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Editorial to the Special Issue 'World Heritage and Tourism Innovation: Responding to the Challenges in a Changing World'

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Heritage tourism has become an integral part of the global economy, with World Heritage Sites among the most popular destinations. World Heritage Sites (WHS), listed by the United Nations Educational, Scientific and Cultural Organization (UNESCO), are recognized as having outstanding universal value and attract millions of visitors each year. In 2019, prior to the COVID-19 pandemic, international tourist arrivals to heritage sites increased by 6%, outpacing the overall global tourism growth rate of 3.5% (UNWTO, 2020). Tourism revenues from World Heritage Sites amounted to approximately EUR 120 billion in 2019, with 600,000 jobs directly generated by these sites. This represents a significant contribution to the local and national economies of countries hosting World Heritage Sites. On the other hand, the high number of visitors has put a strain on infrastructure, cultural sites, and natural habitats, and led to negative impacts on the environment and local communities (UNESCO, 2021). In addressing negative impacts, World Heritage Sites have experienced a steady increase in innovation rates. However, the pandemic forced World Heritage sites to innovate more in order to survive and develop sustainable tourism practices.

The aim of this special issue is to address tourism innovation in line with the principles and objectives of the UNESCO World Heritage Centre and its World Heritage and Sustainable Tourism Programme. The potential of tourism innovation at World Heritage Sites has not been fully explored and is rarely considered from an interdisciplinary perspective. There is growing interest in exploring innovative tourism practices that can help protect World Heritage Sites and the people and ecosystems that surround them. Tourism management at World Heritage Sites can foster sustainability-driven innovation by using not only new technologies, but also new visitation and communication strategies, new methods for measuring impacts, new approaches to site and infrastructure planning and design, new social and institutional forms of collaboration and networking, and more.

Research on tourism innovation, and in particular on sustainability-oriented tourism innovations for World Heritage Sites, is crucial for three reasons. First, World Heritage Sites must be preserved for future generations, as they provide insights into the history, culture, and natural environment of our world and have significant value to humanity as a whole. Therefore, it is critical to explore new ways to ensure their long-term sustainability while facilitating access for international visitors. Second, it is important to develop sustainable tourism practises that protect World Heritage Sites while generating revenue for their funding, for local communities, and for the economies of the countries that host World Heritage Sites. Last but not least, research on sustainability-oriented tourism innovations can lead to the development of new technologies and methods that can enhance the visitor experience and engage local communities in the management and preservation of World Heritage Sites.

This volume brings together a selection of research papers presented at the 7th UNESCO UNITWIN Conference on World Heritage and Tourism Innovation, held in Portorož in 2022. The conference highlighted the need for greater engagement between stakeholders, including local communities, tourism operators, heritage managers, and policy makers. Such collaboration can lead to the development of innovative approaches to visitor management, conservation, and community engagement. Many insightful manuscripts were submitted for this publication, but the editors had to limit the number of papers selected in order to follow the journal policy. The nine papers in this special issue present different research agendas developed by scholars with diverse cultural and disciplinary backgrounds, addressing key issues in tourism innovation for World Heritage Sites, such as sustainability-oriented innovation, digital transformation and knowledge dissemination.

The first paper offers an innovative approach to the categorization of cultural sustainability elements for World Heritage Sites. Based on the analysis of cultural World Heritage Sites in Switzerland, authors Rafael Oliveira, Silvia De Ascaniis, Renata Baracho, Hebert Salgado and Lorenzo Cantoni propose five categories of elements that need to be considered when developing sustainability strategies for World Heritage Sites. With the proposed categorization the authors argue for a proactive lead in setting new groupings of sustainability elements for addressing complex tourism management challenges at WHS.

The second paper introduces a research agenda on the transformative impacts of the COVID-19 pandemic on the visitation of the World Heritage Sites. The results of comparative analysis of World Heritage Sites with other tourism destinations in Chech Republic, show that UNESCO list inscription was rather a disadvantage at the beginning of the pandemic crisis, but brought a faster recovery in the following years. Although this study by Zuzana Kvítková and Zdenka Petru does not specifically focus on the sites' resilience rate, it certainly opens up new ways of understanding the non-linear stability and the ability of World Heritage Sites to adapt to difficult situations.

In the third paper, Ilaria Rosani, Maria Gravari-Barbas, Silvia De Ascaniis and Lorenzo Cantoni look at the innovative use of digital technologies in heritage tourism education and training. With the outbreak of COVID-19 in 2020, the usefulness and flexibility of eLearning have become the key element for an industry's survival and success. The authors analyse the case of a particular type of eLearning phenomenon: that of so-called Massive Open Online Courses, or 'MOOCS.' Through the example of a MOOC series 'Tourism Management at World Heritage Sites (Vol. 3),' they outline the characteristics of its learners, as well as the relevance of eLearning for World Heritage Sites.

The fourth paper is based on big data analytics as an imperative of digital transformation for WHS. Its focus is big data performed on geotagged photographs of Plečnik's architectural heritage uploaded by visitors to the photo-sharing platform Flickr. Authors Gorazd Sedmak, Dejan Paliska and Aleksandra Brezovec used big data to analyse the patterns and structure of spatial visitor behaviour in Ljubljana, Slovenia, by focusing on the spatially dispersed architectural World Heritage Site. The results lead to a better understanding of the behavioural patterns of dispersed WHS visitors, their structure, and the role of these attractions within the destination.

In the fifth paper, Tadeja Jere Jakulin proposes a systematic approach to the sustainable development of World Heritage Sites. Based on the emblematic case of the Bahá'í Gardens WHS in Haifa, Israel, this study examine the principles of systems thinking into practice. The data for the causal-loop model within the framework of system dynamics was obtained through a field survey. Results of the in person interviews with Bahá'í religion's representatives show they anticipate the feedback loop to ensure that all activities at the site are planned with the respect for natural and cultural environments.

The sixth paper also focuses on the new approach to sustainable development. It explores the role of higher education institutions (HEI) in the sustainable development of WHS. Lombuso Precious Shabalala presents tourism at WHS as a vehicle that can be utilised by higher education institutions towards mitigating poverty alleviation and socio-economic development, which contributes to addressing Sustainable Development Goals. The case under study is Mapungubwe WHS in South Africa. This study highlights the new value of community engagement projects undertaken by HEIS as potential drivers of a holistic and more sustainable management of World Heritage Sites.

The seventh paper looks at the strategic communication nature of cultural tourism of Zadar, Croatian town with its City Walls inscribed on UNESCO's World Heritage List. Using the City of Zadar and Zadar County as a case, this paper explores the heritage content in social media marketing for attracting low-cost carrier (LCC) travellers to Zadar. UNESCO World Heritage is one of the main motive destinations use to attract tourists. However, Božena Krce Miočić, Tomislav Klarin and Gabrijela Vidić found that culture was not used as a primary strategic communication of Zadar's tourism promotion authorities while attracting LCC.

The last two papers look at tourism innovation for WHS through the marketing lens as well. The eighth paper focuses on tourism product innovation from the perspective of heritage storytelling. It explores an innovative heritage tourism product development based on archaeological heritage of Cyprus. The Ancient Life Stories Tourism depends on and connects the elements from the UNESCO Representative Lists of the Intangible Cultural Heritage of Humanity, as well as other products and services. Based on the findings of the cluster analysis technique, authors Antonis Theocharous, Petros Kosmas, Maria Panagopoulou, Hristo Andreev, Petros Giannoulis, Katerina Pericleous and Kirsi Lorentz, identified market segments for ancient life story based tourism.

In the last paper, Anđela Šormaz and Engelbert Ruoss shed new light on social media as a management tool for heritage destinations. By using quantitative content analysis of social media posts and reviews for heritage destinations in Switzerland (13 parks, five World Heritage Sites, and two UNESCO Biosphere Reserves), they emphasize the link between social media popularity of heritage sites and unsustainable tourism practices in these sites. Data collected from the tourism-related digital platforms serve as a basis for the identification and management of potential over- and undertourism spots within larger protected heritage destinations.

Overall, this special issue of the *Academica Turistica* provides a valuable contribution to the growing body of knowledge on sustainable tourism and innovation in World Heritage Sites. It highlights the importance of collaboration, technology, and context-specific approaches in promoting sustainable tourism and protecting our World Heritage for future generations. We hope that this issue will inspire further research and innovation in this important field.

