Are Sun Lovers nervous?

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Abstract

In the travel and tourism industry, understanding travellers' behaviours, needs and interests is one of the major issues to be tackled in order to provide excellent services. During the last decades, enormous efforts have been made in numerous studies with regard to the topic. The goal of this paper is to contribute to this knowledge base, trying to find relationships between tourist roles and long term personality traits. The paper is based on the 17 tourist roles defined by Gibson and Yiannakis (2002) and the Big Five Factors describing personality traits. Data collection was done using a 50 items questionnaire capturing basic demographic data, travel preferences and personality traits of nearly 1.000 respondents. The analysis shows interesting results, especially when taking different age ranges into consideration.

1 Introduction

Understanding customers is one of the major issues to be tackled in order to provide appropriate products and services. The famous quote, "If I have three million customers on the Web, I should have three million stores on the Web" by Jeff Bezos, founder of Amazon.com, emphasizes the importance of personalization. In the last decades, research studies related to travelling and tourism tried to identify the main factors that drive the choices of travellers – choices regarding travel activities and travel destinations. The goal of this work is to broaden the existing knowledge about customer behaviour in the travelling and tourism domain. The core of the study is the identification of relationships between long term personality traits (i.e., the Big Five Factors) and the rather short term tourist roles defined by Gibson and Yiannakis (2002). Broadening the knowledge base in this context creates new possibilities in the area of personalization systems such as recommender systems. Personality aware recommender systems have been introduced to address different kinds of problems such as cold start, sparsity, etc. (Cantador & Fernández-Tobías, 2014). Especially tourism related recommender systems have a great need for richer user information due to the lack of historical ratings that are often unavailable in this domain.

The paper is organized as follows. In section 2 related work is presented; section 3 describes the design and the conduction of the study including the data analysis methods. In section 4 the results of the analysis are given, section 5 explains and discusses the results and the last section provides overall conclusions.
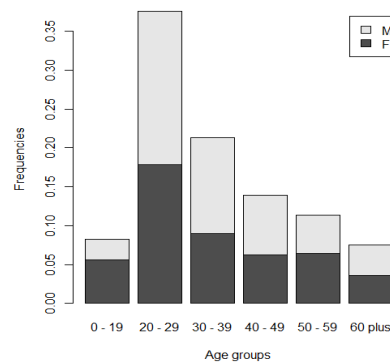
2 State of the Art

Understanding travellers' behaviours, needs and interests has been a hot researched topic in the travel and tourism industry for several decades. Cohen (1972) tried to find

a relationship between different travel purposes and interests, needs and the social environment of individuals; and, in a next step, defined four travel roles (Cohen 1974). Extending this work, Pearce (1982) introduced a 15 travel role categorization. In a three phases study, Yiannakis and Gibson (1992) identified 13 tourist roles. Gibson and Yiannakis (2002) found statistical evidence of a correlation between the tourist roles and life stage, gender, and personal needs. Furthermore, they finally introduced a categorization comprising 17 tourist roles. Tourist behaviour was further intensively studied (Iso-Ahola 1983; Yiannakis 1986; Yfantidou 2008). However, these studies did not consider personality traits as long term behavioural patterns. This paper, on the other hand, investigates if relationships between the Big Five Factors, demographic characteristics and tourist roles exist.

A study carried out by Gretzel et al. (2004) showed significant relations between travel personality types and the choice of travel activities, but no relation to the choice of the travel destination. A similar study was conducted by Moscardo et al. (1996), who identified relationships between the benefits that traveller seek and the activities that travellers undertake. With respect to personality traits, various personality scales were designed to assess the differences in behaviour and experience of individuals. Today, the most important one is the "Big Five Factor Model" (Goldberg 1990, John & Srivastava 1999). The "Big Five" stand for: Extroversion, Agreeableness, Conscientiousness, Neuroticism, and Openness to new Experience. A study by Jani (2014) found significant relationships between the Big Five Factors and some of the travel personality types presented in (Gretzel et al. 2004).

