ISSN (PRINT): 1994 - 7658 ISSN (ONLINE): 1314 - 0817

VARNA UNIVERSITY OF MANAGEMENT

European Journal of Tourism Research

http://ejtr.vumk.eu

Brand personality positioning of world heritage sites: A text mining approach

Mohamed Abdalla Elsayed Hassan [1]*, Konstantina Zerva [2] and Silvia Aulet [3]

[1] Doctoral candidate, Faculty of Tourism, University of Girona, Plaça Ferrater Mora, 1, 17004 Girona, Spain. Email: u1944971@campus.udg.edu

[2] Associate Professor, Faculty of Tourism, University of Girona, Plaça Ferrater Mora, 1, 17004 Girona, Spain. Email: konstantina.zerva@udg.edu

[3] Associate Professor, Faculty of Tourism, University of Girona, Plaça Ferrater Mora, 1, 17004 Girona, Spain. Email: silvia.aulet@udg.edu

*Corresponding author

Abstract

World Heritage Sites (WHSs) are perceived as significant tourism brands. However, there is no in-depth analysis of the intangible meaning of World Heritage (WH) cultural attraction types from the visitor's lens. This study employed text mining and a Brand Personality (BP) lexical approach using WH personality categories to identify types of cultural attractions with intangible meanings in WHSs located in seven countries in Asia and the Pacific and Europe. This enabled the WH personality category distribution for each type of WH cultural attraction found on TripAdvisor to be measured. Accordingly, 9,971 visitor-generated reviews were analyzed and fifteen WHS cultural attraction types in the seven countries identified. The relationships between WH personality categories, the seven countries and WH attraction types were analyzed, and attraction types clustered into four groups. Significant differences were found between Asia and the Pacific and Europe regarding WH personality category distribution.

Keywords: World Heritage; cultural attractions; brand personality dictionary; text mining

Citation: Hassan, M.A.E., Zerva, K. and Aulet, S. (2023). Brand personality positioning of world heritage sites: A text mining approach. *European Journal of Tourism Research*, 35, 3505. https://doi.org/10.54055/ejtr.v35i.2923
.

© 2023 The Author(s)
This work is licensed under the Creative Commons Attribution 4.0 International (CC BY 4.0). To view a copy of this license, visit https://creativecommons.org/licenses/by/4.0/

1. Introduction

1.1 Cultural World Heritage in tourism

Heritage tourism's increasing impact on the tourism industry has led to it being a significant subset of cultural tourism and a prominent source of cultural consumption (Arezki *et al.*, 2009; Carbone, 2016; Cellini & Cuccia, 2016; Misiura, 2006). In this regard, heritage tourism has demonstrated significant effects on destination attractiveness and visitor preferences, which support destination growth (Kirilenko *et al.*, 2019). Lacher *et al.* (2013) emphasised that further research investigating different perceptions of heritage sites deepens understanding on how they influence destination preferences. According to Carbone (2016), promoting cultural heritage as a distinctive feature of a destination requires specific processes. Additionally, the focus on visitor attractions still appears necessary when promoting destinations (Manrai *et al.*, 2018) as they are considered important for driving tourism demand (Leiper, 1990). Heritage sites carrying the UNESCO World Heritage (WH) brand are regarded as the most desirable in their field due to their Outstanding Universal Values (OUVs) (Prados-Peña & Del Barrio-García, 2021). This has led academics to recognise WH as a well-known tourism brand (Y. Yang *et al.*, 2019). Thus, the purpose of this study is to analyze WH cultural attributions.

When analysing the development of WH, Ryan and Silvanto (2009) concluded that the concept of the WH had shifted from conserving natural and cultural sites of OUV and was becoming a tourism brand. They argued that WH has been considered a unique brand used by countries to foster their economic assets and by visitors as a differentiator influencing choice-making processes. To support this, Prados-Peña and Del Barrio-García (2021) made references to the fact that the criteria for WH selection ensured having OUVs, and that this recognition established a powerful WH brand. When employing a well-known heritage brand extension like WH, simplifies establishing extra values based on visitor WH beliefs, expanding from the WH brand to its extensions (Prados-Peña & Del Barrio-García, 2021; Kim *et al.*, 2019). Furthermore, the academic literature suggests that WH as a determinant for increasing visitor numbers depends on each country's marketing strategy (Poria *et al.*, 2011).

In this regard, most academics agree that the success of WH in influencing visitors (Y. Yang *et al.*, 2019) and its capability to derive sustainable incomes (Buckley *et al.*, 2020) lies in destination managers' willingness to use WH in their tourism marketing campaigns (Mariani & Guizzardi, 2020). Academics also noted that some WH attributes used in heritage promotion, which could foster heritage brand equity, were not utilized by tourism marketing organizations (Hall & Piggin, 2002; King & Halpenny, 2014; Prados-Peña & Del Barrio-García, 2021). Marcotte and Bourdeau (2006, 2012) investigated how destination managers used the WH as a tool for online promotion rather than concentrating on heritage conservation. Hence, Poria *et al.* (2011) argued that the best way to analyze WH is to investigate its net brand equity, where net denotes that no marketing strategies have been used to modify the WH effect. As WH perceived authenticity, for example, was explored to evoke visitor behaviour such as influencing their preferences towards destinations and willingness to pay extra fees (Poria *et al.*, 2011; Wuepper, 2017), it is essential for World Heritage Sites (WHSs) managers to recognise and communicate WH brand attributions (Del Barrio-García & Prados-Peña, 2019). Thus, the current study's primary aim is to identify the attributes of types of WH cultural attractions from the visitor's lens for the first time. This helps define how visitors perceive particular WH cultural types, which may enable destination managers to target their promotional materials more effectively towards visitors.

Furthermore, identifying the cognitive attributes of WHSs may help categorize WH cultural types (Lew, 1987). Leiper (1990) noted that tourist attractions are essential to tourism as they are key elements underpinning the growth of tourism (Carbone, 2016; Klarić, 2017). Some scholars have grouped the intangible meanings derived from visitors' perceptions in order to categorize cultural attractions (Leiper, 1990; Lew, 1987). Objectives of the present study include using TripAdvisor visitors' post-experience reviews to identify the intangible meanings of WH cultural types and categorize them based

on visitors' perceptions. Using visitors' perceptions as a reference may aid in differentiating between various types of attractions and understanding WHS classifications as a micro-element of the tourist attraction system.

The prominence of online visitor reviews influencing visitors' preference for destinations (Gretzel & Yoo, 2008), has spread analysis has taken different approaches. For instance, sentimental analysis measures (positive, negative, or neutral) feelings towards destinations (Mehraliyev *et al.*, 2022), or argumentative analysis (De Ascaniis & Gretzel, 2013), which explores visitors' opinions of a destination through online visitor reviews. Recently, Hassan *et al.* (2021) suggested that the concept of Brand Personality (BP), which is defined as 'the set of human characteristics associated with a brand' Aaker (1997, p. 347) is a viable tool for measuring intangible meanings of WH. Thus, the current study extends BP, using it to measure WH cultural attraction types, and digital texts to analyze visitors' perceptions of WH. This may be a helpful tool for destination managers, helping them differentiate between, and better communicate the intangible meanings of WHS attributions, thus enhancing visitors' ties with them.

1.2 Brand personality concept

The Big Five model (Extroversion, Agreeableness, Conscientiousness, Openness, and Neuroticism) is one of the most commonly used personality classifications, and is based on the psycholexical approach, advocating that language creates adjectives that differ among people (Allport & Odbert, 1936; Goldberg, 1992). Aaker (1997), used the psycholexical approach in her pioneering BP study, and defined brands as a person with five dimensions (Sincerity, Excitement, Competence, Sophistication, and Ruggedness). Due to its prominence in measuring the intangible meanings of brands, Aaker's (1997) scale has been widely extended to several domains. These include non-product brands such as tourism destinations (Ekinci & Hosany, 2006; Kumar & Nayak, 2018), countries (D'Astous & Boujbel, 2007), cities (Kaplan *et al.*, 2010), and more recently, cultural WHSs (Hassan *et al.*, 2021).

In this regard, traditional lexical and empirical approaches differ in how they use BP categories associated with destinations, with Destination Personality (DP), which is defined as 'the set of human characteristics associated with a destination' (Ekinci & Hosany, 2006, p.1), taking a different marketing focus. In the traditional empirical approach, academics explore how the DP categories they employ can be used to enhance feelings and strengthen visitors' ties to destinations (C. Zhang *et al.*, 2019). Furthermore, academics developed the BP lexical approach, exploring its significance in positioning and differentiating between destinations (Rojas-Méndez & Hine, 2016). For cultural attractions, Hassan *et al.* (2021) identified the WH BP dictionary —namely the WH 222-item personality dictionary— into five categories: Competence, Excitement, Ruggedness Sincerity, and Sophistication (hereafter, WH dictionary) to differentiate between WHSs located in France, Germany, Italy and Spain.

Thus, a second objective of the present study is to put Hassan *et al.*'s (2021) WH categories into practice and identify the positioning of several cultural WHSs for the first time. These WHSs are spread across seven countries in two regions with the highest number of WHSs on the UNESCO WH list: Europe, and Asia and the Pacific. A larger sample may help draw more general conclusions about WH's perceived BP categories compared to the findings of earlier research on this topic, such as Hassan *et al.* (2021)'s WH category distributions. In addition, this study aims to investigate how WH countries differ from one another in order to identify the leading competitive advantage among the seven countries chosen for analysis. To this end, two research questions were designed:

1. What are the personality category distributions for each type of WH cultural attraction as organized on TripAdvisor and for WHSs located in Asia and the Pacific and Europe?

2. This study also hypothesized a relationship between specific types of WH attractions relying on their intangible meanings.

Thus, what are the relationship patterns between the types of WH cultural attractions that can be constructed from the relationship between cultural WH dictionary categories and the types of attractions on TripAdvisor?

2. Literature review

2.1 World Heritage perceived attributions in tourism

To date, even though WH has been perceived as a tourism brand, visitors' and destination managers' WH awareness is ambiguous (Adie & Hall, 2016; King & Halpenny, 2014; Park & Santos, 2017). Keller (1993) pointed out that customer awareness could be measured in relation to recognition, recall, and top-of-mind brand awareness. To date, WH research has used a Likert scale to evaluate visitor knowledge, rather than perceived attributes, a method that is still lacking. When Baral, Hazen, and Thapa (2017) and King and Halpenny (2014) examined WH awareness, most visitors may have recognised the WH brand, but failed to acknowledge its meaning. Recently, Alvarez-Sousa and Prados (2020) found that neither WH nor UNESCO WH keywords were found in visitors' reviews on TripAdvisor. In this regard, visitors' understanding of in-depth intangible meanings of WH is still lacking (Adie, Hall, & Prayag, 2017; Poria *et al.*, 2011).

Prior research on how visitors perceive WHSs is limited to utilizing scales established on a more theoretical basis, without considering visitor evaluations (Baral *et al.*, 2017; Nian *et al.*, 2019). The OUVs of WHSs are scientifically assessed in terms of Authenticity (genuine and credible), Integrated (holiness), and Protection and Management criteria defined by UNESCO (2019). Despite the fact that WH OUVs contain other factors like Integrity, Protection, Management, and Criteria of Significance, the majority of prior studies tended to focus on visitors' perceived authenticity (UNESCO, 2019). Academics assessed WH perceived qualities from the visitor's lens, but in operational terms, using OUVs specified by scientists such as Chhabra (2010). Thus, aside from the study by Poria *et al.* (2011), visitors' terms have not been considered by the majority of prior investigations. Thus, this study takes an initial step towards investigating WHSs from the perspectives of visitors and experts, pointing out the need for additional research on WH perceived brand equity (Adie, 2017; Adie & Hall, 2016).