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Original Scientific Article

A Proposal to Categorize Cultural Sustainability Elements for the Management of World Cultural Heritage Sites

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Different interpretations have been proposed of how culture is related to the concept of sustainability. Culture has been described as the fourth dimension of sustainability, together with the economic, environmental and social dimensions; it has been considered a mediator that enables a balance among the other three dimensions; it has also been seen as the very foundation for achieving sustainability goals. However, the elements that make culture a fundamental part of sustainability interventions are neither yet clearly defined nor equally implemented. In tourism, when it comes to World Cultural Heritage Sites (WCHSS), the issue of cultural sustainability should be considered both from the position of the management and from the position of visitors: do WCHSS managers consider cultural sustainability dimensions when developing sustainability strategies for their site? Are visitors' experiences and images of the site influenced by elements related to cultural sustainability? A study is presented here, which aimed at answering these questions, analysing both faces of the coin. First, the different interpretations proposed to explain the relationship between culture and sustainability have been considered, to identify key descriptive elements. Then, a sample of online travel reviews about visitors' experiences at UNESCO WCHSS has been analysed, to see if such key elements were part of visitors' stories and evaluations. Finally, managers and specialists of WCHSS in Switzerland have been interviewed, to see if they agreed on the identified key descriptive elements. Results allowed us to categorize 24 elements related to cultural sustainability, to aggregate them into five dimensions, and finally to organize them in a conceptual framework.

Keywords: cultural sustainability, World Heritage Sites, categorization, tourists, site managers, online travel reviews

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Introduction

In the last decades, the development of Information and Communication Technologies (ICTS) has become the backbone of the networked society, just as power grids were essential in industrial society (Castells, 2005). The fast technological development they allowed has created concerns in society through questioning its ability to ensure sustainable development (Haarstad, 2017; Höjer & Wangel, 2015). The concept of sustainability is related in much of the literature to the development of the social, economic and environmental context of a given territory. There is a wide debate about the role of culture in sustainability (Chew, 2009; Hawkes, 2001; Suntikul, 2016) and the concept of cultural sustainability has been defined in different ways. Some authors claim that culture can be seen as a specific dimension of sustainability (Maggiore & Velleco, 2012; Throsby, 2016). Others claim that it can be integrated with the social dimension, thus resulting in a socio-cultural dimension (Aydin & Alvares, 2016; Ranasighe, 2018). Some researchers argue, then, that culture serves as a central pillar for the development of the other dimensions (Hawkes, 2001; Soini & Birkland, 2014).

In the field of tourism, the issue of sustainability has been a hot topic for some years. However, while the perspective of managers and their actions regarding sustainability have frequently been highlighted, the tourists' perspective has barely been studied (Aydin & Alvarez, 2016). Tourists generally assess the sustainability of destinations based on those aspects that affect their own experiences most. Thus, they do not directly perceive some sustainability actions taken by the territory, creating challenges for destinations to develop strategies on how to communicate these actions to the tourist efficiently.

On some social platforms for travel and tourism, such as *TripAdvisor,* tools have been implemented that allow users to identify establishments committed to sustainability principles. Tripadvisor's Green Leaders stamp is highlighted for accommodations that are committed to sustainable practices such as recycling waste, organic food, and electric car charging stations. The focus is, however, mostly on environmental issues. Hopefully, in the future, user comments and evaluations might include more sustainability elements (Aydin & Alvarez, 2016).

Visitors' evaluation of their experiences at cultural heritage sites can suggest the elements that the management should focus on to increase awareness of the cultural elements and to increase their satisfaction during the visit. Tourism could in this way strengthen a positive connection between residents, tourists, and managers within a society and help to point out the central role of culture in sustainability issues (Terkenli & Georgoula, 2021).

In the specific case of WCHSS, understanding visitors' awareness of the cultural aspects of heritage that need to be considered for sustainable management is even greater. Since a site is inscribed in the UNESCO World Heritage List, there is, on the one hand, an increase in visitation interest that can expand the potential for knowledge and preservation while, on the other hand, the site may suffer from over-tourism and external cultural influences that might directly affect the preservation of cultural elements (Tan et al., 2020; Oliveira et al., 2022). It is the responsibility of the site management to ensure that cultural elements of heritage are maintained and enhanced through tourism, maximizing positive impacts and minimizing negative impacts (Sonuç, 2020).

This study aims to identify the elements of cultural sustainability that WCHS visitors recognize in the visitation experience, to classify them in comparison with the elements put forward by heritage managers and, on this base, to elaborate a conceptual framework of cultural sustainability for heritage cultural sites.

Literature Review

The Role of Culture in Sustainability

The concept of sustainability originated as an evolution of the concept of development. The concept of development originally highlighted the economic and productive activities that provide employment, consumption and wealth to a society. Gradually, it expanded its scope to human development, including values and social goals such as life expectancy, education, equity, opportunity and well-being (Maggiore & Vellecco, 2012).

The concept of sustainable development or sustainability was presented in 1987 by the World Commission on Environment and Development (WCED). In very rough terms, it focuses on satisfying the needs of the present society without compromising the needs of future generations (Hawkes, 2001; Soini & Birkeland, 2014).

This concept was further elaborated by Throsby (2016) when defining some basic principles that should characterize sustainability: continuity, intergenerational and intragenerational equity, diversity, a balance between natural and cultural ecosystems, and interdependence between the cultural, social, ecological and economic dimensions.

It should be noted that the principle of interdependence between the four dimensions and, especially, the role of culture in sustainability are much debated in the literature and sometimes controversial. There is a consensus that sustainability is composed of three basic dimensions: economic, social and environmental (Hawkes, 2001; Maggiore & Vellecco, 2012; Soini & Birkeland, 2014; Suntikul, 2018; Weng et al., 2019). The dimensions were agreed upon in 2002 during the Sustainable Development Congress (Soini & Birkeland, 2014) and later reaffirmed by the United Nations in 2005 (Suntikul, 2018). This division ended up expanding a debate about the role of culture within sustainability, which still remains undervalued compared with the other dimensions (Chew, 2009; Hawkes, 2001; Suntikul, 2018).

Culture can be seen as composed of three aspects: the values and aspirations of a society, its forms of development and transmission, its tangible manifestations (physical structures, works of art and places of great cultural value) and intangible ones (ideas, practices, beliefs and traditions), that help to create cohesion within a specific group (Hawkes, 2001; Maggiore & Vellecco, 2012).

As far as sustainability is concerned, there are some specific characteristics of culture that foster its development, namely: the valuing of cultural identity (Chew, 2009; Hawkes, 2001; Maggiore & Vellecco, 2012), knowledge (Maggiore & Vellecco, 2012; Aydin & Alvarez, 2016), social empowerment (Throsby, 2003; Chew, 2009; Ranasinghe, 2018), cultural capital (Murzyn-Kupisz, 2012), diversity (Hawkes, 2001; Throsby, 2003), creativity and innovation (Hawkes, 2001; Maggiore & Vellecco, 2012) and finally, technology (Maggiore & Vellecco, 2012).

In summary, Dessein et al. (2015) state that culture can participate in the concept of sustainability by taking three different roles. The first role characterizes culture as *support* for sustainability, that is, it is seen as a fourth dimension of the model together with the economic, social and environmental dimensions. The second role of culture would be *connection and mediation,* serving to balance the relationships between the three other dimensions. Finally, the third role highlights culture as the *main element* for the achievement of sustainability objectives. The last perspective is based on the understanding that culture creates all moral and ethical values of a society that will serve as the main goals to be achieved by sustainability. The authors believe that, depending on the circumstances and objectives, one or the other perspective might better explain the role of culture in sustainability.

In the case of WCHSS, it is questioned which of the three roles highlighted by Dessein et al. (2015) could better represent culture in the sustainability discourse from a tourism perspective. Understanding the perspective of the managers and that of the tourists who visit those places can shed light on this issue.

Cultural Sustainability in Tourism

Tourism can be considered a fundamental activity for the development and cultural preservation of a society, ensuring benefits for future generations (Ranasinghe, 2018). However, if not well managed, tourism can negatively affect the culture of a society, generating problems such as excess demand (García-Hernández et al., 2017; Murzyn-Kupisz, 2017; Yeniasir & Gökbulut, 2018), loss of values and traditions (García-Hernández et al, 2017; Jamal et al., 2010), lack of respect between tourists and residents (Jamal et al., 2010) and poor receptivity of tourists by the population (Ranasinghe, 2018; Yeniasir & Gökbulut, 2018).

