<tr>
<th>Dimensions of values</th>
<th>Service quality index</th>
<th>Facility index</th>
<th>Service index</th>
<th>Information index</th>
<th>Management index</th>
<th>Satisfaction index</th>
<th>Behavioural intentions index</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Beta</td>
<td>P-value</td>
<td>F-value</td>
<td>Model P-value</td>
<td>R-square</td>
<td>Beta</td>
<td>P-value</td>
</tr>
<tr>
<td>External dimension</td>
<td>0.092</td>
<td>0.052</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Internal dimension</td>
<td>0.281</td>
<td>&lt;0.001</td>
<td>32.516</td>
<td>&lt;0.001</td>
<td>0.112</td>
<td></td>
<td></td>
</tr>
<tr>
<td>External dimension</td>
<td>0.201</td>
<td>&lt;0.001</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Internal dimension</td>
<td>0.194</td>
<td>&lt;0.001</td>
<td>35.291</td>
<td>&lt;0.001</td>
<td>0.121</td>
<td></td>
<td></td>
</tr>
<tr>
<td>External dimension</td>
<td>0.034</td>
<td>0.488</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Internal dimension</td>
<td>0.207</td>
<td>&lt;0.001</td>
<td>13.782</td>
<td>&lt;0.001</td>
<td>0.051</td>
<td></td>
<td></td>
</tr>
<tr>
<td>External dimension</td>
<td>0.044</td>
<td>0.368</td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Internal dimension</td>
<td>0.261</td>
<td>&lt;0.001</td>
<td>22.577</td>
<td>&lt;0.001</td>
<td>0.081</td>
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</tr>
<tr>
<td>External dimension</td>
<td>0.040</td>
<td>0.409</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Internal dimension</td>
<td>0.233</td>
<td>&lt;0.001</td>
<td>17.902</td>
<td>&lt;0.001</td>
<td>0.065</td>
<td></td>
<td></td>
</tr>
<tr>
<td>External dimension</td>
<td>0.120</td>
<td>0.013</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Internal dimension</td>
<td>0.235</td>
<td>&lt;0.001</td>
<td>27.703</td>
<td>&lt;0.001</td>
<td>0.097</td>
<td></td>
<td></td>
</tr>
<tr>
<td>External dimension</td>
<td>0.123</td>
<td>0.010</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Internal dimension</td>
<td>0.244</td>
<td>&lt;0.001</td>
<td>29.651</td>
<td>&lt;0.001</td>
<td>0.104</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note:

* There were 9 values items including 5 external values dimension items and 4 internal values dimension items. The external dimension was created by taking the mean of the 5 external values items. The internal dimension was created by taking the mean of the 4 internal values items. The external and internal dimensions served as the independent variables in each multiple regression model.

* There were 23 service quality items including 10 facility items, 4 service items, 5 information items, and 4 management items. The service quality index was created by taking the mean of the 23 service quality items. The facility index was created by taking the mean of the 10 facility items. The service index was created by taking the mean of the 4 service items. The information index was created by taking the mean of the 5 information items. The management index was created by taking the mean of the 4 management items.

* The satisfaction index was created by taking the mean of the 3 satisfaction items.

* The behavioural intentions index was created by taking the mean of the 4 behavioural intentions items. The service quality, facility, service, information, management, satisfaction, and behavioural intentions indices served as the dependent variable respectively in each multiple regression model.
Table 7. Comparison of socio-demographic and trip characteristics among HK resident, mainlander and western

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>HK resident</th>
<th>Mainlander</th>
<th>Westerner</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age (mean age) *</td>
<td>37</td>
<td>34</td>
<td>38</td>
</tr>
<tr>
<td>Gender (male)</td>
<td>51%</td>
<td>59%</td>
<td>51%</td>
</tr>
<tr>
<td>Income (less than HK $250,000) *</td>
<td>63%</td>
<td>77%</td>
<td>28%</td>
</tr>
<tr>
<td>Education (graduate degree) *</td>
<td>17%</td>
<td>8%</td>
<td>41%</td>
</tr>
<tr>
<td>Employed status (outside home) *</td>
<td>53%</td>
<td>68%</td>
<td>64%</td>
</tr>
<tr>
<td>Marital status (married)</td>
<td>48%</td>
<td>58%</td>
<td>54%</td>
</tr>
<tr>
<td>Travel distance (km) *</td>
<td>44</td>
<td>274</td>
<td>1958</td>
</tr>
<tr>
<td>Social group (family)</td>
<td>39%</td>
<td>40%</td>
<td>36%</td>
</tr>
</tbody>
</table>

*Significantly different at $p < .05$ using analysis of variance for age and travel distance variables and using $\chi^2$ test of independence for the rest of the variables.

Income refers to annual household income (1 USD = 7.8 HKD) in 2006.

be because of the relative heterogeneity in socio-demographics and trip characteristics of the sample (see Table 7). The heterogeneous socio-demographic and trip profile might also reflect little within-group homogeneity of values, especially for the major nominal ethnic groups traditionally used for comparative purposes (Li, Chick, Zinn, Absher, & Graefe, 2007).