In line with De Ascaniis and Gretzel (2013), the current study used digital texts rather than typical surveys to offer a broad notion of WH perceived attributes, and analyse WH perceived quality. Thus, by analysing visitor-generated content related to WHSs on TripAdvisor, the sample can be expanded to include as many descriptors assigned by visitors to as many WHSs as possible. By extending BP lexical measurements to WHSs, it is possible to analyse the substantial amount of qualitative data gleaned from TripAdvisor visitor reviews. For the first time, this study investigates visitors' perceived quality of WH, centering on exploring its perceived intangible meanings, i.e., BP personality categories, through digital text analysis.

2.2 Brand personality construct in tourism

Academics concur that Aaker's BP (1997) is prominent, but has certain limitations, including a lack of generalizability when used to measure brands in various cultural contexts. As brands embed cultural meaning, the BP categories construction is varied due to differences in consumer values and beliefs (Aaker *et al.*, 2001; Roy & Banerjee, 2021). In this regard, Ahmad and Thyagaraj (2014) emphasised that brand managers should consider the role culture plays in establishing consumer perceptions towards brands. This may assist in constructing well-defined BP categories that capture the beliefs and values of a specific culture. Thus, many studies have explored the viability of Aaker's BP categories in different

cultural contexts, such as tourism destinations (Davies *et al.*, 2018). The majority of DP investigations came to the conclusion that DP categories are culture-specific rather than universal (Davies *et al.*, 2018). Ekinci and Hosany (2006) argued that in tourism one destination can be substituted for another, as they have become highly competitive, concluding that extending BP to destinations is a significant metaphor for formulating DP categories that may provide destinations with unique abstract identities. Regarding DP categories debated for their consequences and antecedences, several tourism studies noted that DP categories had an impact on a variety of visitor behaviours (Usakli & Baloglu, 2011). For instance, DP categories were found to affect visitor loyalty, intent to return (Ekinci & Hosany, 2006), and recommendations (Murphy *et al.*, 2007; Papadimitriou *et al.*, 2015). The need to design culturally relevant DP categories was emphasised by academics as each destination has unique intangible features (Kumar & Nayak, 2018), and up-to-date, efforts to construct specific DP categories are required (Carvalho *et al.*, 2021; Saeed *et al.*, 2021). Therefore, Hassan *et al.* (2021) developed the BP lexical approach to enhance the inclusion of WH cultural context in WH categories when constructing WH personality categories to measure cultural WHSs.

2.3 Brand personality lexical approach in tourism

In contrast to the BP psychometric approach, Carvalho *et al.* (2021) suggested employing qualitative and multi-method research that combines both qualitative and quantitative approaches or includes methodological triangulation, which may enhance knowledge of BP. Herein, Pitt *et al.* (2007) first introduced the BP lexical approach, which was later expanded upon (Hassan *et al.*, 2021; Rojas-Méndez & Hine, 2016). Available BP approaches have shown different ways of constructing BP categories (Lieven, 2017). First, the psychometric approach, which is based on scale construction criteria (Churchill, 2006) and determined via survey questionnaires (Aaker, 1997). Second, the lexical approach, which differs in that BP category items depend on the synonyms' relevancy defined by thesaurus dictionaries and text data analysis (Pitt *et al.*, 2007). Additionally, there are variations between these two BP approach applications in the tourism industry.

The BP psychometric approach focuses on measuring the influence of DP categories on visitor behaviours (C. Zhang *et al.*, 2019), as mentioned previously. The lexical method, however, was more concerned with differentiating destinations according to BP categories. In the first approach, Ekinci and Hosany (2006), for instance, developed three DP categories (sincerity, excitement, and conviviality) and investigated how these affect visitors' intention to visit and recommend. Worth mentioning, Kumar and Nayak (2018, p. 6) compiled a list of all prior studies according to the DP categories identified. The vast amount of text data available online and advancements in text mining processing have drawn academic attention to the analysis of web-based DP. In a pioneering study, Pitt *et al.* (2007) expanded Aaker's 42-item five dimensions into a dictionary that included 833 synonym items used for comparison between DP categories in ten African tourism websites. Later, Rojas and Hine (2016) identified South American countries positioning using the lexical approach. Despite Pitt *et al.*'s (2006) lexical approach being hailed for its marketing applications, it lacks items relevant to specific contexts due to the limited number of synonyms in Aaker's five dimensions.

In explaining the above, Hassan *et al.* (2021) found many items relevant to WHSs were missing when they employed Pitt *et al.* (2007)'s dictionary to identify the WH personality categories from visitor reviews on TripAdvisor. Thus, they expanded Aaker's (1997) 42 items to 9,460 items, constructing Four Thesaurus BP dictionaries that enabled them to add items not included in Pitt *et al.* (2007)'s dictionary, and establish a 222-item dictionary of WH personality. The present study aims to define the attraction type of cultural WH personality categories by examining the 222-item WH dictionary and investigating the personality types of WH cultural attractions.

2.4 Tourist attraction system

Tourist attractions have been perceived as a structural system of interconnected elements (Leiper, 1990; Lew, 1987). To better understand the cultural attraction system, Carbone (2016) stressed the need for cultural heritage managers to realize the difference between resources and cultural attractions when providing a detailed account of available systems. Resources that restore cultural heritage draw tourists' attention, becoming cultural attractions, thus enhancing tourism arrivals (Carbone, 2016). Lew (1987) established the earlier taxonomy of attractions based on three purposes. Firstly, 'ideology' refers to definition and description of attraction types and focuses more on the tangible aspects of attractions such as their particular uniqueness. Secondly, 'organization and development of attractions' refers to geographical notions (Leiper 1990) that depend on the space and nature of attractions. Thirdly, 'cognitive perception and experience of tourist attractions by different groups' refers to visitor perception and experience as their feelings towards attractions. Later, Leiper (1990) considered tourist attractions as an interconnecting system between three elements: the 'tourist'—person motivated to visit an attraction—, the 'sight' —nucleus means characteristic of the attraction—, and the 'marker' —information about the nucleus—. Botti, Peypoch, and Solonandrasana (2008) presented time as a new unit for classifying attractions into 'seasonal attractions' and 'permanent attractions'. For Richards (2002), the application of the Leiper system has positive practical implications; however, he considered that efforts are still required in this domain.

Krešić and Prebežac (2011) identified a gap in the literature on categorizing attraction. Previous studies agreed that attraction classification can be derived from specific elements of the attraction system that concur with the objective behind the categorization (Botti *et al.*, 2008; Leiper, 1990; Lew, 1987; Richards, 2002). For instance, classifying WHSs into cultural, natural, and mixed may be interpreted as being based on 'ideography and organization' and 'development of attractions'. This UNESCO WH classification is based more on geographical notions that depend on the space and nature of attractions according to Leiper's (1990) attraction categorization system. It is important to note that visitors' perceptions are lacking in the UNESCO WH categorization (Poria *et al.*, 2011). Therefore, studying the intangible meanings of WH categories may help narrow this knowledge gap in this study. Lew (1987) acknowledged that evaluations of studies on destination image are cognitive components of the attraction system. More recently, BP lexical methods have enabled cognitive attributes to be transformed into numeric values, which this study employs to categorize types of WH attractions based on visitor evaluations. This may help to better understand the WH cultural attraction system from the demand side. Categorizing WHSs from their cognitive meanings can be related to Lew's (1987) 'cognitive perception and experience of tourist attractions by different groups', and Leiper's (1990) attraction system 'markers'. This type of categorization adds more value to WHSs as it shifts the focus to their intangible meanings and interaction with visitors (Leiper, 1990).

3. Analytical procedures

First, the maximum amount of textual digital data describing WHSs was collected from online visitor reviews on TripAdvisor of post-visit experiences. Second, the computer content was analyzed using the BP lexical approach. Third, five pre-defined WH categories of Hassan *et al.*'s (2021) dictionary were employed to measure the personality categories distribution of WH attraction types and WHSs by countries based on visitor reviews.

3.1 Sample and data collection

From 402 URLs for 261 cultural WHSs between May and August 2021, this study extracted the identifications of attraction categories related to WHS data, which comprised 9,971 visitor-generated reviews. These visitor reviews described WHSs located in Asia and Pacific and Europe, two UNESCO

areas containing the top seven countries with listed sites: China (37), India (30), Japan (19), France (39), Germany (44), Italy (50), and Spain (42). These 261 WHSs in seven counties account for 30% of the total list of WH cultural sites, categorized into 869 (77.5%) cultural, 213 natural and 39 mixed sites (22.5%). The rationale behind selecting these particular seven countries is that UNESCO's WH list statistics indicate that these may offer a sufficient number of TripAdvisor visitor reviews. Using TripAdvisor's filter feature, only 402 URLs with the keywords 'World Heritage' or 'UNESCO World Heritage' from visitor-generated reviews in English were collected.

The data from these URLs was then used to identify the WH attraction type described by TripAdvisor. Then how TripAdvisor organized these cultural attractions under a specific cultural type or combination of types was investigated, finding that it agrees with UNESCO's WH definition for cultural attractions: '**Monuments:** architectural works, works of monumental sculpture and painting, elements or structures of an archaeological nature, inscriptions, cave dwellings and combinations of types, which are of Outstanding Universal Value from the point of view of history, art or science'. '**Groups of buildings:** groups of separate or connected buildings which, because of their architecture, their homogeneity or their place in the landscape, are of Outstanding Universal Value from the point of view of history, art or science'. '**Sites:** works of man or the combined works of nature and of man, and areas including archaeological sites which are of Outstanding Universal Value from the historical, aesthetic, ethnological or anthropological points of view.' (UNESCO, 2019: 19).

Regarding the organization of cultural attractions on TripAdvisor, the most common categories are 'Sights & Landmarks' 'Points of Interest & Landmarks', 'Architectural Buildings', 'Historic Sites' and 'Religious Sites'. Several other attraction types are organized in combination with the previous categories such as 'Architectural Buildings, Churches & Cathedrals' or a combination as follows 'Architectural Buildings, Religious Sites, and Churches & Cathedrals'. This study, thus, extracted all keywords given to the cultural attractions from all 402 URLs, filtering them into fifteen categories of attractions: 'Churches & Cathedrals', 'Architectural Buildings & Theaters', 'Castles' 'Historic Walking Areas', 'Historic Sites & Geologic Formations', 'Historic Sites', 'Historic Sites & Neighborhoods', 'Observation Decks & Tower & Bridges', 'Architectural Buildings & Museums', 'Religious Sites', 'Monuments & Statues & Government Buildings', 'Ancient Ruins', 'Architectural Buildings', 'Caverns & Caves' and 'Points of Interest & Landmarks'. To analyze WH personality category distributions for each of these cultural types, visitor user-generated reviews describing each WH cultural attraction type were filtered, resulting in fifteen distinct data files. Moreover, seven additional data files were prepared with visitor reviews for each of the seven selected countries. This enabled both an analysis of both the relationships between the WH countries and the fifteen WH cultural types, and the WH personality categories for WHSs for the seven countries.

3.2 Methods

Based on the five-category WH dictionary developed by Hassan *et al.* (2021), this research identifies and measures the personality categories of fifteen WH cultural types and WHSs in seven countries, using the WH dictionary as a measurement tool for the first time. Relationships between the variables were analyzed using Correspondence Analysis (CA) in text mining, which is considered a key technique in visualizing relationship patterns between various data variables.

This study generally analyses TripAdvisor visitor reviews about the predefined 222 items of WH five categories to measure the WHSs countries and types of attractions personality categories. Thus, using inferential statistics, it will use quantitative content analysis, a technique for analyzing texts for predefined terms or phrases and drawing conclusions about their presence (Boettger & Palmer, 2010; Devi Prasad, 2008). It is also known as conceptual content analysis, as it identifies the presence and

frequencies of particular words or concepts while looking at the relationships between them (Boettger & Palmer, 2010). This study will follow a computer content analysis technique for online travel reviews (OTRs) — which are defined as 'narratives, opinions, pictures, and ratings posted on travel-related websites by users or consumers and based on their travel-related experiences with places, attractions, and tourism-related activities, products, and services' — (Marine-Roig, 2022, p.4).