Based on the principles of sustainability outlined by Throsby (2016), on the other hand, there are several ways in which tourism can positively impact culture. First, the cultural exchange helps visitors' access to the reality of residents (Aydin & Alvarez, 2016). Also, it might involve inhabitants in guiding tourists and promoting local products through communication channels and encouraging green actions, cultural knowledge and pre-trip preparation on cultural elements (Jamal et al., 2010). Second, sustainable tourism might positively impact well-being, guaranteeing an inclusive, empowered and happy society. What is good for the economy is not always good for society (Hawkes, 2001). The city must be good for the resident and the tourist; therefore, one must think of means such as controlling the number of visitors or limiting congestion (Throsby, 2016). Third, tourism might impact the quality of life, which brings as a consequence the improvement in community needs, such as aesthetic, spiritual, cultural and leisure elements (Murzyn-Kupisz, 2012). In addition, it enables greater economic gains, as tourists spend not only on heritage but also on services around the spaces (Murzyn-Kupisz, 2012), increasing local income, employment (Yeniasir & Gökbulut, 2018) and direct, indirect and induced impacts on the economy (Maggiore & Vellecco, 2012). The fourth impact is related to strengthening cultural perception (Yeniasir & Gökbulut, 2018), enabling investments in cultural heritage (Murzyn-Kupisz, 2012). Finally, the last impact is connected to ethical issues, focused on the understanding that physical and cultural space are correlated (Jamal et al., 2010).

To enhance the benefits of considering and managing cultural aspects in heritage sites, it is recommended that managers make use of cultural elements in an integrated way with heritage (Eversole, 2006). In this case, managers are perfectly aware of all cultural elements of society (authenticity, history, lifestyle), including them completely in space, without damaging the territory. Heritage development processes tend to be participatory and inclusive, presenting solutions that benefit several dimensions. However, it often happens that heritage sites that push tourism undergo several changes in their original elements, usually stressing only some isolated cultural elements for promotion. The principle is that the story shown is authentic, but with no direct connection between the initiative and the cultural context. The community, despite knowing the context, does not fully identify with what is produced without participating in its production or using local skills. The worst case scenario is the one when the manager invents non-existent spaces within the space for the exclusive use of tourism, without connection with cultural aspects of the region. It can even generate the creation of a new local identity, but is focused on external consumption and is unrelated to local needs.

Culture is recognized as an essential part of the tourism activity, and understanding the ways it can positively or negatively impact the tourism experience might help in the development of effective strategies for the management of heritage. How, though, do tourists conceive the culture of the place they visit? Which elements of the place relate to the cultural dimension? Do such elements influence their experience and, if yes, how? The study presented here aimed at answering these questions, focusing on the experience of tourists at WCHSS.

Research Methodology

2,750 comments published by visitors to WCHSS on the online platform TripAdvisor were collected and analysed. Tripadvisor provides not only data of users' ratings, but also comments about tourist attractions, allowing owners and managers of these spaces to know about positive and negative aspects of visitors' experiences (Torres, 2013). Data were collected using the web scraping technique, that is, using automated tools to extract data from digital platforms, transforming them into a structured database (Marres & Weltevrede, 2013).

The choice of the sites to be included in the sample was based on the analysis of WCHS that had dedicated pages on TripAdvisor. 504 attractions (as of 4 April 2020) were identified, having on average 4,354 comments each. To collect the greatest diversity of heritage, the main attraction of each of the countries that had at least the total number of the above-average comments was selected; following this criteria, Gibraltar, the Czech Republic and French Polynesia were disregarded. In the case of the United States, two attractions were selected, since the country has different WCHSS spread over its territory, which increased diversity. The final database was composed of 22 attractions from 21 countries: Robben Island

Datacomment: 2019-09-01

Rating: 5

Title: When in Seoul, this is a MUST (**unicity**)!

Comment: The palaces are beautiful and the grounds are well-landscaped. The original buildings (**authenticity**) were burned by the Japanese during their occupation of Korea, so these are recreations, but feel ancient (**authenticity**). The guides (**local guides**) at the library are very kind and helpful (**attendance**) providing very interesting information (**local information**). Take your time, there is a lot to see (**freedom of visitation**). It is also common to see people dresses in the garb of that time period (**local costumes**) witch really adds to the atmosphere as you wander the grounds. There is so much history here. And if you are in the summer, bring the sun umbrellas. Is is hot and rain frequent at that time of year. The little cafe **(support infrastructure**) has limited offerings, so you may want to bring food. Note of caution: If you take the Hop On Hop Off bus (**transport access**), the drop you off a quite a ways from the entrance. It is better to get off at the stop prior; it is much closer to the entrance.

Dataexperience: August 2019

Attraction: Changdeokgung Palace

City: Seoul

Country: South Korea

url: a href="/ShowUserReviews-g294197-d320359-r706138269-Changdeokgung_Palace-Seoul.html"class="location-review-review-list-parts-ReviewTitle_reviewTitleText--2tFRT"

Figure 1 Example of Classification of Expressions in Visitors' Comments Related to Cultural Sustainability

Museum (South Africa), Cologne Cathedral (Germany), Sydney Opera House (Australia), Schonbrunn Palace (Austria), Grand Palace (Belgium), Corcovado – Christ the Redeemer (Brazil), Mutianyu Great Wall (China), Changdeokgung Palace (South Korea), Alhambra (Spain), Statue of Liberty and San Jose Mission (United States), Eiffel Tower (France), Acropolis (Greece), Kinderdijk (Netherlands), Taj Mahal (India), Naqsh-e Jahan Centre (Iran), Baha'i Gardens (Israel), Gallerie Degli Uffizi (Italy), Atomic Bomb Dome (Japan), Tower of London (United Kingdom), Bern's Historic Centre (Switzerland) and Hagia Sophia Museum (Turkey).

Within each comment, those expressions that corresponded to elements aimed at cultural sustainability and the visitor's experience as a whole were classified. The elements of culture that foster sustainable development taken out of the literature (i.e. valuing of cultural identity, social empowerment, knowledge, cultural capital, diversity, creativity and innovation, technology) were used as references to identify such expressions and to aggregate similar concepts. Each comment was read individually and the classification of the sentences was done manually by three independent coders.

In total, 7,340 expressions related to cultural aspects of the sites were identified and classified into 49 categories. Figure 1 provides an example of how the expressions in each text were classified; each category is described in brackets after the respective (underlined) expression. The three coders then, compared their analyses and agreed on reducing the 49 categories into 24, and later to aggregate them into 5 dimensions, based on similarities among each other. The entire procedure was performed using the Atlas software. The software allows for classifying words that are repeated throughout one or more texts, manually or automatically, so to assist in the investigation of linguistic patterns within the texts.

Results

Table 1 shows the 49 categories defined on the basis of the characteristics of sustainable development in culture, later reduced to 24 and then aggregated into 5 dimensions. Table 2 shows the weight of each category in the sample.

A definition of each category was elaborated and agreed upon by the three coders, so as to have a reliable classification procedure for users' comments. The following is the working definition of each category:

- *Quality of information:* capacity of the site to create strategies to pass on historical and cultural information so as to expand visitors' knowledge. Information can be given through information panels, signposts, audiovisual technologies, training tour guides, and storytelling. Regardless of the format, it must be ensured that visitors understand the given information in a clear and non-tiring way, in addition to having the possibility to answer their questions and solve their doubts.
- *Photo availability:* capacity of the attraction to foster photographs by visitors which point out elements that value the local cultural production, supporting its dissemination. Many visitors are motivated by the possibility of taking good photos as travel records and later sharing them in their social circles. In this way, attractions that encourage the practice and have strategies to value the participation of their visitors

Table 1 Cultural Sustainability's Dimensions and Categories

Dimension	Final category	Preliminary category
Information and Communication	Quality of information	Lack of information
		Time-consuming information
		Excessive information
		Wrong information
		Local information
		Information boards
		Signboards
		Translation
		Self-guided tour
	Photo availability	Photo availability
	Technological devices	Technological devices
	Quality of service	Quality of service
		Attendance
Cultural Enhancement	Uniqueness	Uniqueness/Unicity
		Unesco
	Authenticity	Authenticity
	Conservation and preservation	Conservation
		Preserved structure
		Cleaning
	Vitality of the offer	Quality of artworks
		Quality of cultural events
Facilities	Support structure	Support structure
	Mobility	Mobility/transport access
	Accessibility	Accessibility

Continued on the next page

with photographic records, help in creating the image of the destination. The images also help in valuing cultural aspects and symbols, in addition to providing information that can be essential in the choice of travel for prospective visitors and a form of loyalty during the post-trip period.

