

Evolutionary and cultural influences on interactions with nature: a comparison of British and Chinese visitors to the New Forest National Park and Jiuzhaigou National Scenic Area

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Introduction

The Biophilia thesis (Wilson 1984) proposes that people have a need to affiliate with nature. Evolutionary psychologists argue that humans have evolved in a natural environment and therefore the feelings, which visitors have in nature, one would predict to be universal. However visitors' attitudes to nature are likely to result from a co-creation of social and cultural influences, tested here as an urban or rural living environment and national culture (British or Chinese). This study sought to provide evidence in support of these two claims using a survey of visitors to the New Forest National Park, England and Jiuzhaigou National Scenic Area, China. The New Forest is the largest lowland heath in Europe, and the Park attracts about 3 million visitors a year. Jiuzhaigou is a World Nature Heritage site, which attracts 2.6 million tourists a year.

Literature review

The literature suggests that there is not only a variety of structural and socio-demographic factors but also socialisation experiences through which people form their attitudes to nature and the environment. Urban residents are more concerned about the over-exploitation of natural resources (Arcury & Christianson, 1990). Whilst Berenguer et al. (2005) found that rural dwellers in Spain 'present more attitudes of environmental responsibility and greater consistency on expressing behavioural intentions compatible with the protection of the environment' (p. 128). The importance of developing bonds with nature when growing up, was established by Hinds & Sparks (2008) who demonstrated that in a sample of English undergraduate social science students, those who had rural childhoods reported stronger identification, more positive affective connections and more positive attitudes to the natural environment than those students growing up in urban areas. Harris (2006) claims that in China, more-educated, affluent and urbanised people have more pro-environmental attitudes.

Methodology

Face to face surveys, using self-completion questionnaires containing the same questions, were undertaken in the New Forest National Park and Jiuzhaigou National Scenic Area. Following a back translation and piloting, convenience samples of 600 visitors in each park were requested to complete the survey. In China, 597 completed questionnaires were received and 408 in England with 964 questionnaires in total being usable for this part of the research project. An attitudinal scale, ranging from 1 = strongly agree/strongly

feel to 5 = strongly disagree / strongly not feel, was used.

Data was analysed using SPSS 19 and tested for differences between two independent groups on a continuous measure using the Mann Whitney U Test. The median scores were calculated (see Table 1) and where there is a statistically significant difference between nationalities, an approximate value of r , equalling the effect size, is also given. Using Cohen's (1988) criteria, 0.1 = a small effect, 0.3 = a medium effect and 0.5 = a large effect.

Results and discussion

Beginning with the respondent profile, there were similarities in respect of gender and age between the two nationalities. In the Chinese sample, 59.6% were male, and predominantly between 26-45 years old (61.1%), whilst in the British sample, 60.3% were male and mainly between 36-55 years old (50.1%). 59.6% of the Chinese respondents grew up in a rural area and 33.8% now live in a rural area. Whereas 40.4% of British respondents grew up in a rural area and 66.2% now live in a rural area.

Taken as a whole, the participants disagreed strongly with the statement that nature is unimportant but agreed strongly that people are a part of nature and that conserving nature now is important for future generations. These results demonstrate the value of natural capital in people's lives.

There were some similarities (see Table 1) between respondents in the two countries in respect of how they felt in nature, for example, they all strongly agreed that nature is fascinating and powerful and agreed that natural places can inspire or have special meanings for them. However, there were also statistically significant differences (at a significance level of 0.5), between the cultural groups in terms of how they felt in a natural environment. The largest effect ($r = 0.527$) of national culture was that though they both disagreed that natural places are stressful, the Chinese disagreed but the British *strongly* disagreed. There was a medium effect of culture in respect of the statement 'God gave people control over nature' with both the Chinese and British gave this a median score of 3. A similar medium effect was identified in terms of the statement, 'Natural places have a religious/spiritual value'. However, the Chinese agreed more with this statement than the British.

In respect of whether a respondent grew up in a rural or urban area and where they lived at the time of the study was also interesting. Their current place of residence revealed statistically significant differences in terms of urban or rural living in respect of five statements. Notably, all of these

Table I.
Results

	Medium			Asym p. Sig.	Effect size (<i>f</i>)	Grew up			Now live		
	All	Chin- ese	Brit- ish			Rural	Urban	Asym p. Sig.	Rural	Urban	Asym p. Sig.
People ought to try & control nature	4	4	4	0.000	0.177	4	4	0.333	4	4	0.003
Natural places are dangerous	4	4	4	0.000	0.001	4	4	0.493	4	4	0.186
People can always repair any damage to the environment	4	4	4	0.000	0.281	4	4	0.494	4	4	0.320
Nature should benefit the economy	3	3	3	0.597	-	3	4	0.073	3	3	0.443
God gave people control over nature	4	3	3	0.000	0.301	4	4	0.241	4	4	0.001
People have a need to be in a natural environment	2	2	2	0.000	0.248	2	2	0.378	2	2	0.001
Conserving nature now is important for future generations	1	1	1	0.961	-	1	1	0.579	1	1	0.534
People are a part of nature	1	1	2	0.000	0.145	2	1	0.179	2	1	0.001
Natural places have a religious/spiritual value	2	2	3	0.000	0.238	2	2	0.931	2	2	0.142
Natural places are stressful	4	4	5	0.000	0.527	4	4	0.736	4	4	0.000
Natural places are tranquil	2	2	2	0.000	0.088	2	2	0.792	2	2	0.929
Natural places can inspire me	2	2	2	0.115	-	2	2	0.699	2	2	0.429
Natural places can have special meanings for me	2	2	2	0.248	-	2	2	0.939	2	2	0.244
Natural places are pleasing to look at	1	2	1	0.001	0.115	2	1	0.184	1	1	0.660
Nature is fascinating	1	1	1	0.665	-	1	1	0.177	1	1	0.678
Nature is powerful	1.5	2	1	0.166	-	2	1	0.253	1	2	0.665
Nature is unimportant	5	4	5	0.000	0.335	5	5	0.537	5	5	0.000

statements also showed statistically significant differences in terms of nationality, suggesting that there is some co-creation of attitudes. However, when the file was split by nationality, there were no differences between where they live now within each nationality, suggesting that national culture has greater influence.

Interestingly, unlike the results of Hinds & Sparks (2008), this study suggests that whether a person grows up in a rural area or not has no difference in respect of their feelings and attitudes to nature. This was also true when the file was split between nationalities – there were still no significant differences within the groups.

Limitations

Whilst this study considered the views of a large cohort of respondents in each country, there are limitations with the sample. First, they were all visitors to an area of natural protection and therefore had some commonality of leisure interest. Secondly whilst nationality was taken as a variable the Chinese cannot be taken as a single homogenous group in view of tribal differences and the British are still divided by class, and so the concept of a national culture is contentious. Additionally standard socio-demographic variations of age and gender were also not considered. Further research could consider these aspects.

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