Due to Web 2.0's advancements, user-generated content, including OTRs, has increased in significance as a source for tourism marketing research (Hlee *et al.*, 2018; Mandić *et al.*, 2019; Marine-Roig & Anton Clavé, 2016; Muritala *et al.*, 2020). The salience of OTRs is seen in their analysis as a tool to measure, for example, visitor perceptions of a particular destination's image (Hlee *et al.*, 2018; Marine-Roig, 2019; Marine-Roig & Ferrer-Rosell, 2018) or visitor feelings (positive or negative sentiment) towards destinations (Gkritzali *et al.*, 2018; Mehraliyev *et al.*, 2022). Worth mentioning is that Hassan *et al.* (2021) used the analysis of OTRs for the first time, to the best of our knowledge, in the context of WH cultural attractions to identify their hidden meanings and quantify the competitive advantages among cultural WHSs. This study expands the use of OTRs for further analysis on WHSs countries and types of attractions.

This study will first operationalize computer quantitative content analysis (Sjøvaag & Stavelin, 2012) to reduce the complexity of the text data and measure the frequencies of 222-WH dictionary items. Marine-Roig (2022) provided a detailed account of the OTRs' content analysis approach and outlined procedures for their analysis. Among these procedures applied in the present study are; 1- Selection Sources of OTRs — determining websites that host OTRs —, 2- Data Collections, 3- Data Arrangement, and 4- Content analysis process.

Since TripAdvisor is recognised as a trustworthy source for marketing research, it was chosen for this study (Fang *et al.*, 2016; Gretzel & Yoo, 2008; Marine-Roig & Anton Clavé, 2016; Xiang *et al.*, 2017). Marine-Roig and Ferrer-Rosell (2018) offer a method for selecting host websites which evaluates their size, popularity, and visibility to compare them across a group of chosen OTRs' host websites. TripAdvisor was found to be the website that meets these three criteria (Marine-Roig, 2022; Marine-Roig & Anton Clavé, 2016; Marine-Roig & Ferrer-Rosell, 2018).

In collecting and arrangement of OTRs data, this study uses Python's 'Beautiful Soap Library' to extract OTRs from a collection of webpages on TripAdvisor associated with various WHSs. Herein, structured or semi-structured OTRs data were extracted from these web pages (Marine-Roig, 2022). In this regard, the textual review body, which is the unstructured component of the OTRs, is considered the most significant component since visitors express their opinions and provide details about their experiences at the WHS attractions they have visited, for example (Marine-Roig, 2022). The date of review, date of experiences, rating of review, review location (which enables this study to filter reviews depending on countries), and given titles of the WH attractions types are the structured components of reviews extracted from TripAdvisor's webpages (it allows also to group reviews based on attractions types). The titles of the reviews are the semi-structured elements of OTRs that were extracted for this study. Since they summarize the total experience, they are regarded as important sources of information (De Ascaniis & Gretzel, 2013; Marine-Roig, 2022). This study combined the review titles with the review textual bodies during the arrangement to improve the analysis of the term attributed to WHSs.

For content analysis procedures, among many other approaches, two have been frequently used to analyze text data (Denny & Spirling, 2017); the first is a content analysis technique known as the 'Supervised Learn Method' or 'Structured Content Analysis' that uses predefined topic categories to study a given set of text data. The second method, 'An Unsupervised Learning Method' analyses text without using any pre-established categories. To find latent patterns in text, the latter method is used

in topic modeling and document categorization (Curiskis *et al.*, 2020), for example. Since this study uses the 222 predefined WH dictionary categories, it operationalized the first approach to measure WHSs countries and types of cultural attractions (2020). This Supervised Learn Method is the common BP lexical approach, which uses Pitt *et al.*'s (2007) BP dictionary categories (Paschen *et al.*, 2017). Based on this study's aims, the unit of analysis is the combined textual body and tile of reviews attributed to a set of WHSs in particular counties or a particular type of WH cultural attractions. Based on the whole unit of analysis, the frequencies of each of the 222 items of the WH dictionary were calculated.

Before conducting the WH dictionary analysis, nodes —text mining pre-processing features of Knime Software — were used to simplify the complexity of text data files (Denny & Spirling, 2017). These features include **Punctuation, Numbers Erasers**, and **Stop-word Lists**—which comprise the majority of meaningless words and eliminate any that were not likely to provide meaningful information for the meanings—. **Lemmatization and Stemming** were employed to shorten the terms to their original forms. These techniques also help combine words like beautiful, beauty, and beautifying. **Case Converter node** is used because the 222 WH category items were compared to the text in the units of analysis (textual data files) that were established for the study. Case convertors had to be used to ensure frequency accuracy in all textual data files. This ensured that all texts had the same upper or lowercase format. **Frequency Filters** were used that enabled the calculation of the frequencies of each item in a specific WH category across the entire unit of analysis. To this end, this study employed **Dictionary Tagging** in Antword Profiler to measure the match between the 222-item WH five-category dictionary and the prepared data files of the fifteen WH types and seven WH countries.

4. Analysis of results

Results are discussed in relation to the 222-item WH dictionary categories, their distribution in relation to the seven WH countries, and then their correlation with the fifteen types of WH attractions, including the interpretation of their meanings. Following this, the relationships between different WH variables, attraction types and countries, are analyzed. All the distributions were measured using Antword Profiler software.

4.1 World Heritage site countries personality category distributions

Figure 1 shows the personality category distributions of the WHS countries, where the distribution curves reflect the difference in the size of the personality items analyzed in each data file. The Sophistication category came first in WHS countries, with items such as 'beautiful', 'magnificent' and 'impressive'. Excitement was the second category described, with items such as 'amazing', 'impressive' and 'fantastic'. The category Sincerity, with the items 'originality', 'typical' and 'authenticity', came third. Following this, Competence, with the items 'outstanding', 'protected' and 'extraordinary'. The least attributed category was Ruggedness, with items such as 'massive', 'intricate' and 'outdoor'. Furthermore, the distributions of WH categories also show a specific correlation between the WH categories. Whereby the categories of the Sophistication and Excitement curves show certain similarities in terms of percentages of distributions. This can be explained by the fact that these two categories are frequently attributed, and can be interlinked with the visitors' reviews to a certain extent. The same is true for both the Competence and Sincerity curves, while ruggedness does not show any correlation.

When interpreting the WH categories, Aaker (1997) acknowledged that Sincerity correlates with attributes such as 'warmth', which can express the inner meanings of brands (Aaker, 1997). In the context of this study, Sincerity and Competence are WH categories that can be best linked to items related to the WH concept of 'authenticity' and 'integrity' (UNESCO, 2019). Whereby academics connotate terms such as original, traditional, and genuine, which describe Sincerity, to the concept of authenticity (Hyounggon *et al.*, 2018). While the category Competence includes items referring to

dependability and responsibility (Aaker, 1997), this category can be best related to the concept of integrity (Khalaf, 2020), which refers to protecting WHSs. This leads Hassan *et al.* (2021) to link sincerity to authenticity and Competence to integrity, both intrinsic aspects of WHSs.

To interpret Sophistication, Aaker (1997) related this category's items to well-known brands, which marketers have used to promote well-known companies such as BMW and Mercedes. Worth mentioning is that most of these category items can be linked to the aesthetics of WHSs. Dictionary.com (retrieved 27th February 2023, from https://www.dictionary.com/browse/aesthetic) defines aesthetics as 'having a sense of the beautiful; characterized by a love of beauty'. Academics in heritage aesthetics studies relate the concepts of aesthetics to terms of beauty or liking (Ha & Yang, 2019; Malvica *et al.*, 2022; Ruban *et al.*, 2020; Tieskens *et al.*, 2018), which are exhibited in the items of Sophistication. For Excitement, Aaker (1997) described the items in this category as linked to social interactions. Specifically, the author linked this category to Extroversion, one of the Big Five in psychology studies (Mccrae & Costa, 1987). Thus, Excitement may best describe the involvement of visitors at WHSs. Aaker *et al.* (2001) concluded that Ruggedness was culturally distinctive as it was related to brands like Levi's. This may help explain why WHSs received the least attributions for this category.

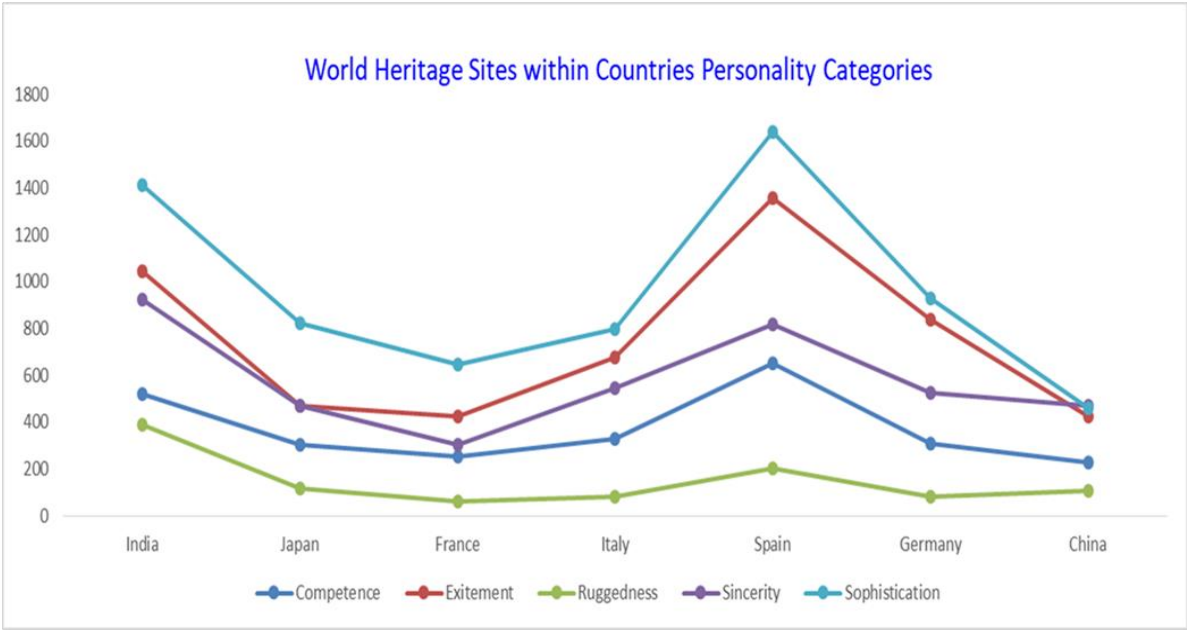


Figure 1. *Personality distributions for World Heritage Site countries on TripAdvisor. Own work.*

4.2 Personality distributions of World Heritage cultural attraction types

Significant differences were noted among the fifteen WH cultural personality distributions (Figure 2). On the other hand, Figure 1 demonstrated that there is a certain consistency in the personality distributions of the overall WHSs in the seven WH countries, as noted previously. This can be noted as the distribution curves of WHSs of countries have no intersections, in contrast to Figure 2. On the contrary, the curves in Figure 2 related to attraction types were frequently interchanged. Thus, for a better understanding of the personality distributions of WH cultural attraction types, a detailed account of the ten attributed items related to each of these fifteen types of cultural attractions is presented in Table 1. Rojas-Méndez and Hine (2016) regarded investigating the density of items belonging to categories attributed to brands as noteworthy. Destination managers can therefore use the frequency of the items in Table 1 to determine the density of WH personality items, which demonstrates the relative importance of various items across WH types.