- *Technological devices:* use of electronic equipment as a means to improve the quality of the information received by tourists before, during and after their visit to the attraction, in addition to enabling online shopping and greater interaction between the observer and the observed object. Equipment such as online ticketing sites or mobile applications can facilitate visitors' entry and assist with prior information. The use of audio guides and films helps to create narratives during the visit, passing on reliable information, clearly and educationally, helping the visitor to better understand the story behind the object. In addition, games and other technological means of interaction make it possible to attract different profiles of audiences to the space, serving as entertainment and adding value to the product. It is important to emphasize that visual technologies such as projection screens and other elements can

Table 1 Continued from the previous page

Dimension	Final category	Preliminary category
Cultural Integration	Local guides	Local guides
	Value for money	Value for money
	Networked attractions	Networked attractions
	Integration of local products	Local products
		Souvenirs
	Local immersion	Presence of tourists only
		Presence of locals
		Local costumes
		Cultural restrictions (clothes/religion)
	Environmental connection	Environmental connection
		Water recycling
	Respect for minorities	Religious diversity
		Sexual diversity
		Female equality
Organization	Visitor capacity	Visitor capacity
	Waiting time	Waiting time
	Security	Insecurity
		Hostile residents
		Safety procedures
		Annoying sellers
	Problem-solving	Problem-solving

be used without overlapping the original aspects of the space.

- *Quality of service:* how employees and other professionals at the attraction meet the needs of visitors in a clear, respectful and friendly manner, ensuring good hospitality for visitors.
- *Uniqueness:* a unique feature of the heritage that distinguishes it from other heritage sites, which may be the history, cultural values, architecture, special certifications or other elements that make the visitor understand that the space is unique. The visitor is more motivated to visit spaces where he can see unprecedented elements that are difficult to find elsewhere. The space must seek ways to highlight its peculiar and iconic characteristics, valuing the authentic cultural elements that can convey the idea of uniqueness to its visitors. Thus, the attraction will be considered an unmissable tour by people who visit the region.
- *Authenticity:* the capacity of the attraction to express its historical and cultural role, creating a sense of connection for visitors with its intended purpose. The most important thing is to guarantee an emotional experience and less so material originality since most of the attractions have changed over the years. Even so, it is necessary to transmit to the visitor an experience close to originality, whether from recreation or in an informative way, comparing the original differences with the current historical aspects, and emphasizing the relevance and cultural identity of the attraction for society.

Table 2 Weight of Each Category on the Sample of Comments

Category	Percentage
Quality of the information	31.5
Uniqueness	31.4
Local guides	22.6
Authenticity	21.7
Conservation and Preservation	20.2
Support structure	16.6
Visitor capacity	16.1
Value for money	14.1
Network attractions	13.3
Mobility	13.3
Vitality of the offer	11.4
Photo availability	9.5
Integration of local products	7.5
Waiting time	6.9
Technological devices	6.5
Local immersion	4.7
Quality of service	4.5
Safety	3.8
Accessibility	3.6
Problem-solving	2.4
Freedom of visitation	1.9
Environmental connection	1.6
Tourist behaviour	1.5
Respect for minorities	0.1

- *Conservation and preservation:* maintenance of works and space, in addition to ensuring that the environment is clean, both for the organization of the attraction and for the visitors. It also includes the preservation of the original characteristics of the cultural elements in restoration processes. These processes can limit visitor access and vision in some spaces and works, so visual alternatives that minimize the impact of non-visitation are essential, such as information panels, digital visual experiences or the possibility of visualizing the restoration process itself. It reduces the visual pollution of the interventions and guarantees a satisfactory experience for the visitor.
- *Vitality of the offer:* offer of quality materials, works and cultural artefacts, avoiding reproductions and representing the local diversity for the visitor. Organizing or supporting rich cultural presentations and events that value traditional elements and community participation as part of the attraction. Adding value to the visit with quality elements and cultural presentations makes the visitor value the experience more and get closer to local customs.
- *Support structure:* provide the attraction with quality services that help well-being during the visit, such as spaces for food, bathrooms, a visitor centre, souvenir shops and parking lots, among others. The support structure, in addition to ensuring greater comfort, makes it possible to add value to the cultural asset and generates possibilities for inclusion into the local culture of the products and services offered. It is recommended to ensure that support structures are accessible to different audiences with different access needs and consumption profiles. It is also valid to promote services for visitor use, in addition to adding value to experiences, especially gastronomic and product purchases.
- *Mobility:* availability of viable and quality transport access for the arrival of the visitor at the site and possible displacement within the attraction. In addition, depending on the type of transport available, it is possible to add information about the attraction and the local culture before arrival or add the means of transport as part of the cultural experience for the visitor. During the visit, alternative means of transport can be used to facilitate the mobility of visitors and be offered as an added product, providing new experiences such as the use of boats, bicycles or some typical local means of transport.
- *Accessibility:* capacity of the attraction to guarantee a quality tourist experience for people who need special care, such as parents with children, the elderly and disabled people, among others. The attraction must have the necessary equip-

ment and be in good condition so that visitation is facilitated.

- *Local guides:* the possibility of hiring local tour guides, to favour the region's economy in addition to strengthening knowledge of the culture on the part of the local community. It can also strengthen relationships between the community and tourists, enabling a more authentic visiting experience. From the local tour guide, tourists can learn about peculiarities, stories and attractions that are outside the usual itineraries. Therefore, the guide must be properly trained, have an adequate professional attitude, treat visitors with respect and pass on reliable information. The good relationship and motivation of these professionals result in better visitor satisfaction. It is expected that the professional's role will be legalized, guaranteeing security for the tourist and generating tax collection, favouring new policies for the sector, and the elaboration of strategies to encourage the hiring of these professionals must be developed.
- *Value for money:* feeling that the price charged for services on the site is following what is offered by the market, fulfilling visitors' expectations. Provide more viable forms of access for people in the community, encouraging them to attend attractions more constantly.
- *Networked attractions:* strategies that encourage and facilitate visitors' access to other attractions or services around the attraction, enabling a better economic distribution within the territory, in addition to encouraging the visitor to learn more about the characteristics of the local culture. In addition, it gives the possibility of redistributing the tourist in several places, reducing the chance of having an excessive number of visitors concentrated in one place only. Campaigns to promote other attractions or the creation of vouchers that make it possible to purchase tickets from different spaces with discounts can be valid initiatives.
- *Integration of local products:* incentives to sell local products, aiming to develop the economy of the community, in addition to valuing the way of reproducing the local culture. Enable traditional elements to be incorporated into the sale of souvenirs and for visitors to have information about the products, encouraging them to discover local shops and markets, strengthening contact with the community. Local products add value to the culture and enhance the visitor experience. It is necessary to foster actions that encourage the production and purchase of local products, such as ways of promoting products, tasting and supporting events and markets in the city.
- *Local immersion:* provide integration between visitors and the local culture, encouraging the presence of the community in everyday life and also as visitors to the attraction. Ensure that the tourist experiences the attraction from the perspective of traditions and cultural values of the community during the visit, be it the gastronomy, way of life, or typical clothes, among other cultural elements. Provide strategies that make tourists interested to experience local life. Ensure that the visitor has enough information before visiting, e.g. if the space has any cultural restrictions for visitation, such as the wearing of appropriate clothing.
- *Environmental connection:* possibility of synergy between the material elements of the heritage with the scenic elements of the landscape, such as local fauna and flora, encouraging environmental sustainability and helping the contact between visitors and territory. The existence of these elements enriches the experience at the site, in addition to enabling educational actions that generate quality of life for the community.
- *Respect for minorities:* means allowing access and non-discrimination of visitors by gender, race or colour, in addition to ensuring diversity in the employability of the population in tourist attractions. In addition, it is possible to encourage cultural programmes that foster debates and the participation of minority groups.
- *Visitor capacity:* ensuring that the visitation space is sufficient for the visitor's experience, without the feeling of being overwhelmed. An excessive

number of people can cause problems in conservation, in addition to making it difficult for the visitor to understand information. It can also favour behaviour conflicts among visitors, residents and attraction staff. Therefore, it is necessary to establish ways to avoid excess demand, such as coordinating groups of visitors, monitoring the flow in and out of spaces or using reservations in advance.