Another reason why responses of values did not follow the same patterns found in other studies might be due to the difficulty of measuring values cross-culturally (Shelby, Vaske, & Donnelly, 1996; Zinn, Manfredo, Vaske, & Wittmann, 1998). Values are regarded as one of the most abstract types of social cognition and are often indirect and hard to identify (Kahle, 1983). When different cultures interact, values may become ambiguous (Rokeach, 1973). In this study, statistics for Hofstede’s five-dimension model showed a poor fit using CFA according to several indicators, such as Goodness of Fit Index and Normed Fit Index. Values are activated when certain conditions are met (Hofstede, 2001; Schwartz, 1992). In other words, values are usually brought to one’s mind through response to a stimulus. However, when respondents in the present study were asked Hofstede’s values questions, many objected, saying that those cultural questions were too abstract, too direct, or unrelated to their recreation trip.

Furthermore, in comparison to Kahle’s LOV measure (e.g., sense of belonging, sense of accomplishment, warm relationships with others), some items in Hofstede’s measure (e.g., inequalities among people are both expected and desired, less powerful people should be dependent on the more powerful) sometimes seemed too direct and even offensive. Respondents tended to skip those items that seemed unfriendly or provocative. The relatively high level of abstraction of Hofstede’s items might also explain the failure of EFA to identify interpretable dimensions of values in this study (Torelli & Kaikati, 2009).

**LOV in the parks and recreation context:** Although the findings of CFA to the LOV items indicated a poor fit for the original four-dimension model, the EFA clearly revealed two dimensions of values in a park and rec-

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3 An itemisation of Hofstede’s measure of values used in this study is available from the lead author upon request.

4 Based on the exclude case listwise solution, the overall response rate of Hofstede’s measure of values items was 64 per cent. For the three groups, the response rates for Hong Kong resident, Mainlander, and Western were 60, 59, and 74 per cent respectively.
recreation context. These two new dimensions, external and internal, well captured the meaning of the LOV measure and provided good face validity. The initial four dimensions were reorganized and combined into two dimensions with acceptable reliability and provided an unambiguous and parsimonious approach to interpret the seemingly complex values. When analyzing the differences between these two dimensions of values among three ethnic groups, we found the external dimension did not differ significantly among groups. This result indicated that external values such as sense of belonging, warm relationship with others, and being well respected by others, were equally important to the three ethnic groups. Perhaps those who like to visit parks and recreation areas share consensus patterns such as sense of harmony, and these patterns are reflected in their values. In other words, the findings implied that the external oriented values may be universal to the three cultural groups.

On the other hand, those who identified themselves as Westerners tended to rate internal values, such as self-fulfilment, sense of accomplishment, fun and enjoyment in life, and excitement, as more important than those who identified themselves as Hong Konger or Mainlander. This might be because Western-oriented visitors were more likely to de-emphasize tolerance, obedience, communal obligations, and duty in life, but gave more emphasis to achievement, competitiveness, hedonism, self-expression, self-esteem, choices of life style, and quality of life. This is consistent with earlier research findings (e.g., Hall, 1976; Reisinger & Turner, 1999) showing values differences between Western and Oriental cultures.

The predictive validity checks from all multiple regression models were significant at the .001 level but the R-square of all models ranged from 5 per cent to 12 per cent, which was not strong. The findings echo a number of studies of ethnicity and leisure where the researchers achieved statistical significance but accounted for little of the variance (Chick, Li, Zinn, Absher, & Graefe, 2007; Li, Chick, Zinn, Absher, & Graefe, 2007). In addition, since the internal dimension was repeatedly significant in predicting perceived service quality, satisfaction, and behavioural intentions in all multiple regression models, to some extent this internal dimension (which included self-fulfilment, sense of accomplishment, fun and enjoyment in life, and excitement), possessed more predictive power than did the external dimension. While the combined effect of these two dimensions demonstrated acceptable predictive validity, we feel that better measures are needed. In other words, the practical significance of having 5 per cent to 12 per cent of the variance accounted for suggests that there was, in fact, something there but the measurement method used for values dimensions was simply not accounting for it very well. We suggest that it is essential to explore other measures of values, for example, Schwartz’ Value Survey (Schwartz, 1992) and test their explanatory power to predict service quality and subsequent variables in parks and recreation.

Conclusion
The testing of Hofstede’s measure of values and the LOV suggests that values, as measured in the park and recreation context, need to be further refined to be more meaningful and useful. In particular, Hofstede’s measures of values require additional study to determine their appropriateness in the park and recreation context. If, for example, we consider criterion-related validity, with differentiating ethnically diverse park visitors as the criterion, then Hofstede’s measure fails. Nevertheless, the valid measurement of values cross-culturally among diverse ethnic groups using multiple data sets across different settings may help us explore the effects of cultural values on leisure behaviour and enhance niche parks and recreation management (Vaske & Manning, 2008).
REFERENCES


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