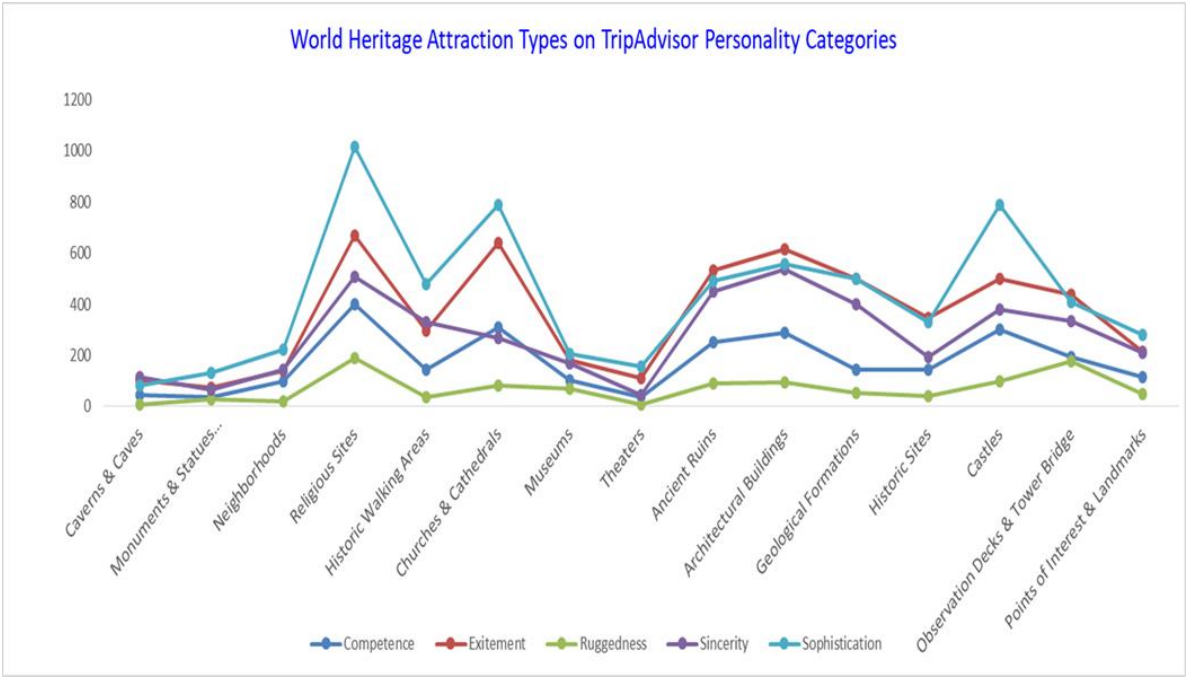


Figure 2. *Personality categories of World Heritage cultural types on TripAdvisor. Own work.*

4.3 Interpretation of personality categories for types of World Heritage attractions

It is important to note that the majority of WH attraction types are considered the fundamental components of cultural tourism activities. This includes the consumption of heritage assets, such as archaeological sites, museums, castles, palaces, historical buildings, ruins, theatres, and churches, where heritage assets can refer to a single building, a group of buildings, a city or town, or a collection of buildings (Misiura, 2006; Uday, 2021). To interpret the meanings of WH cultural types, Aaker (1997) provided an interpretation of the five BP, referred to previously, and more recently, Hassan *et al.* (2021) interpreted WH categories based on Aaker's interpretations. Thus, as the present study is underpinned by Hassan *et al.*'s (2021) WH categories, it found that it may be useful to interpret the meaning of the four groups of cultural attractions relying on their link to specific WH personality category meanings, as determined by distribution percentages.

Regarding Table 1, the first group, 'Churches & Cathedrals', 'Architectural Buildings & Theaters' and 'Castles' was highly dominated by Sophistication, with items such as 'beautiful', 'striking', 'magnificent', 'renowned', and 'spectacular'. These items express the external features of brands that carry significant values according to Aaker (1997) and Hassan *et al.* (2021). Most of the Sophistication items may also refer to the aesthetics of WHSs. Ruban (2018) stated that aesthetics refers to visitors' evaluations of beauty regarding physical features of heritage sites. Worth mentioning, WH aesthetic values are also related to criterion vii of the UNESCO WH guidelines (M. Zhang *et al.*, 2022). This criterion is mostly connected to natural beauty and includes aesthetic values. Criterion vii refers to WHSs having OUVs, and having 'to contain superlative natural phenomena or areas of exceptional natural beauty and aesthetic importance' UNESCO (2019: 26). Within the context of this study, visitors referred to Sophistication using terminology that particularly focused on extrinsic aspects of aesthetic beauty.

Table 1. *Frequent World Heritage items for types of attractions*

Items	Categories		Freq	Items	Categories		Freq
amazing	Excitement		34	beautiful	Sophistication		54
ancient	sincerity		32	complex	Ruggedness		20
beautiful	Sophistication		13	amazing	Excitement	**Monuments**	17
nice	sincerity	**Caverns**	11	nice	sincerity	**&**	16
incredible	Excitement	**&**	10	magnificent	Sophistication	**Statues**	9
huge	Competence	**Caves**	9	huge	Competence	**•Government**	8
excellent	Sophistication		8	impressive	Excitement	**Buildings**	8
famous	Sophistication		8	free	Excitement		8
spectacular	Sophistication		8	easy	Sophistication		7
natural	sincerity		7	top	competence		7
Items	**Categories**		**Freq**	**Items**	**Categories**		**Freq**
beautiful	Sophistication		58	beautiful	Sophistication		268
amazing	Excitement		36	amazing	Excitement		153
stunning	Sophistication		24	impressive	Excitement		103
fortified	competence	**Historic Sites**	23	stunning	Sophistication	**Churches**	81
ancient	sincerity	**•**	19	magnificent	Sophistication	**&**	77
top	competence	**Neighborhoods**	18	huge	Competence	**Cathedrals**	62
nice	sincerity		17	famous	Sophistication		53
local	sincerity		17	nice	sincerity		46
unique	Excitement		15	top	competence		45
free	Excitement		14	spectacular	Sophistication		42
Items	**Categories**		**Freq**	**Items**	**Categories**		**Freq**
beautiful	Sophistication		379	beautiful	Sophistication		52
amazing	Excitement		149	complex	Ruggedness		36
complex	Ruggedness		109	nice	sincerity		33
impressive	Excitement		104	amazing	Excitement		30
nice	sincerity	**Historic Sites**	99	impressive	Excitement	**Museums**	28
golden	competence	**• Religious Sites**	94	free	Excitement		24
stunning	Sophistication		72	huge	Competence		20
magnificent	Sophistication		68	royal	Sophistication		17
famous	Sophistication		67	excellent	Sophistication		16
peaceful	Excitement		54	ancient	sincerity		16
Items	**Categories**		**Freq**	**Items**	**Categories**		**Freq**
beautiful	Sophistication		189	amazing	Excitement		144
amazing	Excitement		77	beautiful	Sophistication		134
nice	sincerity		63	ancient	sincerity		112
unique	Excitement		47	impressive	Excitement		74
ancient	sincerity	**Historic**	33	nice	sincerity	**Historic Sites•**	54
traditional	sincerity	**Walking Areas**	32	excellent	Sophistication	**Ancient Ruins**	48
top	competence		26	top	competence		44
local	sincerity		24	easy	Sophistication		33
famous	Sophistication		22	famous	Sophistication		33
stunning	Sophistication		21	huge	Competence		32
Items	**Categories**		**Freq**	**Items**	**Categories**		**Freq**
beautiful	Sophistication		63	amazing	Excitement		172
amazing	Excitement		27	beautiful	Sophistication		145
stunning	Sophistication		19	ancient	sincerity		136
fantastic	Excitement		15	impressive	Excitement		78
impressive	Excitement	**Theatres**	12	nice	sincerity	**Architectural**	61
incredible	Excitement		11	excellent	Sophistication	**Buildings**	54
magnificent	Sophistication		10	top	competence		45
nice	sincerity		8	huge	Competence		41
top	competence		8	easy	Sophistication		39
easy	Sophistication		7	stunning	Sophistication		37
Items	**Categories**		**Freq**	**Items**	**Categories**		**Freq**
beautiful	Sophistication		213	beautiful	Sophistication		100
modern	Excitement		132	unique	Excitement		89
well-preserved	Excitement		131	amazing	Excitement		64
typical	sincerity	**Historic Sites •**	129	top	competence		30
amazing	Excitement	**Geological**	59	nice	sincerity	**Historic Sites**	29
royal	Sophistication	**Formation**	54	fantastic	Excitement		22
nice	sincerity		47	fascinating	Sophistication		21
ancient	sincerity		38	free	Excitement		20
impressive	Excitement		25	complex	Ruggedness		20
excellent	Sophistication		23	famous	Sophistication		19

Items	Categories		Freq
beautiful	Sophistication	**Castles**	148
amazing	Excitement		134
stunning	Sophistication		110
top	competence		84
impressive	Excitement		71
magnificent	Sophistication		63
nice	sincerity		54
huge	Competence		46
complex	Ruggedness		31
royal	Sophistication		25

Items	Categories		Freq
beautiful	Sophistication	**Points of Interest & Landmarks**	83
nice	sincerity		50
amazing	Excitement		47
impressive	Excitement		30
top	competence		28
local	sincerity		24
ancient	sincerity		22
unique	Excitement		22
stunning	Sophistication		20
free	Excitement		17

Items	Categories		Freq
amazing	Excitement	**Observation Decks & Tower Bridge**	148
complex	Ruggedness		134
beautiful	Sophistication		110
ancient	sincerity		84
nice	sincerity		71
top	competence		63
impressive	Excitement		54
fascinating	Sophistication		46
unique	Excitement		31
magnificent	Sophistication		25

The second group, 'Historic Walking Areas', 'Historic Sites & Geologic Formations', 'Historic Sites' and 'Historic Sites & Neighborhoods' was best described by Excitement in items such as 'amazing', 'impressive', 'peaceful', 'unique' and 'free'. Aaker (1997) described Excitement items in terms of social activities, whereas Hassan *et al.* (2021) linked these items to intrinsic aspects of WH. These items can be best referred to as the engagement with social activities related to visitor experience within historic cities. The third group, 'Observation Decks & Tower & Bridges', 'Architectural Buildings & Museums', 'Religious Sites' and 'Monuments & Statues & Government Buildings' were most frequently described by Competence, with items such as 'huge', 'complete', 'top', 'great', and 'outstanding' and 'protected'. Aaker (1997) linked Competence to responsibility, security, and dependability and Hassan *et al.* (2021) related this category to the intrinsic aspects of WHSs. Moreover, the items of this group express the concept of integrity referring to the sense of protecting WHSs (Baral *et al.*, 2017; Khalaf, 2020). Hence, the items attributed to the fourth attraction group show to a certain degree how this group of attractions enjoys a prestige and protection status, expressed as 'outstanding' and 'protected'.

The fourth group of 'Ancient Ruins', 'Architectural Buildings', 'Caverns & Caves' and 'Points of Interest & Landmarks' were frequently attributed to Sincerity, with items such as 'original', 'ancient', 'authentic', 'local', and 'nice'. For Aaker (1997), Sincerity referred to items carrying the meanings of warmth and acceptance; however, Hassan *et al.* (2021) linked them to intrinsic aspects of WH, with the items referring to the authenticity encountered in most ancient ruins. In cultural heritage studies, the concept of authenticity relates to the visitor's desire to establish the impression of genuineness through the consumption of cultural heritage (Atasoy & Eren, 2023; L. Yang *et al.*, 2023). Although this study interpreted each group of WH cultural attraction types with reference to the most common WH category attributed to a specific attraction type, these attraction types also include items attributed from other WH categories, however these are less frequent.