- *Waiting time:* capacity of the attraction to reduce the waiting time of visitors at the entrance and in its possible visitation spaces. Develop strategies that can minimize waiting time, such as encouraging reservations in advance, and favouring entries with local tour guides, in addition to providing adequate structure for waiting in lines, especially for visitors with mobility needs or health problems. The strategies prevent the visitor from entering the attraction in a harsh manner and minimize conflicts between visitors and staff during the visit.
- *Security:* ensure that the visitor is not embarrassed by harsh approaches from residents such as street vendors, who approach with initial good intentions to apply future scams. Make sure that the security procedures for entering the attractions are explained clearly, avoiding problems and doubts for visitors to the spaces.
- *Problem-solving:* Ensuring that the steps before, during and after the visit occur smoothly and clearly for the visitor. Ensuring that the services provided are of high quality and that the visitor does not have the feeling of being helpless or without solutions in the event of problems within the site, especially unforeseen ones. This makes visitors have a good experience and share it with acquaintances.
- *Freedom of visitation:* guarantee that the visitor has enough time and freedom of movement within the space so that they can learn from it and feel close to the cultural aspects offered. In the case of guided tours, organize them so that some contemplation by the visitor is possible and explain to the visitor in advance the places where access is prohibited so that expectations are met.
- *Tourist behaviour:* tourist awareness of their behavior during the visit, avoiding situations such as lack of respect for employees, the community and other tourists, in addition to the depredation of goods, accumulation of garbage and noise pollution. Manage spaces in a way that the flow of people does not induce predatory behaviour, occurring calmly.

The Perception of Swiss WCHS Managers

Method

A face-to-face semi-structured interview was carried out with 8 managers and specialists of Swiss WCHSs, to check if their perception of cultural sustainability corresponded to the classification proposed on the basis of visitors' comments. Switzerland was chosen because it was easy for researchers to access the managers of these heritage sites, based on ongoing projects during this research.

The choice of the interviewees was based on managers and specialists that work with tourism in WCHSs. Data collection was carried out in October 2021. The interviews lasted, on average, one hour and were conducted in two languages: English and Italian.

The questions were asked using the method known as *card sorting.* This method allows the interviewer to better understand how the interviewees classify certain concepts and categories, using cards (Spencer, 2009). The card classification method was based on a hybrid format where the interviewee received 24 cards with the categories of cultural sustainability and was asked to classify them according to 5 cards representing the dimensions in Table 1. If the interviewee did not find a dimension in which they believed they could classify a category, they could create new dimensions. The interviewee could also associate the same category to more than one dimension or exclude categories from the classification, giving them the freedom to interpret all the elements of the card in a non-induced way.

Results

The *Organization* dimension had the highest number of classified categories among all the other dimen-

Table 3 Cultural Sustainability Categories by Dimensions According to Swiss WCHS Managers

Dimensions	Categories
Information and Communication	Quality of information
	Photo availability
	Technological devices
	Networked attractions
Cultural Enhancement	Uniqueness
	Authenticity
	Conservation and preservation
	Vitality of the offer
	Environmental connection
Facilities	Accessibility
	Mobility
	Visitor capacity
Cultural Integration	Local immersion
	Integration of local products
	Respect for minorities
	Local guides
	Tourist behaviour
Organization	Problem-solving
	Waiting time
	Quality of service
	Support structures
	Freedom of visitation
	Security
	Value for money

sions, followed by *Information and Communication, Facilities, Cultural Integration* and *Cultural Enhancement.* The classification of categories into dimensions made by WCHS managers mostly corresponded to that proposed by the authors; in particular, the categories classified in the dimensions *Facilities, Cultural Integration* and *Cultural Enhancement.* The final division of categories by dimensions based on the interview with Swiss managers is presented in Table 3.

The following question of the card sorting activity asked to create a ranking with the 10 most relevant categories. The ranking was free-form, which resulted in rankings with fewer than 10 categories or rankings with categories ranked in the same position. To calculate the final result, 10 points were given to each interviewee for the category classified in 1st place, 9 points for the category classified in 2nd place, and so on up to 1 point given for the category classified in 10th place. In the case of categories classified in the same position, they were given the same point value. The points received by each category were added up and divided by the number of respondents. The categories *Conservation and preservation, Authenticity, Uniqueness, Quality of information, Network attractions, Vitality of the offer, Accessibility, Environmental connection, Quality of service* and *Technological devices* resulted in being the top 10.

Then, interviewees were asked to create a ranking of the 5 categories they believed to be least relevant in terms of cultural sustainability of the site. The categories *Waiting time, Freedom of visitation, Photo availability, Visitor capacity* and *Value for money* resulted in being the least relevant to cultural sustainability.

Finally, interviewees were asked to point out if there was any category on the list that they believed could not be managed directly by managers. In this case, they were not asked to score the categories. Respondents pointed out that *Tourist behaviour* is not a manager's responsibility. However, some of them did not specifically mention any category, thereby reinforcing the notion that managers are involved in various tasks, including partnerships, collaborations, and monitoring, as integral aspects of their roles.

Discussion

The analysis of visitors' comments and the interviews with WCHS managers aimed at identifying categories of elements of the sites that are related to cultural sustainability. Having made clear which are such elements and which of them are the most important to ensure that the culture of a site is acknowledged, valued and respected by visitors, can support managers in developing sustainable management strategies. Some categories – such as those grouped in the dimensions *Cultural integration, Cultural enhancement* and *Information and communication* – directly refer to cultural elements, while others – such as those grouped in the dimensions *Facilities* and *Organization* – are indirectly

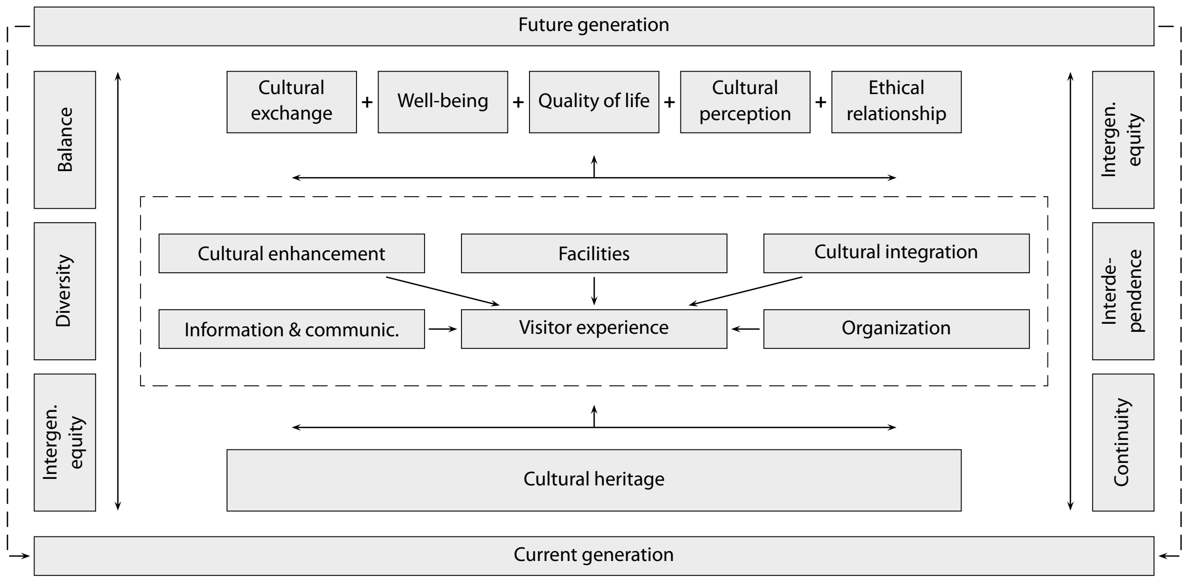

Figure 2 Cultural Sustainability Framework for Cultural Heritage Sites Based on Visitor Experience

related to a site's culture; even so, access to facilities and services as well as a good organization of the site, facilitate visitors' experience and helps to integrate culture into material and logistic elements of the site.

The classification of categories into dimensions proposed by the authors on the basis of visitors' comments was mostly validated by managers, with only some adjustments which made it more coherent with their perspective. As for categories that were considered less relevant, the possibility of integrating them with other categories should be considered in future studies, so to acknowledge the relevance ascribed to them by visitors.

Visitors' experiences at heritage sites might be enhanced by management strategies developed according to the five dimensions that this study pointed out. According to the dimension *Information and communication,* the understanding and transmission of knowledge of the local culture to visitors should be fostered, and greater interaction with the space should be guaranteed. The *Cultural enhancement* dimension stresses elements that add value to the heritage, such as authenticity and uniqueness, representing the local culture in a trustworthy and representative way. The dimension *Facilities* stresses that fact that structures and services should help to widen access and enable the inclusion of cultural elements in basic activities of the attraction, such as the connection of culture by means of transport and space for selling souvenirs, among others. The *Cultural enhancement* dimension aims at guaranteeing the visitor's integration in the local community, stimulating them to get to know other attractions in the territory, in this way broadening their connection with the spaces. Finally, management interventions that take into account the *Organization* dimension should help to make the visitors experience pleasant, minimizing conflicts that may occur between visitors and residents or encouraging good visitor behaviour. In addition, they should favour the application of fair prices, allowing visitation by a wider public.