3   Methodology

The starting point of this work was a questionnaire composed of 50 statements. Each statement was related to either one of the 17 tourist roles defined by Gibson and Yiannakis (2002) or one Big Five Factor. Participants were asked to rate to which level they agree with the given statements from 1 (strongly agree) to 5 (strongly disagree). Also, basic demographic data was collected: gender, age and country. The questionnaire existed in two versions, i.e., online and offline. The offline version provided 553 and the online version 444 completed forms, resulting in 997 data records (Neidhardt et al. 2015). The analysis was based on both subsamples and

Fig. 1. Distribution of age groups and gender

there were no significant differences between the offline and the online sample. The distribution of age groups and gender is illustrated in Figure 1.

The following analysis steps were carried out: 1) Frequency analysis of the tourist roles and the personality traits; 2) Frequency analysis of the tourist roles and the personality traits considering age; 3) Frequency analysis of the tourist roles considering gender and 4) Correlation analysis between the tourist roles and the

personality traits taking into consideration age. It was assumed that if a normalized questionnaire scores (i.e., the level to which a person agreed to a statement) was four or five, a person would "play" a certain tourist role and exhibit a certain personality trait, respectively. For the frequency analysis a cross tabulation method was used, and the correlations were calculated as Pearson correlation coefficients.

The first part of the analysis identified which tourist roles occurred most often among the respondents. Since the roles were not exclusive, the sum of the percentages distributed over the roles exceeded 100%. The roles with the highest numbers of affiliates were *Sun Lover* (76%), *Explorer* (68%), *Jetsetter* (83%) and *Escapist I* (59%). Then, for each age group the proportion of the respondents belonging to the different tourist roles was calculated (see Table 1). Again the sum of the percentages in an age group exceeded 100%. *Sun Lover*, *Explorer* and *Jetsetter* were quite popular in all life stages. *Action Seeker*, *Anthropologist* and *Archaeologist* decreased with age. Other tourist roles were quite varying over the age groups. Interestingly, *Thrill Seeker*, *Drifter* and *Educational Tourist* were the most popular in the group '20-29', and *Seeker* had the highest popularity in the group '50-59'. The Big Five, on the other hand, were almost equally distributed over the age groups. Further analysis showed, moreover, very little influence of gender on the tourist roles.

Table 1. Tourist roles preferences over the age groups (respondents with normalized scores four or five for a certain tourist role in a certain age group)

Tourist Role	19 and less	20 – 29	30 – 39	40 – 49	50 – 59	60 plus
Sun Lover	78%	80%	80%	72%	63%	76%
Action Seeker	67%	57%	47%	42%	25%	27%
Anthropologist	49%	39%	32%	25%	7%	11%
Archaeologist	23%	15%	16%	12%	12%	9%
Organized Mass Tourist	16%	16%	14%	5%	11%	11%
Thrill Seeker	22%	43%	38%	24%	27%	20%
Explorer	78%	70%	66%	67%	58%	71%
Jetsetter	82%	82%	86%	80%	82%	92%
Seeker	17%	16%	15%	12%	22%	17%
Independent Mass Tourist I	22%	28%	29%	17%	25%	33%
Independent Mass Tourist II	59%	47%	48%	37%	34%	28%
High Class Tourist	15%	13%	13%	15%	12%	11%
Drifter	16%	19%	8%	7%	6%	4%
Escapist I	45%	59%	64%	61%	62%	49%
Escapist II	39%	39%	44%	44%	46%	32%
Educational Tourist	15%	30%	23%	13%	16%	17%
Active Sport Tourist	33%	43%	48%	53%	43%	43%

4   Results

In the following the focus is on relationships between the Big Five Factors and the 17 tourist roles see also Table 2 (only tourist roles with significant correlation scores are listed). The highest correlation was found between Neuroticism and *Sun Lover*, followed by Extroversion and *Archaeologist*. The highest negative correlation was between Conscientiousness and *Drifter*.