4.4 World Heritage cultural attraction types and country personality category positioning

Various relationships between and within WH attraction types and WH country personality categories were confirmed, based on CA. In this regard, the CA shown in Figure 3 demonstrates the relationships between several WH cultural types and their distributions in specific countries, as well as WH dictionary categories, as X^2 was 1183.818 with p-value 0.0001; df 84. These correlations shown in the two-

dimensional CA map (Figure 3), are the most used in BP investigations (Hassan *et al.*, 2021; Pitt *et al.*, 2007; Rojas-Méndez & Hine, 2016).

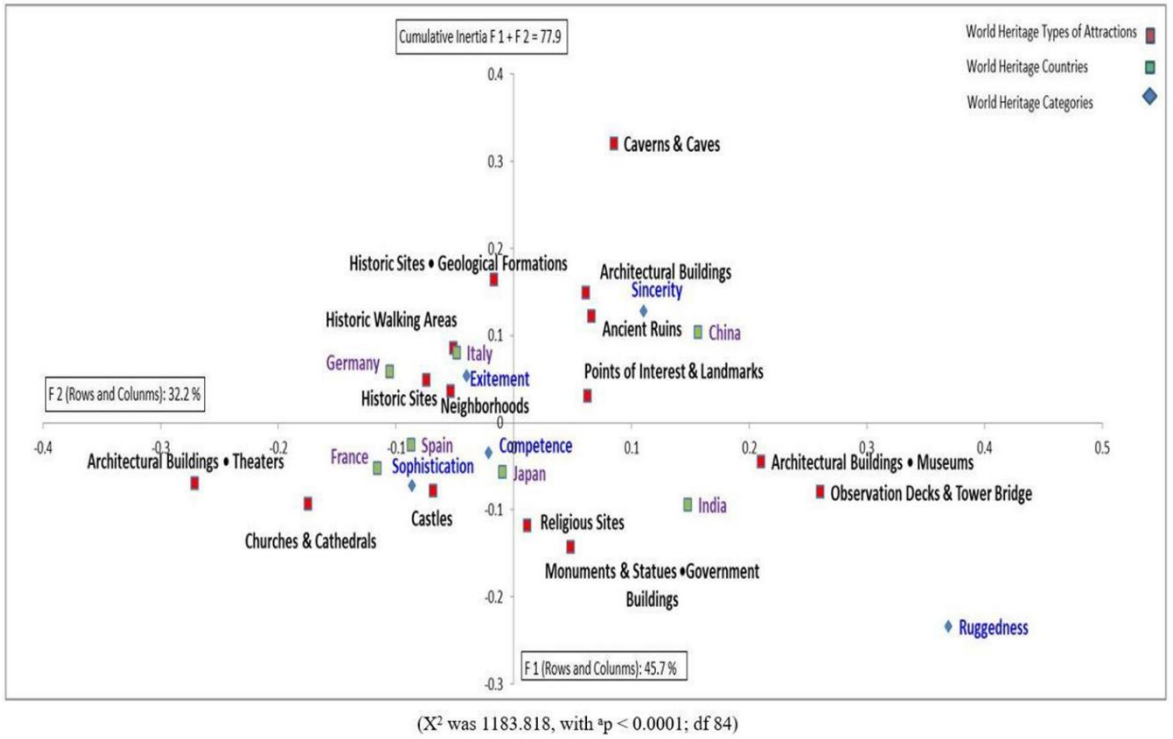


Figure 3. *World Heritage cultural types and distribution of personality categories on TripAdvisor. Own work.*

4.4.1 World Heritage country positioning

As shown in Figure 3, the first dimension of the CA map illustrates that European countries were grouped together on the left side of the map to a certain extent, whereas Asia and the Pacific, China and India were grouped together on the right side. Although Japan was located on the left, but close to the dividing line. This indicates that European WHSs may share certain attribution similarities, as is also the case for Asia and the Pacific countries. However, there was a significant difference between the WH category positioning of some of the European countries and Asian and Pacific countries. To better analyze WHS positioning, detailed accounts of distances can be interpreted from Table 2, which presents the coordinates of rows (WH cultural types and WH countries).

The coordinates of the CA map's first dimension demonstrated that the WHSs of France with coordinates (-.344) and China with coordinates (.517) were completely different due to their coordinate distances (Table 2). Whereby visitors to WHSs in France related sites to Sophistication, visitors in China related them to Sincerity. The WHSs in Germany and India were located far from each other, with Germany located near Excitement, and India between Competence and Ruggedness. In contrast, the WHSs of Italy and Germany were positioned close to each other and both frequently ascribed Excitement. The WHSs of France and Spain, which were quite closely located, were frequently attributed Sophistication and Competence. The WHSs of China and Japan were very close to Sincerity and Competence, and India and Japan close to Competence and Ruggedness. The second-dimension coordinates demonstrated that the WHSs of Germany, Italy and China were close to each other and described by Excitement and Sincerity. Germany and Italy were most attributed Excitement, whereas

for China, the most attributed was Sincerity. This dimension also grouped together Spain, France, Japan, and India under Sophistication and Competence, but far from Ruggedness. WHSs in France and Spain were most attributed Sophistication, and for Japan this was Competence.

Table 2. *Symmetrical normalization of World Heritage attractions and country personality categories*

Principle Coordinate Rows				
	Dimension 1		**Dimension 2**	
Attractions	**Coord**	**Corr**	**Coord**	**Corr**
Caverns & Caves	-1.259	0.082	0.508	0.016
Monuments & Statues - Government Buildings	0.092	0.001	0.412	0.015
Historic Sites & Neighborhoods	-0.094	0.001	-0.200	0.006
Religious Sites	-0.036	0.001	0.359	0.093
Historic Walking Areas	-0.019	0.000	-0.394	0.052
Churches & Cathedrals	-0.591	0.158	0.205	0.023
Architectural Buildings & Museums	0.547	0.047	0.316	0.019
Architectural Buildings & Theaters	-0.801	0.049	-0.002	0.000
Historic Sites. Ancient Ruins	0.238	0.022	-0.288	0.039
Architectural Buildings	0.246	0.027	-0.382	0.079
Historic Sites & Geological Formations	0.329	0.040	-0.751	0.249
Historic Sites	-0.227	0.012	-0.141	0.005
Castles	-0.226	0.023	0.162	0.014
Observation Decks &Tower Bridge	0.638	0.137	0.503	0.102
Points of Interest & Landmarks	0.218	0.009	-0.077	0.001
Counties				
India	0.366	0.125	0.387	0.166
Japan	-0.017	0.000	0.104	0.006
France	-0.344	0.043	0.048	0.001
Italy	-0.083	0.004	-0.287	0.052
Spain	-0.280	0.080	0.035	0.001
Germany	-0.268	0.042	-0.247	0.042
China	0.517	0.097	-0.213	0.020
Active Total		**1.000**		**1.000**

Regarding future research on this topic, it is worth highlighting that the relationship between the WH categories observed previously in Figure 1 could be better investigated by analysing the CA map Figure 3, and Table 3 the coordinates of columns. In this regard, a relationship between the distributions of items Sophistication, Excitement and Competence is observed. This is illustrated in Figure 3, which shows that these three categories are positioned around each other near the centre of the CA map. Furthermore, the first dimension in Table 3 shows that Competence (with coordinates -.145) is the nearest point to Excitement (-.137). The second dimension shows that Sophistication (.120) is the nearest point to Excitement (-.125). Overlapping between specific variables or the distance between them on the CA map, as in the case of these three WH categories, demonstrates that specific items in these categories may share certain linguistic similarities (Bakarov, 2018). This phenomenon is explained

through traditional BP methods; for example, some studies found that certain items from Sophistication and Competence are reorganized in a different way than they were categorized by Aaker (1997) (Davies *et al*., 2018). This is known as item shifting (Hosany *et al*., 2006), whereby Caprara *et al*. (2001) were among the first to explain the fact that BP items have cultural contextual meanings that may lead to item shifting. In the context of WH categories, category correlations mean that when describing WHSs, certain items in specific categories are frequently attributed and correlated. Bosnjak *et al*. (2007) referred to the need for further investigation on item shifting. To this end, further research on the centrality of items is recommended, for example, their density and interlinking, as defined in Table 1 (Rojas-Méndez & Hine, 2016).

Table.3 *Symmetrical normalization of World Heritage personality categories*

Principle Coordinate Columns				
WH categories	**Dimension 1**		**Dimension 2**	
	Coord	Corr	Coord	Corr
Competence	-0.145	0.024	0.153	0.031
Excitement	-0.137	0.043	-0.125	0.043
Ruggedness	0.867	0.338	1.025	0.563
Sincerity	0.472	0.397	-0.385	0.315
Sophistication	-0.264	0.198	0.120	0.049

To conclude, the CA map generally demonstrated that the WHSs of European countries shared similarities in that the four countries were located near each other and near the WH categories Excitement, Sophistication and Competence. Even though the WHSs of European countries shared certain similarities overall, specific differences were also noted. In this regard, the WHSs of Germany and Italy were frequently described as Excitement, while France and Spain were ascribed Sophistication. In contrast to WHSs in European countries, the CA map showed that WHSs in China, India and Japan had a somewhat similar distribution of WH categories. These countries differed from European countries, however, in that they were attributed Sincerity, Competence and Ruggedness. Here, China was the most attributed with Sincerity, Japan with Competence, and India was located between Competence and Ruggedness. Furthermore, a relationship between the WH categories Sophistication and Excitement was also observed. To this end, the WH personality category distributions for the seven countries may aid destination managers in these countries assess competitive values.

Furthermore, to investigate the generalizability of WH category distributions, this study could be compared with the findings of Hassan *et al*. (2021), who measured the overall positioning of the WH brand, as well as ten WHSs in each of the following countries: France, Germany, Italy, and Spain. In the current study, the authors considered each WHS as a unit for analysis, expanded the reviews to include China, Japan and India, and utilized both types of cultural attraction and each country as units. According to Hassan *et al*. (2021), the majority of WHSs in German and Spanish are similarly positioned towards Competence, whereas those in France and Italy are positioned towards Excitement and Sincerity. In contrast, our study found that WHSs in France and Spain were attributed with Sophistication, and those in Germany and Italy were frequently described with Excitement. The differences between these results may be because Hassan *et al*. (2021) chose representative samples (ten WHSs) for each country. Findings in the present study indicate that a country's positioning may be more accurate as the WH countries were measured as individual units and all WHS reviews related to each country were included in the analysis: France (39), Germany (44), Italy (50) and Spain (42).

4.4.2 Positioning of types of World Heritage cultural attractions

Figure 3 and Table 2 show types of WH attractions, classified into four groups based on the WH personality category distributions. 'Churches & Cathedrals', 'Architectural Buildings & Theaters' and 'Castles' were grouped together near Sophistication. This indicates that these three types of attractions shared similarities in that they were frequently ascribed Sophistication. 'Historic Walking Areas', 'Historic Sites & Geologic Formations', 'Historic Sites', and 'Historic Sites & Neighborhoods' were found near each other on the map, and were frequently attributed with Excitement. The attractions type 'Observation Decks & Tower & Bridges', 'Architectural Buildings & Museums', 'Religious Sites' and 'Monuments & Statues & Government Buildings' were grouped and attributed with Competence, and to a lesser extent Ruggedness. 'Ancient Ruins', 'Architectural Buildings', 'Caverns & Caves' and 'Points of Interest & Landmarks' were grouped together around Sincerity.