Enacting these dimensions in management strategies should bring benefits to the local society, both present and future generations. As described in the literature review, the benefits generated by sustainable management that is based on cultural dimensions, include cultural exchange (Aydin & Alvarez, 2016), well-being (Hawkes, 2001; Throsby, 2016), quality of life (Murzyn-Kupisz, 2012; Yeniasir & Gökbulut, 2018; Maggiore & Vellecco, 2012), cultural perception (Yeniasir & Gökbulut, 2018) and ethical relationships (Jamal et al., 2010). Finally, all these elements in turn, will make, cultural heritage strengthen the principles of sustainability, as described by Throsby (2016), from the elements of continuity, intergenerational and intragenerational equity, diversity, a balance between natural and cultural ecosystems and interdependence between the cultural, social, ecological and economic dimensions. This dynamic is illustrated in the framework in Figure 2.

The framework, together with the categorization of cultural sustainability elements, can help managers to understand the issue of cultural sustainability and suggest the main actions that should be carried out to improve the visitation experience to enhance culture as an element of sustainability.

Conclusion

The procedure used and the results obtained by the study presented in this paper can inform future research aimed at developing indicators for cultural sustainability in heritage sites, as well as the elaboration of a concept of cultural sustainability for the sector. It needs to be noted that this work only considered comments made about tangible assets, but since culture is a mix of tangible and intangible elements, future research should analyse comments on non-tangible assets, so as to validate, refine and integrate definitions, categories and dimensions. Finally, the perception of managers from different countries or heritage types should be considered, so to build a more robust conceptual framework that can be used in different contexts.

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Cultural UNESCO Heritage in COVID-19 Pandemic Times

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Being on the UNESCO list is a privilege and a sign of exclusivity and uniqueness. Destination Management Organizations (DMOS) extensively use the international popularity of the UNESCO list inscription. Many researchers have confirmed that UNESCO list inscription is an advantage. However, there are also papers with opposite results. Several factors influence the visitor numbers at the UNESCO site – the structure of the visitors (international and domestic), and location, including accessibility, seasonality, and regional importance. COVID-19 dramatically affected world tourism. This research aims to answer whether UNESCO heritage list inscription was an advantage in the COVID-19 pandemic times and what role international tourism plays in UNESCO sites. The authors used a method of comparative analysis based on available statistical data, correlation analysis and *t*-test. The paper compares the change in the number of visits to UNESCO attractions to similar tourist attractions. The Czech Republic has 16 tangible attractions on the UNESCO list. The analysis includes 12 cultural UNESCO attractions. The results show that UNESCO list inscription was rather a disadvantage in the first year of the pandemic (2020) but brought a faster recovery in 2021. The role of changes in international tourist arrivals is important for collective accommodation establishments in both UNESCO and non-UNESCO sites, but more for UNESCO sites. The correlation of changes in international tourism with changes in visitor numbers in the UNESCO attraction is also high; however, it is not statistically significant.

Keywords: tourist attractions, UNESCO sites, Czech Republic, COVID-19 pandemic

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Introduction

Cultural heritage plays a very important role in tourism development in many countries. The Czech Republic is a country of cultural tourism. It is very rich in the number of cultural monuments; almost forty thousand are protected as immovable cultural monuments, and 336 have the status of national cultural heritage (see https://www.npu.cz). The most important cultural attractions for tourism are those which are on the UNESCO list of cultural and natural heritage (UNESCO, 2021c). Their exclusivity and uniqueness are the highlights of the destinations. The inclusion on the UNESCO list impacts domestic and foreign tourism in the destination. The World Heritage-listed sites typically receive more tourist visits than their non-listed counterparts (Yang et al., 2010; Gao & Su, 2019, Han et al., 2020). In 2020 and later, tourism and World Heritage Sites experienced dramatic changes due to the COVID-19 pandemic (UNESCO, 2021d; UNWTO, 2021). This paper examines if inscription on the UNESCO list was an advantage compared to non-UNESCO attractions. Their competitiveness and resilience are important for the restart of tourism (UNWTO, 2020). The paper brings new findings and contributes to the knowledge about cultural heritage. The situation caused by the COVID-19 pandemic is unprecedented and the effect of restrictions and critical tourism collapse brought new impacts and challenges.

Theoretical Background

The paper is based on the tourism demand theory (Divisekera, 2013). Tourism demand is affected by many factors such as income in the origin country, prices in the tourist destination, the safety of the destination and a set of other demand factors on the tourist site (e.g. motivation). Tourism demand and its influencing factors are topics of many papers, e.g. Dogru et al. (2017) and Agbola et al. (2020).

Significance of UNESCO List Inscription

A World Heritage Site is an area with an outstanding universal value that requires long-term protection and is non-renewable and irreplaceable, as was identified in 2021 by the United Nations Educational, Scientific and Cultural Organisation (UNESCO) and World Heritage Committee (WHC). Inscription on the World Heritage list and the resulting prestige helps raise awareness among citizens and governments about heritage preservation. Greater awareness leads to a general rise in the level of protection and conservation given to heritage properties. Countries may also receive financial assistance and expert advice from the World Heritage Committee to support activities for the preservation of their sites (UNESCO, 2022). A localized monument, building, town, landscape, or cultural tradition becomes globalized through its inclusion into the world heritage list and gets a new status as being of 'outstanding universal value' (Scholze, 2008). World heritage areas especially are used as a means of economic regeneration through tourism development (Su et al., 2015; Buckley et al., 2020; Agapiou, 2021). These sites also have a significant economic impact on local communities (Jimura, 2011; Christensen & Jones, 2020; Slabbert et al., 2021; Zhang, 2021). The research reveals that residents and entrepreneurs perceive inscription in the UNESCO heritage list as an advantage (Kvitkova et al., 2022). The World Heritage Sites contribute to national image creation (Silverman, 2011; Kim et al., 2019; Wang & Yuan, 2020) and due to that, they play an important role, especially in international tourism. They also promote destination branding (Poria et al., 2011; Xu & Ye, 2018; Kim et al., 2019). These two aspects are why various national and regional governments actively apply for the inscription of sites on the UNESCO list (Poria et al., 2011). Some authors (Ryan et al., 2011; Li et al., 2020; Panzera et al., 2021) discuss a symbiosis tension between tourism utilization and conservation. Panzera et al. (2021) investigate the impact of tangible cultural heritage on the tourism attractiveness of European regions. They show that the presence of UNESCO sites reduces the distance decay effect. International tourists, when not faced with barriers, are willing to travel longer distances if a destination is endowed with UNESCO cultural World Heritage Site status. According to, e.g., Bloch (2016) and Allen and Lennon (2018), poor legislation, management and some inappropriate tourism operations are leading to conflicts between heritage conservation and tourism development. On the other hand, tourism development can create new values and can be seen as a tool to combat poverty in less developed countries/destinations and promote sustainability (Su et al., 2016; Vargas, 2018; Lin et al., 2020; Maruyama & Woosnam, 2021).

Several authors (Shen et al., 2014; Park et al., 2019; Fu, 2019; Katahenggam, 2020) pay attention to the significance of authenticity, which is important for heritage tourism. Authenticity and its perception increase the heritage destination value (Kolar & Žabkar, 2010). On the other hand, the acceptance of authenticity itself depends on tourists' perceptions. Tourists' satisfaction and their level of education are the main factors influencing their perception of the outstanding universal value of UNESCO sites (Verma & Rajendran, 2017; Alazaizeh et al., 2020). This outstanding universal value is beneficial for enhancing the international and national image and tourism attractiveness of destinations where these sites are located (Parga-Dans et al., 2020). It is generally believed that the inscription of a site on the UNESCO list positively impacts local tourism demand (Zhang et al., 2022). The effects of the sites on the World Heritage List on tourism, of course, vary from country to country and region to region. They are monuments of global significance. As mentioned, these monuments have a special protection status and are of great importance, especially in international tourism (Kučová, 2009). All the above confirms that UNESCO list inscription is an advantage. Several factors (Johnová, 2008) influence the visitor numbers at the UNESCO site. There are some factors on the site itself (internal ones), such as the type of attraction, whether indoor or open air, opening hours, regulation of visits, etc. Other factors (external ones) are the social and economic situation in the destination, the structure of the visitors in the destination (domestic/international, one day visitors/tourists), and location, including accessibility, seasonality, and regional importance. Of course, there are also the general factors influencing tourism development (Holloway & Humphreys, 2020), which can impact the number of visitors, e.g. terrorism, natural disasters, diseases/pandemics.