Table 2. Correlations between the Big Five and the tourist roles ([***]: p < 0.001; [**]: p < 0.01; [*]: p < 0.05)

	Open.	Cons.	Extr.	Agre.	Neur.
Sun Lover	0.28[***]	0.20[***]	0.29[***]	0.04	0.46[***]
Action Seeker	0.17[***]	0.01	0.27[***]	-0.01	0.21[***]
Anthropologist	0.14[***]	-0.10[**]	0.27[***]	-0.02	0.12[***]
Archaeologist	0.19[***]	0.00	0.35[***]	0.16[***]	0.17[***]
Organized Mass Tourist	0.18[***]	0.04	0.19[***]	0.27[***]	0.24[***]
Jetsetter	0.22[***]	0.17[***]	0.13[***]	0.11[***]	0.24[***]
High Class Tourist	0.01	0.17[***]	0.16[***]	0.00	0.25[***]
Drifter	0.07[*]	-0.25[***]	0.16[***]	0.10[**]	-0.10[**]
Educational Tourist	0.17[***]	-0.12[***]	0.04	0.27[***]	0.08[**]

With the other tourist roles no or only very small correlations existed. Due to the results in Table 1, age was, in a next step, taken into consideration when correlating the Big Five and the tourist roles. Table 3 lists the obtained correlations. Only correlation scores above 0.30 and below -0.25 (for positive and negative correlation respectively) are shown. Although the overall patterns still hold, there are clearly differences between the age groups. Openness had the highest positive correlation with *Sun Lover* in the '40-49' group; Conscientiousness with *Sun Lover* in the '60+' group; Extroversion with *High Class Tourist* in the '60+' group; and Agreeableness with *Educational Tourist* in the '19 and less' group. In Table 3 some significant negative correlations are revealed that cannot be observed when studying all age groups together, e.g., between Neuroticism and *Seeker* in the age group '40-49'.

Table 3. Highest correlation scores between Big Five and tourist roles per age group (only highly significant correlations are listed; [***]: p < 0.001; [**]: p < 0.01; [*]: p < 0.05)

Age groups		Open.	Cons.	Extr.	Agre.	Neur.
(19 and less)	*Sun Lover*					0.36[***]
	Organized Mass Tourist	0.36[***]				0.38[***]
	Seeker			-0.25[**]		
	Educational Tourist				0.41[***]	
	Archaeologist			0.35[**]		
(20-29)	*Sun Lover*					0.46[***]
	Organized Mass Tourist				0.36[***]	
	Drifter		-0.35[***]			
(30-39)	*Sun Lover*					0.48[***]
	Archaeologist			0.39[***]		
(40-49)	*Sun Lover*	0.50[***]		0.35[***]		0.55[***]
	Seeker	-0.30[***]				-0.29[***]
	Drifter		-0.26[**]	0.41[***]		
	Archaeologist			0.48[***]		
(50-59)	*Sun Lover*	0.39[***]				0.37[***]
	Action Seeker					0.37[***]
(60 +)	*Sun Lover*		0.58[***]			0.46[***]
	Jetsetter		0.37[**]			
	Archaeologist			0.48[***]		
	Action Seeker			0.44[***]		0.41[***]
	High Class Tourist			0.55[***]		

5 Conclusion

The analysis presented in the paper showed that significant correlations between the Big Five Factors and the 17 tourist roles exist. This implies that the travel behaviour of a person and his/her travel preferences are related to the personality traits of that person. Furthermore, the travel roles vary with age whereas the Big Five Factors appear to be quite stable. There is little influence of gender on the tourist roles.

In recent years personalization systems such as recommender systems have become more and more important, also in the area of tourism. These systems benefit from more comprehensive user models. Here, one example is the picture based approach to elicit user preferences (see Neidhardt et al. 2015). The results of the study can be integrated into such models in order to advance them further and to capture user preferences more accurately. And, regarding the question "Are Sun lovers nervous?", the answer is that yes: Sun lovers are nervous!

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