Furthermore, several observations were made from the CA map that raise concerns. Firstly, the CA map demonstrated that distances exist between specific WH cultural types. For example, on the coordinates of rows (Table 2) on dimension two 'Historic Sites' with coordinate (-.200) and 'Historic Sites & Neighborhoods' with coordinate (-.141) were mapped close to each other and near Excitement. The same occurred with 'Ancient Ruins' and 'Architectural Buildings', which were attached. Also found nearby were 'Religious Sites' and 'Monuments & Statues & Government Buildings'. Moreover, 'Observation Decks & Tower & Bridges' and 'Architectural Buildings & Museums' were connected to a certain extent. This indicates that the attached WH cultural types on the CA map could be attributed with similar items. Secondly, the CA map (Figure 3) also illustrated that specific WH cultural types were closely connected to specific WH categories. This indicates that the density of WH category personality items (Rojas-Méndez & Hine, 2016) is frequently attributed to the WH cultural type. For instance, 'Historic Sites' and 'Historic Sites & Neighborhoods' were explicitly attributed with Excitement. In contrast, some cultural attractions were located far from any specific WH personality categories. This means that the distribution of WH personality items was infrequent or not explicitly biased to specific WH dimensions such as 'Caverns & Caves' or 'Observation Decks & Tower Bridges' (Pitt *et al.*, 2007).

To this end, the CA map may provide a better understanding of the relationship between WHSs of countries and distributions of categories of WH cultural personality types. Figure 3 demonstrated that certain WH cultural types, WHSs of countries and WH categories were linked to each other. For example, the group of 'Architectural Buildings & Churches & Cathedrals', 'Architectural Buildings & Theaters', and 'Castles' were better located near France and Spain where both were attributed to Sophistication and Excitement. The 'Historic Walking Areas', 'Historic Sites & Geologic Formations', 'Historic Sites', and 'Historic Sites & Neighborhoods' were attached to Germany and Italy, where they were frequently attributed to Excitement. The attraction types 'Observation Decks & Tower & Bridges', 'Architectural Buildings & Museums', 'Religious Sites' and 'Monuments & Statues & Government Buildings' were grouped near India and Japan and attributed with Competence, and to a certain extent, Ruggedness. In addition, 'Ancient Ruins', 'Architectural Buildings', 'Caverns & Caves' and 'Points of Interest & Landmarks' were grouped near China and attributed with Sincerity. To determine the items most frequently attributed by visitors regarding the centrality of the attraction type linked to specific countries, it may be helpful to consider the relationship between attraction type, countries, and personality categories. Thus, this may provide destination managers with additional information for determining promotion materials that highlight the type of attraction it is best to focus on in their country.

5. Discussions and conclusions

This is the first study to extend the BP lexical dictionary and use it to measure WH cultural types, providing a detailed account of the relationships between WH cultural types, the WHSs of seven

countries and the WH categorical dictionary (Hassan *et al*., 2021). Findings from the study have several theoretical and practical implications related to the WH brand and BP construct.

5.1 World Heritage theoretical contributions

The analysis of the WH cultural types and WH countries' personality categories conducted in this study may strengthen tourism marketing organizations' knowledge of WHSs. Scholars acknowledge that understanding visitor perceptions of WHSs such as WH personality category items may contribute to boosting WH perceived net brand equity (Poria *et al*., 2011). Additionally, the lack of understanding of WH attributions and their application to tourism promotion prompted some scholars to call for an update on WH knowledge for destination managers (Hall & Piggin, 2002; Marcotte & Bourdeau, 2012). Thus, communicating visitor perceptions of the intangible attributions of WHSs may influence the emotions and destination preferences of tourists (Lacher *et al*., 2013) such as increased loyalty (Poria *et al*., 2011). According to Poria *et al*. (2011), the visitor perspective was not taken into account when determining WHS designation criteria, stating that the term 'Heritage', for example, was missing from UNESCO's criterion descriptor. The aims of the current study were to fill these gaps by defining WH intangible visitor perceived attributes, categorizing types of WH cultural attractions, and differentiating between these and countries Overall, it provides destination managers with more information about visitor perceived attributions of WHSs.

Regarding the WHSs category distributions, this study found that the 261 WHSs in seven countries are frequently related to Sophistication, Excitement, Sincerity, and Competence, but rarely to Ruggedness. This supports the conclusions reached by Hassan *et al*. (2021) on overall WH personality category distributions. However, the findings in this research included more WHSs visitor reviews, which were related to seven countries in different UNESCO WH geographical locations, than the study by Hassan *et al*. (2021). These results agree with earlier research that BP categories were found to incorporate culturally relevant categories. In their analysis of BP category items from earlier studies, Davies *et al*. (2018) found that the four categories analyzed in their study also appeared in the previous BP studies, even under different names. In contrast, Ruggedness, which is thought to be specific to a particular culture, appeared less frequently in relation to WHSs.

The present study concurred with Hassan *et al*. (2021) regarding overall WH category distributions; however, the percentage of distribution in our study differed. This difference can be explained by the fact that the present study included a larger number of visitor reviews than Hassan *et al*. (2021) for each WH country. Therefore, WH dimension distributions can be described as dynamic, depending on the variation in the number of reviews. This study encourages WHS managers to monitor their WH personality categories by updating visitor user-generated reviews of their sites. Furthermore, managers should note that WH category distributions may differ, depending on the scale of the heritage brand. For instance, visitor reviews can be analyzed in relation to one WHS, a group of WHSs, a set of WHSs representing a particular country or destination, or a type of attraction, as is the case in this study. This is useful for destination managers when designing WH marketing strategies, as it enables them to describe WHSs more specifically.

When analysing the distribution of WH categories within the fifteen WH cultural types, it was found that the present study supports the previous argument regarding the dynamism of BP categories. The more BP is explored within the micro-element category, the more varied the personality categories are. The distributions of WH categories for the seven countries in Figure 1 demonstrated consistency among the WH personality distributions with slight differences between the seven countries, as also found by Hassan *et al*. (2021). In contrast, Figure 2 illustrates that the distributions of WH categories for the fifteen cultural WH types were mostly different among these types of cultural WHSs. This present study analyses cultural types of WH as micro-elements of destination attractions, providing more detailed

information about BP category distribution. However, future research should focus more specifically on investigating BP categories as a micro-element of brand or product categories.

For the purpose of categorizing WH cultural types from the standpoint of the tourist attraction system, we identified four groupings for fifteen types of cultural attractions, based on visitor perceptions taken from visitors' experience reviews on TripAdvisor (Leiper, 1990; Lew, 1987). Empirically, this grouping was based on the level of similarity between intangible meanings attached to WHSs expressed in visitor reviews. Within the tourist attraction system, Lew (1987) and Leiper (1990) proposed that three elements were needed to analyze tourist attractions, one of which is visitor perception. Furthermore, this study relates the four types of WH attractions to their cognitive meanings. As a result, a particular WH cultural type can be best represented by the WH category that is most commonly linked with the distribution of its intangible meanings (Figure 3). Our conclusions agree that the tourist attraction system can aid the development of WH categorization, and fill gaps reported by scholars regarding classifying and defining tourism attractions (Botti *et al.*, 2008; Krešić & Prebežac, 2011; Richards, 2002). Furthermore, after interpreting the four groups of WH attraction meanings, findings showed that visitors attributed WHSs with items associated with heritage aesthetics, which are linked to items of Sophistication, and the concept of authenticity, which is linked to items of sincerity. Misiura (2006) explained that one of the reasons behind the increase in demand for heritage tourism is the fact that visitors seek something more 'authentic'. Thus, when visitors perceive authenticity at WHSs this can predict visitor satisfaction (Nguyen & Cheung, 2016) because perceived authenticity significantly influences the quality of the experience (Genc *et al.*, 2022). This may also increase the economic value of WHSs as it increases visitors' willingness to visit (Poria *et al.*, 2011), pay extra entrance fees (Wuepper, 2017), and may motivate visitor intention to visit cultural destinations to a certain extent (Atasoy & Eren, 2023). Moreover, aesthetic appreciation was found to be a prominent element in tourism destinations as it influences visitor satisfaction and experience. Thus, for WHSs, perceived aesthetics may also enhance loyalty (L. Yang *et al.*, 2023) to cultural destinations (Malvica *et al.*, 2022).

5.2 Brand personality theoretical contributions

The present study agrees with Poria *et al.* (2011) in that general marketing concepts such as BP should be transferred and applied to tourism. In this regard, Prados-Peña, Crespo-almendros, and Porcu (2022) mentioned that the growing interest in heritage enables destination managers to apply marketing strategies for tangible product brands. Therefore, it can be concluded that Hassan *et al.*'s (2021) WH categories can be used by destination managers to differentiate between WHSs, in addition to tangible attributes. BP is designed to encourage consumer preference based on symbolic attributes by eliciting consumer emotion (Aaker, 1997). As a result, it is seen as a crucial instrument for building brand equity and a major technique for establishing advertising communications (Aaker, 1997; Saeed *et al.*, 2021). Thus, using WH BP items identified from visitors' evaluations of experiences may add credibility and foster potential visitor preference towards WH destinations. Visitor experience is perceived as an important factor influencing brand preference, credibility and satisfaction (Prados-Peña & Del Barrio-García, 2021). Thus, understanding visitor experience of attributes linked to WH may influence WH brand equity (Prados-Peña & Del Barrio-García, 2021).

This study shows that the lexical BP approach applied to WHSs demonstrates its ability to differentiate between WH countries and types of attractions. Notably, this study concurred with other studies (Hassan *et al.*, 2021; Rojas-Méndez & Hine, 2016) in that CA is prominently used to analyze the various relationships between several variables. Transforming the WHSs' intangible meanings into numerical values enabled the CA to simply visualize the WH positioning of cultural types and countries (Greenacre, 2017). This therefore assisted in exploring differences and similarities between WH types and countries and their distribution related to the WH categories. Thus, destination managers may

extend this study method in order to analyze their WHSs, or the WH cultural type personality category distributions, and thus, better describe and market their WHS (Pitt *et al.*, 2007). Furthermore, these findings were obtained from visitor perceptions, which UNESCO experts may find useful to include in WHS descriptions (Poria *et al.*, 2011). Overall, the BP lexical methods employed in this study may have several empirical and practical implications.

5.3 Managerial implications

Designing a WHS BP strategy may help destination managers better differentiate between WHSs (Pitt *et al.*, 2007). In the particular case study in this research, understanding the WH personality category distributions for the seven countries chosen may help a specific country analyze the competitive values of WHSs in comparison to other countries. For instance, we showed that WHSs in Europe shared several similarities which were frequently described by the categories Sophistication and Excitement. In contrast, WHSs in Asia and the Pacific had certain similarities between them, but were distinguished from WHSs in Europe as being frequently described by Sincerity, Competence, and Ruggedness, as shown in the CA map (Figure 3). Moreover, it was clear that visitors frequently attributed specific WH categories to particular WH countries. Hence, destination managers may want to emphasise the most frequent WH categories given to their WHSs over the least frequent ones, and highlight how those categories differ from those attributed to other countries. For instance, Chinese WHSs are best described with Sincerity, Japanese and Indian WHSs with Competence, French and the Spanish WHSs with Sophistication, and German and the Italian WHSs with Excitement. The same is true for the fifteen different cultural attraction types, which were categorized into four groups. The CA map (Figure 3) made it clear that a certain set (group) of WH types was commonly related to a specific WH category. The CA map (Figure 3) may also provide destination managers with more information which can help them choose marketing materials that highlight the type of attraction in their country it would be most appropriate to focus on.

Furthermore, this study encourages destination managers to improve the way they convey the intangible attributions of WHSs. For instance, the first category, which includes the majority of Historic Cities, can be advertised through Excitement items linked to social engagement. On the other hand, the second category, which includes ancient ruins, can be marketed through Sincerity, which agrees with authenticity. The third category, which includes theatres, bridges, and museums, can be better delivered through Competence items, which are attributed to the concept of integrity. Sophistication best describes most contents of churches and castles, and the aesthetics of WHSs. Furthermore, the density of personality items is shown through the centrality of particular items assigned to particular types of WH attractions i.e., the prominence of particular items within various WH cultural type categories distributions (Table 1). This can also be consulted by destination managers. It is worth highlighting that conveying WHS personality items may enhance communication content describing WHSs and that providing thoughtfully planned heritage content that may attract tourists to visit the destination as a whole, rather than simply a particular WHS (McKercher, 2002). McKercher (2002) also emphasised the significance of visitors' prior understanding of perceived meanings of cultural attractions. Botti *et al.* (2008) added that the length of time spent at attractions could depend on the amount of information a visitor had gained before visiting.