Tourism Impacts on UNESCO Sites and COVID-19 Impact

According to Zhang et al. (2022), great attention is paid to the impacts of tourism on World Heritage Sites, such as environmental, economic, social, and cultural. The highly intensive tourist demand and the number of World Heritage Sites visitors is a great challenge for sustainability (Li et al., 2008; Berg, 2018). Tourism development has both positive and negative impacts on World Heritage Sites, an obviously positive economic impact in smaller sites, and negative impact on, for example, the local population in bigger cities such as Venice and Barcelona (Kumar, 2019). New standards for sustainable tourism in UNESCO sites are being adopted (Kumar, 2019; Pedersen, 2020). On the other hand, World Heritage Sites impact tourism development in destinations and places where they are located (Yang et al., 2019).

According to UNWTO statistics (2021), with few exceptions (e.g. 2003, 2009), international tourism was constantly growing for decades until 2019. At a certain development stage, the situation, especially in cities, became unsustainable. Similarly to the general development, tourism grew in the Czech Republic till 2019. In 2019, 22 million guests stayed in collective accommodation establishments in the Czech Republic (CZSO, 2020). Due to the COVID-19 pandemic, tourism was almost paralysed in 2020. The number of accommodated guests fell to 10.8 million in 2020 (CZSO, 2021), which meant a decrease of 51%. The number of foreign guests fell from 10.9 million in 2019 (CZSO, 2020) to 2.8 million in 2020 (CZSO, 2021), which is an even higher drop of 74%. That means domestic tourism dropped less than international tourism in the Czech Republic. COVID-19 has affected all sectors and regions worldwide and has deeply impacted the entire cultural ecosystem. The world's 1,000-plus UNESCO World Heritage properties were no exception. World Heritage Sites experienced a 66% drop in visitation and a 52% decline in ticket sales in 2020 because of COVID-19 (UNESCO, 2021a). The uncertain surroundings of this crisis changed the policy of re-alignment of properties towards domestic tourism in the short term. According to a study (Falk et al., 2022), in the summer season of 2020 (July and August), official data of 65 regions in four countries in Europe (Austria, the Czech Republic, Germany, and Switzerland) showed that the domestic overnight stays evolved unevenly, with decreases from 10% in sparsely populated areas up to 27% in densely populated regions. The different impacts on the different site types described by Caruana et al. (2021) highlight the lower effect of the pandemic on open-air (archaeological) sites and the important role of such open-air sites within the local community. Also, the official data from CzechTourism (see https://tourdata.cz) confirms that the most visited attractions during the COVID-19 pandemic years are the open-air attractions, in comparison with indoor attractions. As COVID-19 is widely recognized as a challenge or even a game-changer for travel and tourism, Higgins-Desbiolles (2021) explains how advocates of tourism industry rapid recovery stand opposed to wider efforts to reform tourism to be more ethical, responsible, and sustainable. In response to the pandemic, UNESCO (2021b) launched global monitoring to assess, among other things, the impact of COVID-19 on the cultural sector as whole. The downturn in tourism has had a deep financial impact on heritage sites, thereby weakening their conservation and preservation. Therefore, the reactivation of more sustainable, resilient, and inclusive tourism in the long term will be a priority. This will include working onsite with local communities and site managers to reflect on and design new ways of preserving sites, promote sustainable tourism models, and emphasize the importance of sustainable development approaches in line with the World Heritage Sustainable Development Policy (UNESCO, 2015).

The synthesis of the current knowledge shows that the effect of the World Heritage Site List enhances the site's attractiveness and positively influences tourism demand. On the other hand, a synthesis confirmed that other factors (like the COVID-19 pandemic) are influencing the tourism demand (number of visitors), both domestic and international.

Methods and Aim

The paper aims to bring new insight into the UNESCO sites situation during the COVID-19 pandemic and answer whether UNESCO heritage list inscription was an advantage during the COVID-19 pandemic and what role the international importance of these sites played in the results.

As the published research acknowledges both positive and negative effects on the destination and the situation with the pandemic was completely unprecedented, the first stage of the research was brainstorming. During the brainstorming, the findings from literature were discussed and two additional ideas emerged: (1) Residents will expect that the usually overcrowded sites will be pleasant for a visit now and will tend to visit the UNESCO sites and their attractions, and (2) the UNESCO sites are more dependent on international tourists than the others, and the domestic tourism will not be sufficient to cover the decrease in international tourism. These ideas raised more questions, such as what was the real development in UNESCO sites and if it was different from the non-UNESCO sites?

The research questions are formulated as follows:

- RQ1 *Is inscription into the UNESCO heritage list an advantage during the COVID-19 pandemic?*
- RQ2 *What role does international tourism play in the UNESCO sites during the COVID-19 pandemic?*

The following hypotheses are developed in line with the research questions:

- H1a *The decrease in visitor and tourist numbers will be on average smaller in UNESCO sites than in non-UNESCO sites.*

Comparative analysis is used with these criteria: (1) change in the number of visitors in UNESCO attractions compared to change in the non-UNESCO attractions. The change between 2019 and 2020 is considered. (2) change of the tourists in collective accommodation establishments (CAE). The decrease is analysed and compared in the two groups. *F*-test is applied to test the variance, and *t*-test is applied to test the significance of the difference. The tests were done on the 95% significance level.

- H1b *The average decrease of visitors in UNESCO attractions will be smaller than the average decrease in the region.*

The change in visitor numbers to the UNESCO attractions are taken and compared to the total numbers of visitors to all attractions in the regions. The decrease is compared individually, and average values are calculated. The year-to-year changes are compared.

- H1c *The recovery is faster in UNESCO sites than in non-UNESCO sites.*

The statistics from CAE are analysed, explicitly the change in tourist numbers/number of guests and amount of nights/number of overnight stays of tourists in the accommodation establishment. The change in both indicators is compared. The numbers from 2020 and 2021 are compared. *F*-test is applied to test the variance, and *t*-test is applied to test the significance of the difference. The tests are done on the 95% significance level. Unfortunately, the number of visitors to the attractions in 2021 have not been published at the date of elaboration of this paper (June 2022).

H2a *The UNESCO sites are more dependent on international tourists than the non-UNESCO sites.*

For this hypothesis the statistics from CAE are analysed, explicitly the share of international tourists in the number of tourists and nights at the site. F-test is applied to test the variance, and t-test is applied to test the significance of the difference. The tests are done on the 95% significance level.

H2b *The decrease in visitors to UNESCO sites is mainly influenced by the decrease in international tourists, as they are the most frequent visitors.*

The data on the decrease in visitor numbers in the UNESCO attractions and international tourists in CAE are compared, and the correlation coefficient is calculated.

H2c *For the results of non-UNESCO sites, domestic tourists are more important than international ones.*

The data on the decrease in visitor numbers in the non-UNESCO attractions and domestic tourists in CAE are compared, and the correlation coefficient is calculated. The SPSS program is used to make the calculations and test the significance.

Data sources are different for attractions and CAE. The attractions are monitored, and the number of paying visitors is reported; one tourist can be reported more times on different attractions. There is a platform in the Czech Republic managed by CzechTourism (the Czech NTO – National Tourism Organization), tourdata.cz, where all the information is available. The data are reported directly from the attractions based on their ticket sales or entrance monitoring. Unfortunately, the visitors are not monitored according to the country of origin, so there is no information about the share of international tourists. Tourists in CAE are reported by hotels to the Czech Statistical Office (CSZO) and represent one person arriving at the destination. Nights are reported by CAE and represent how many nights the tourists stayed in the destination. This is taken from the Czech Statistical Office. The statistics do not include tourists staying in private apartments.

The Czech Republic has 16 tangible attractions on the UNESCO list. 14 of them are cultural ones. Analysis and comparison include 12 cultural UNESCO attractions in 9 towns/sites. One of the excluded UNESCO sites is Prague, with the specifics of the capital and big city, where the influence of UNESCO/non-UNESCO could be negligible. The second excluded site is Villa Tugendhat in Brno for a similar reason. One villa in the whole of Brno would probably have a negligible effect on the total numbers, and it would be impossible to detect the impact of UNESCO inscription among many others. Considering the aim of the paper, all relevant attractions are included in the analysis.