This study is limited by the fact that it only examined WHSs in selected seven countries, and the English-language TripAdvisor experience reviews. Therefore, studying WH categories for WHSs on other tourism social networks or listed on TripAdvisor in other languages may enhance the identification of WH personality categories. The study also limits its analysis of the overall WH category distributions to those defined by Hassan *et al.* (2021). Table 2 shows the top ten most frequent items visitors assigned to the fifteen cultural types. To improve the design of the WH BP promotional approach, it may be useful to analyze the distribution of WHSs and types of cultural attractions in

relation to the centrality of particular items within WH categories. More research is needed on the effects of particular WH personality categories on visitor variables, e.g., intent to visit or return, which may advance our understanding of WH. Furthermore, in the study on self-congruity in marketing (Sirgy, 1986) and DP, academics acknowledge destinations where there is a match between brands and self-image are particularly appealing for visitors. Kumar and Nayak (2018) also thought that a crucial factor influencing visitor preferences for a destination was self-congruity. Thus, it would be helpful to identify visitor segments based on visitor reviews where WHSs are described in relation to WH BP categories. For instance, Rojas-Méndez *et al.* (2019) used cluster analysis of BP categories to determine the type of tourists visiting Japan.

References

Aaker, J. (1997). Dimensions of brand personality. *Journal of Marketing Research*, *34*(3), 347–356. https://doi.org/10.2139/ssrn.945432

Aaker, J., Benet-Martinez Verónica, & Jordi, G. (2001). Consumption symbols as carriers of culture: A study of Japanese and Spanish brand personality constructs. *Journal of Personality and Social Psychology*, *81*(3), 492–508. https://doi.org/10.1037/0022-3514.81.3.492

Adie, B. A. (2017). Franchising our heritage: The UNESCO World Heritage brand. *Tourism Management Perspectives*, *24*, 48–53. https://doi.org/10.1016/j.tmp.2017.07.002

Adie, B. A., & Hall, C. M. (2016). Who visits World Heritage? A comparative analysis of three cultural sites. *Journal of Heritage Tourism*, *12*(1), 67–80. https://doi.org/10.1080/1743873X.2016.1151429

Adie, B. A., Hall, C. M., & Prayag, G. (2017). World Heritage as a placebo brand: A comparative analysis of three sites and marketing implications. *Journal of Sustainable Tourism*, *9582*(August), 1–17. https://doi.org/10.1080/09669582.2017.1359277

Ahmad, A., & Thyagaraj, K. S. (2014). Applicability of brand personality dimensions across cultures and product categories: A review. *Global Journal of Finance and Management*, *6*(January 2014), 9–18.

Allport, G., & Odbert, H. (1936). psnTraitNames_Allport.pdf. *Psychological Monographs*.

Alvarez-Sousa, A., & Prados, J. L. P. (2020). Visitor management in world heritage destinations before and after covid-19, Angkor. *Sustainability*, *12*(23), 1–44. https://doi.org/10.3390/su12239929

Arezki, R., Cherif, R., & Piotrowski, J. (2009). Tourism specialization and economic development: evidence from the UNESCO World Heritage List. *IMF Working Paper*. https://doi.org/10.5089/9781451873238.001

Atasoy, F., & Eren, D. (2023). Serial mediation: Destination image and perceived value in the relationship between perceived authenticity and behavioural intentions. *European Journal of Tourism Research*, (33,3309), 1–33. https://doi.org/10.54055/ejtr.v33i.2528

Baral, N., Hazen, H., & Thapa, B. (2017). Visitor perceptions of World Heritage value at Sagarmatha (Mt. Everest) National Park, Nepal. *Journal of Sustainable Tourism*, *9582*(August), 1–19. https://doi.org/10.1080/09669582.2017.1291647

Bosnjak, M., Bochmann, V., & Hufschmidt, T. (2007). Dimensions of brand personality attributions: A person-centric approach in the German cultural context. *Social Behavior and Personality: An International Journal*, *35*(3), 303–316. https://doi.org/10.2224/sbp.2007.35.3.303

Botti, L., Peypoch, N., & Solonandrasana, B. (2008). Time and tourism attraction. *Tourism Management*, *29*(3), 594–596. https://doi.org/10.1016/j.tourman.2007.02.011

Buckley, R., Shekari, F., Mohammadi, Z., Azizi, F., & Ziaee, M. (2020). World Heritage tourism triggers urban–rural reverse migration and social change. *Journal of Travel Research*, *59*(3), 559–572. https://doi.org/10.1177/0047287519853048

Carbone, F. (2016). An insight into cultural heritage management of tourism destinations. *European Journal of Tourism Research*, *14*, 75–91. https://doi.org/10.54055/ejtr.v14i.244

Carvalho, D., Demo, G., & Scussel, F. (2021). The future of brand personality: A systematic review and research agenda. *Revista Psicologia: Organizações e Trabalho* [Psychology: Organizations and Work Journal], *21*(3), 1585–1593. https://doi.org/10.5935/rpot/2021.3.20962

Cellini, R., & Cuccia, T. (2016). Unesco sites As public goods: comparative experiences in Italy. *Revista de Economia Contemporânea* [Journal of Contemporary Economics], *20*(3), 553–569. https://doi.org/10.1590/198055272037

Chhabra, D. (2010). *Sustainable marketing of cultural and heritage tourism*. *Journal of Heritage Tourism* (Vol. 6). https://doi.org/10.1080/1743873X.2011.558756

Churchill, G. A. (2006). A paradigm for developing better measures of marketing constructs. *Journal of Marketing Research*, *16*(1), 64. https://doi.org/10.2307/3150876

Curiskis, S. A., Drake, B., Osborn, T. R., & Kennedy, P. J. (2020). An evaluation of document clustering and topic modelling in two online social networks: Twitter and Reddit. *Information Processing and Management*, *57*(2), 102034. https://doi.org/10.1016/j.ipm.2019.04.002

D'Astous, A., & Boujbel, L. (2007). Positioning countries on personality dimensions: Scale development and implications for country marketing. *Journal of Business Research*, *60*(3), 231–239. https://doi.org/10.1016/j.jbusres.2006.11.005

Davies, G., Rojas-Méndez, J. I., Whelan, S., Mete, M., & Loo, T. (2018). Brand personality: theory and dimensionality. *Journal of Product & Brand Management*, *27*(2), 115–127. https://doi.org/10.1108/JPBM-06-2017-1499

De Ascaniis, S., & Gretzel, U. (2013). Communicative functions of Online Travel Review titles. A pragmatic and linguistic investigation of destination and attraction OTR titles. *Studies in Communication Sciences*, *13*(2), 156–165. https://doi.org/10.1016/j.scoms.2013.11.001

Del Barrio-García, S., & Prados-Peña, M. B. (2019). Do brand authenticity and brand credibility facilitate brand equity? The case of heritage destination brand extension. *Journal of Destination Marketing and Management*. https://doi.org/10.1016/j.jdmm.2019.05.002

Denny, M. J., & Spirling, A. (2017). Text Preprocessing For unsupervised learning: Why it Matters, When It Misleads, and what to do about it. *Political Analysis*, *26*(2), 168–189. https://doi.org/10.1017/pan.2017.44

Ekinci, Y., & Hosany, S. (2006). Destination personality: An application of brand personality to tourism destinations. *Journal of Travel Research*, *45*(2), 127–139. https://doi.org/10.1177/0047287506291603

Fang, B., Ye, Q., Kucukusta, D., & Law, R. (2016). Analysis of the perceived value of online tourism reviews: Influence of readability and reviewer characteristics. *Tourism Management*, *52*, 498–506. https://doi.org/10.1016/j.tourman.2015.07.018

Genc, V., & Gulertekin Genc, S. (2022). The effect of perceived authenticity in cultural heritage sites on tourist satisfaction: the moderating role of aesthetic experience. *Journal of Hospitality and Tourism Insights*. https://doi.org/10.1108/JHTI-08-2021-0218

Gkritzali, A., Gritzalis, D., & Stavrou, V. (2018). Is Xenios Zeus still alive? Destination image of Athens in the years of recession. *Journal of Travel Research*, *57*(4), 540–554. https://doi.org/10.1177/0047287517705225

Goldberg, L. (1992). The development of markers for the Big-Five factor structure. *Psychological Assessment*, *4*(1), 26–42. https://doi.org/10.1037/1040-3590.4.1.26

Gretzel, U., Yoo, K.H. (2008). Use and impact of online travel reviews. In: O'Connor, P., Höpken, W., Gretzel, U. (eds) *Information and Communication Technologies in Tourism 2008* (pp.36-46). Springer. https://doi.org/10.1007/978-3-211-77280-5_4

Ha, S., & Yang, Z. (2019). Evaluation for landscape aesthetic value of the natural World Heritage site. *Environmental Monitoring and Assessment*, *191*(8). https://doi.org/10.1007/s10661-019-7607-9

Hall, C. M., & Piggin, R. (2002). Tourism business knowledge of World Heritage sites: A New Zealand case study. *International Journal of Tourism Research*, *4*, 401–411. https://doi.org/10.1002/jtr.391

Hassan, M. A. E., Zerva, K., & Aulet, S. (2021). Brand personality traits of world heritage sites: Text mining approach. *Sustainability*, *13*(11), 6142. https://doi.org/10.3390/su13116142

Hlee, S., Lee, H., & Koo, C. (2018). Hospitality and tourism online review research: A systematic analysis and heuristic-systematic model. *Sustainability*, *10*(4), 1141. https://doi.org/10.3390/su10041141

Hosany, S., Ekinci, Y., & Uysal, M. (2006). Destination image and destination personality: An application of branding theories to tourism places. *Journal of Business Research*, *59*(5), 638–642. https://doi.org/10.1016/j.jbusres.2006.01.001

Kaplan, M. D., Yurt, O., Guneri, B., & Kurtulus, K. (2010). Branding places: Applying brand personality concept to cities. *European Journal of Marketing*, *44*(9), 1286–1304. https://doi.org/10.1108/03090561011062844

Keller, K. L. (1993). Conceptualizing and measuring, brand managing customer-based Equity. *Journal of Marketing*, *57*(1), 1–22. https://doi.org/10.2307/1252054

Khalaf, R. W. (2020). The implementation of the UNESCO world heritage convention: Continuity and compatibility as qualifying conditions of integrity. *Heritage*, *3*(2), 384–401. https://doi.org/10.3390/heritage3020023

Kim, Hany, Stepchenkova, S., & Yilmaz, S. (2019). Destination extension: A faster route to fame for the emerging destination brands? *Journal of Travel Research*, *58*(3), 440–458. https://doi.org/10.1177/0047287518754407

Kim, Hyounggon, Oh, C. O., Lee, S. S., & Lee, S. S. (2018). Assessing the economic values of World Heritage sites and the effects of perceived authenticity on their values. *International Journal of Tourism Research*, *20*(1), 126–136. https://doi.org/10.1002/jtr.2169

King, L. M., & Halpenny, E. A. (2014). Communicating the World Heritage brand: Visitor awareness of UNESCO's World Heritage symbol and the implications for sites, stakeholders and sustainable management. *Journal of Sustainable Tourism*, *22*(5), 768–786. https://doi.org/10.1080/09669582.2013.864660

Kirilenko, A. P., Stepchenkova, S. O., & Hernandez, J. M. (2019). Comparative clustering of destination attractions for different origin markets with network and spatial analyses of online reviews. *Tourism Management*, *72*(January), 400–410. https://doi.org/10.1016/j.tourman.2019.01.001

Klarić, Z. (2017). Bottom-up approach to classification of tourist attractions: A case study of Croatia. *Tourismos* [Tourism], *12*(1), 1–21. https://doi.org/10.26215/tourismos.v12i1.510

Krešić, D., & Prebežac, D. (2011). Index of destination attractiveness as a tool for destination attractiveness assessment. *Tourism*, *59*(4), 497–517.

Kumar, V., & Nayak, J. K. (2018). Destination Personality: Scale development and validation. *Journal of Hospitality and Tourism Research*, *42*(1), 3–25. https://doi.org/10.1177/1096348014561027

Lacher, R. G., Oh, C. O., Jodice, L. W., & Norman, W. C. (2013). The Role of heritage and cultural elements in coastal tourism destination preferences: A choice modeling-based analysis. *Journal of Travel Research*, *52*(4), 534–546. https://doi.org/10.1177/0047287512475215

Leiper, N. (1990). Tourist attraction systems. *Annals of Tourism Research*, *17*(3), 367–384. https://doi.org/10.1016/0160-7383(90)90004-B

Lew, A. A. (1987). A framework of tourist attraction research. *Annals of Tourism Research*, *14*(4), 553–575. https://doi.org/10.1016/0160-7383(87)90071-5

Lieven, T. (2017). How to create reproducible brand personality scales. *Journal of Brand Management*, *24*(6), 592–608. https://doi.org/10.1057/s41262-017-0058-0

Malvica, S., Palumbo, L., & Cazzato, V. (2022). I feel like I am in that place and I would like to see more : Aesthetic and embodiment components of tourist destination image. *Psychology of Aesthetics, Creativity, and the Arts*, *27*(2), 2008–2018. https://doi.org/https://doi.org/10.1037/aca0000509

Manrai, L. A., Manrai, A. K., & Gan, A. (2018). A cluster analysis of tourist attractions in Spain. *European Journal of Management and Business Economics*, *27*(3), 218–230. https://doi.org/10.1108/EJMBE-08-2017-0008

Marcotte, P., & Bourdeau, L. (2006). Tourists' knowledge of the UNESCO designation of World Heritage sites: The case of visitors to Quebec City. *International Journal of Arts Management*, *8*(2), 4–13.

Marcotte, P., & Bourdeau, L. (2012). Is the World Heritage label used as a promotional argument for sustainable tourism? *Journal of Cultural Heritage Management and Sustainable Development*, *2*(1), 80–91. https://doi.org/10.1108/20441261211223289

Mariani, M. M., & Guizzardi, A. (2020). Does designation as a UNESCO World Heritage site influence tourist evaluation of a local destination? *Journal of Travel Research*, *59*(1), 22–36. https://doi.org/10.1177/0047287518821737

Marine-Roig, E. (2019). Destination image analytics through traveller-generated content. *Sustainability*, *11*(12), 3392. https://doi.org/10.3390/su11123392

Marine-Roig, E. (2022). Content analysis of online travel reviews. In Z. Xiang, M. Fuchs, U. Gretzel, & W. Höpken (eds.), *Handbook of e-Tourism* (pp. 1-26). Springer. https://doi.org/10.1007/978-3-030-05324-6_31-1

Marine-Roig, E., & Anton Clavé, S. (2016). A detailed method for destination image analysis using user-generated content. *Information Technology and Tourism*, *15*(4), 341–364. https://doi.org/10.1007/s40558-015-0040-1

Marine-Roig, E., & Ferrer-Rosell, B. (2018). Measuring the gap between projected and perceived destination images of Catalonia using compositional analysis. *Tourism Management*, *68*(February), 236–249. https://doi.org/10.1016/j.tourman.2018.03.020

Mccrae, R. R., & Costa, P. T. (1987). Validation of the five-factor model of personality across instruments and observers. *Journal of Personality and Social Psychology*, *52*(1), 81–90. https://doi.org/10.1037/0022-3514.52.1.81

McKercher, B. (2002). Towards a classification of cultural tourists. *International Journal of Tourism Research*, *4*(1), 29–38. https://doi.org/10.1002/jtr.346

Mehraliyev, F., Cheng, I., Chan, C., & Kirilenko, A. P. (2022). Sentiment analysis in hospitality and tourism : A thematic and methodological review. *International Journal of Contemporary Hospitality Management*, *34*(1), 46–77. https://doi.org/10.1108/IJCHM-02-2021-0132

Misiura, S. (2006). *Heritage Marketing*. London: Elsevier Ltd.

Murphy, L., Benckendorff, P., & Moscardo, G. (2007). Destination brand personality: Visitor perceptions of a regional tourism destination. *Tourism Analysis*, *12*(5–6), 419–432. https://doi.org/10.3727/108354207783227948

Nguyen, T. H. H., & Cheung, C. (2016). Chinese heritage tourists to heritage sites: What are the effects of heritage motivation and perceived authenticity on satisfaction? *Asia Pacific Journal of Tourism Research*, *21*(11), 1155–1168. https://doi.org/10.1080/10941665.2015.1125377

Nian, S., Zhang, H., Mao, L., Zhao, W., Zhang, H., Lu, Y., … Xu, Y. (2019). How outstanding universal value, service quality and place attachment influences tourist intention towards World Heritage conservation: A case study of Mount Sanqingshan national park, China. *Sustainability*, *11*(12), 3321. https://doi.org/10.3390/su11123321

Papadimitriou, D., Apostolopoulou, A., & Kaplanidou, K. (Kiki). (2015). Destination personality, affective image, and behavioral intentions in domestic urban tourism. *Journal of Travel Research*, *54*(3), 302–315. https://doi.org/10.1177/0047287513516389

Park, S., & Santos, C. A. (2017). From translocal to transnational: WHS articulations. *Annals of Tourism Research*, *64*, 102–113. https://doi.org/10.1016/j.annals.2017.02.003

Paschen, J., Pitt, L., Kietzmann, J., Dabirian, A., & Farshid, M. (2017). The brand personalities of brand communities: An analysis of online communication. *Online Information Review*, *41*(7), 1064–1075. https://doi.org/10.1108/OIR-08-2016-0235

Poria, Y., Reichel, A., & Cohen, R. (2011). World Heritage Site—Is it an effective brand name? *Journal of Travel Research*, *50*(5), 482–495. https://doi.org/10.1177/0047287510379158

Prados-Peña, M. B., Crespo-almendros, E., & Porcu, L. (2022). How online sales promotions via social networks affect the brand equity of a heritage destination. *Heritage*, (5), 2547–2564. https://doi.org/10.3390/heritage5030133

Prados-Peña, M. B., & Del Barrio-García, S. (2021). Key antecedents of brand equity in heritage brand extensions: The moderating role of tourist heritage experience. *European Research on Management and Business Economics*, *27*(3). https://doi.org/10.1016/j.iedeen.2021.100153

Richards, G. (2002). Tourism attraction systems: Exploring cultural behavior. *Annals of Tourism Research*, *29*(4), 1048–1064. https://doi.org/10.1007/978-3-319-42246-6_7

Rojas-Méndez, J. I., & Hine, M. J. (2016). Countries' positioning on personality traits. *Journal of Vacation Marketing*, *23*(3), 233–247. https://doi.org/10.1177/1356766716649227

Rojas-Méndez, J. I., Kannan, D., & Ruci, L. (2019). The Japan brand personality in China: Is it all negative among consumers? *Place Branding and Public Diplomacy*, *15*, 109–123. https://doi.org/10.1057/s41254-019-00118-6

Roy, S., & Banerjee, S. (2021). Cross-cultural dissimilarities in the perception of brand personality of select smart phones: Evidence from West Bengal, India and Bangladesh. *NMIMS Management Review*, *29*(02), 25–51. https://doi.org/10.53908/nmmr.290203

Ruban, D. A. (2018). Aesthetic properties of geological heritage landscapes: Evidence from the Lagonaki Highland (Western Caucasus, Russia). *Зборник Радова Географског Института" Јован Цвијић" САНУ* [Journal of the Geographical Institute Jovan Cvijić SASA], *68*(2), 289–296. https://doi.org/10.1177/000169937401700215

Ruban, D. A., Sallam, E. S., Ermolaev, V. A., & Yashalova, N. N. (2020). Aesthetic value of colluvial blocks in geosite-based tourist destinations: Evidence from SW Russia. *Geosciences*, *10*(2), 51. https://doi.org/10.3390/geosciences10020051

Ryan, J., & Silvanto, S. (2009). The World Heritage List: The making and management of a brand. *Place Branding and Public Diplomacy*, *5*(4), 290–300. https://doi.org/10.1057/pb.2009.21

Saeed, M. R., Burki, U., Ali, R., Dahlstrom, R., & Zameer, H. (2021). The antecedents and consequences of brand personality: A systematic review. *EuroMed Journal of Business*, *17*(4), 448–476. https://doi.org/10.1108/EMJB-12-2020-0136

Sirgy, J. M. (1986). Self-concept in consumer behavior : A critical review. *Journal of Consumer Research*, *9*(3), 287. https://doi.org/10.1086/208924

Sjøvaag, H., & Stavelin, E. (2012). Web media and the quantitative content analysis: Methodological challenges in measuring online news content. *Convergence*, *18*(2), 215–229. https://doi.org/10.1177/1354856511429641

Tieskens, K. F., Van Zanten, B. T., Schulp, C. J. E., & Verburg, P. H. (2018). Aesthetic appreciation of the cultural landscape through social media: An analysis of revealed preference in the Dutch river landscape. *Landscape and Urban Planning*, *177*(May), 128–137. https://doi.org/10.1016/j.landurbplan.2018.05.002

Uday, V. (2021). Cultural Tourism. *International Journal of Multidisciplinary Educational Research*, *10*(1), 1–4.

UNESCO. (2019). *Operational guidelines for the implementation of the world heritage convention*. *World Heritage Center*. Retrieved from http://whc.unesco.org/archive/opguide08-en.pdf

Usakli, A., & Baloglu, S. (2011). Brand personality of tourist destinations: An application of self-congruity theory. *Tourism Management*, *32*(1), 114–127. https://doi.org/10.1016/j.tourman.2010.06.006

Wuepper, D. (2017). What is the value of world heritage status for a German national park? A choice experiment from Jasmund, 1 year after inscription. *Tourism Economics*, *23*(5), 1114–1123. https://doi.org/10.1177/1354816616655958

Xiang, Z., Du, Q., Ma, Y., & Fan, W. (2017). A comparative analysis of major online review platforms: Implications for social media analytics in hospitality and tourism. *Tourism Management*, *58*(February), 51–65. https://doi.org/10.1016/j.tourman.2016.10.001

Yang, L., Hu, X., Lee, H. M., & Zhang, Y. (2023). The Impacts of Ecotourists' Perceived Authenticity and Perceived Values on Their Behaviors: Evidence from Huangshan World Natural and Cultural Heritage Site. *Sustainability*, *15*(2), 1551. https://doi.org/10.3390/su15021551 Academic

Yang, Y., Xue, L., & Jones, T. E. (2019). Tourism-enhancing effect of World Heritage sites: Panacea or placebo? A meta-analysis. *Annals of Tourism Research*, *75*(November 2018), 29–41. https://doi.org/10.1016/j.annals.2018.12.007

Zhang, C., Huang, Z., Cao, F., & Chen, X. (2019). Recognise me from outside to inside: Learning the influence chain of urban destination personalities. *Tourism Management*, *70*(November 2017), 390–403. https://doi.org/10.1016/j.tourman.2018.09.005

Zhang, M., Xiong, K., Wang, X., & Zhao, X. (2022). Natural beauty and esthetic value of natural world heritage sites: a literature review and implications for Karst Geoheritage Sites. *Geoheritage*, *14*(3), 1–13. https://doi.org/10.1007/s12371-022-00714-8

Received: 25/07/2022
Accepted: 06/04/2023
Coordinating editor: Estela Marine-Roig