The second step was to choose the appropriate sites for comparison. As authors apply the statistical methods, the bigger the sample, the better. Therefore, as many relevant attractions as possible were selected. Nonprobability sampling was performed. Based on the number of visitors, attraction character, and location, 19 similar attractions were chosen for comparison. However, during the analysis it was found that 4 rely mostly on one-day visitors, and there is no data for accommodation available in the towns/villages. These were excluded. Therefore, 15 attractions in different sites were selected as suitable for comparison. The statistical methods allow different size of samples and, considering the low numbers, every additional data point can increase the reliability. The character of the attractions is cultural and sacral, mostly castles and chateaux, as the UNESCO sites are also cultural ones. The level of protection was not one of the selection criteria, as authors approach the attractivity of the attraction from the visitors' perspective. However, most of the non-UNESCO attractions are protected on the national level (national cultural monument).

The paper uses an empirical analysis based on dynamic panel data methodology for 2019–2020.

Research Results

As mentioned, there are 12 UNESCO sites and 15 non-UNESCO sites in the sample. Table 1 presents the name, UNESCO heritage list inscription, the number of visitors in 2019 and 2020, and the percentage change. The order is according to the percentage change in the number of visitors.

Table 1 presents the attractions in the sample and the basic information. The percentage decrease ranks the attractions in visitor numbers, and 7 out of the 10

Table 1 Attractions in the Sample

Name	UNESCO?	2019	2020	Change*
Kostnice/Kutná Hora	Y	482646	123800	−74.35
St. Prokop Basilica	Y	44800	12000	−73.21
St. Barbora Church/ Kutná Hora	Y	347500	114100	−67.17
Telč Castle	Y	72900	25100	−65.57
Italian Court/Kutná Hora	Y	32600	12300	−62.27
Konopiště Castle	N	148000	67500	−54.39
Litomyšl Castle	Y	53310	26600	−50.10
Český Krumlov Castle	Y	386300	196400	−49.16
Vsetín Castle	N	45100	23700	−47.45
Karlštejn Castle	N	212400	120100	−43.46
Vranov nad Dyjí Castle	N	69400	43100	−37.90
Valtice Castle	Y	212500	135900	−36.05
Hluboká Castle	N	292930	191500	−34.63
Svojanov Castle	N	83500	54700	−34.49
Lednice Castle	Y	389400	256000	−34.26
Velehrad Basilica	N	259847	176800	−31.96
Buchlovice Chateau	N	101400	71400	−29.59
Lipnice Castle	N	31100	22300	−28.30
Želiv Monastery	N	10900	7900	−27.52
Jindřichův Hradec Castle	N	71880	52300	−27.24
J. Nepomuk Church Zelena Hora	Y	33600	24900	−25.89
Kroměříž	Y	177500	136100	−23.32
Hrad Lichnice	N	22800	18800	−17.54
Třebíč Castle	Y	39500	34800	−11.90
Cimburk Castle	N	23500	22200	−5.53
Bítov Castle	N	66200	68200	3.02
Svatý kopeček Mikulov	N	261200	278900	6.78

Notes * In percent. Based on data from the Czech Tourism (www.tourdata.cz).

worst are on the UNESCO list. In comparison, only 3 out of the 10 best ones are inscribed on the UNESCO list. Already this indicates that UNESCO inscription is not necessarily an advantage.

The attractions are grouped into UNESCO and non-UNESCO attractions. First, the samples are tested with the F-test if the variance is the same. First, the change in the number of visitors is compared. A result of 0.68 (F-crit = 0.39) leads to the rejection of the null hypothesis. The t-test with the t-stat 2.33 (t-crit(1) = 1.72) leads to the rejection of the null hypothesis. The tests are done on the 95% significance level. The analysis of CAE numbers reveals the opposite result. The variance in both samples is similar (F-test = 0.25, F-crit(1) = 0.33), the correct t-test is applied, and the result (t-stat = 0.55, t-crit(2) = 2.07) leads to support of the null hypothesis. The means −41.67% and −38.65% are not significantly different. This different result in visitors to the attractions and the tourists' numbers in CAE can be explained by higher dependence of UNESCO sites on the one-day visitors.

Hypothesis H1a: 'The decrease in visitor numbers will be on average smaller in UNESCO sites than in non-UNESCO sites' is rejected because the results show a significant difference in the means (−27.28 and −46.15). Indeed, the UNESCO inscription seems to be rather a disadvantage for the sites. In terms of accommodation, neither advantage nor disadvantage has been confirmed.

The comparison to the regional numbers (H1b) also leads to the conclusion that being on the UNESCO list is rather a disadvantage in the COVID-19 pandemic. In individual cases, 5 out of 12 UNESCO attractions have a smaller decrease, and 7 have a more significant decrease than the whole region. For statistical comparison, the F-test is applied to analyse the variance and then the t-test. As the hypothesis supposes the mean in UNESCO sites will be smaller, the one-side criterium is used (t-crit(1) = 1.76), and the result, −2.14, leads to rejecting the null hypothesis and acceptance of the significant difference between the means −47.77% in UNESCO attractions and −33.49 in regions as a whole.

The following hypothesis H1c assumes that the UNESCO sites will start growing faster than the non-UNESCO sites. The data from CAE from the years 2020 and 2021 are compared.

The results show an opposite trend than in Table 1. Out of the 10 best-growing sites, 6 are inscribed on the UNESCO heritage list. Out of the 10 worst, 8 are not UNESCO sites. To decide about the hypothesis H1c: The recovery is faster in UNESCO sites than in

Table 2 Number of Tourists in CAE in 2020 and 2021 in the UNESCO and Non-UNESCO Sites

Name	UNESCO?	2020	2021	Change*
Velehrad Basilica	N	4402	7302	65.88
Telč Castle	Y	11841	15061	27.19
St. Prokop Basilica	Y	16039	20034	24.91
Třebíč Castle	Y	16039	20034	24.91
Kroměříž	Y	17587	21773	23.80
Kostnice/Kutná Hora	Y	26168	31566	20.63
St. Barbora Church/ Kutná Hora	Y	26168	31566	20.63
Italian Court/Kutná Hora	Y	26168	31566	20.63
Valtice Castle	Y	20841	24712	18.57
Vsetín Chateau	N	10390	12252	17.92
Svatý kopeček Mikulov	N	65697	77418	17.84
Želiv Monastery	N	6317	7351	16.37
J. Nepomuk Church Zelena Hora	Y	14161	16244	14.71
Vranov nad Dyjí Castle	N	11608	13235	14.02
Litomyšl Castle	Y	12457	13944	11.94
Lichnice Castle	N	7481	8323	11.26
Konopiště Castle	N	11818	12915	9.28
Lednice Castle	Y	34499	37610	9.02
Cimburk Castle	N	1930	2087	8.13
Buchlovice Chateau	N	11901	12662	6.39
Hluboká Castle	N	37666	39667	5.31
Jindřichův Hradec Castle	N	18685	19045	1.93
Bítov Castle	N	20536	20658	0.59
Svojanov Castle	N	2412	2390	−0.91
Karlštejn Castle	N	10526	10098	−4.07
Český Krumlov Castle	Y	109791	100456	−8.50
Lipnice Castle	N	988		

Notes * In percent. Based on data from the Czech Statistical Office (https://vdb.czso.cz/).

non-UNESCO sites, the relevant data are analysed and tested. For the analysis of the data from CAE, the sample slightly changes. There are no data for Lipnice for the year 2021, so only 14 non-UNESCO sites are analysed. Three UNESCO attractions are in Kutná Hora, so only 10 UNESCO sites are in the analysis.

Whereas the mean of the growth in non-UNESCO sites is 12.14%, the mean of the growth in UNESCO sites is 16.71%. First, again the F-test is applied to test the variance. The result, 0.40, exceeds the *F*-crit 0.33, and the variance in the samples is statistically different (288.50 and 115.01). It can be assumed that the UNESCO sites grow as a group, and individual conditions influence the non-UNESCO sites. The hypothesis supposes that the growth in UNESCO sites is higher; we can check the one-side criterium to evaluate the hypothesis (t-stat = 0.81, T-crit(1) = 1.72). With this result, it is impossible to reject the null hypothesis, and we must admit that the difference in growth is not statistically significant.

However, with deeper insight, there is one exceptional site among the non-UNESCO sites with a growth of 65.88% (the Velehrad Basilica), an outlier. As this is an exception among the sites, the question arises of how the situation changes if the site is excluded. The mean of the growth of non-UNESCO sites decreases to 8.01% (from 12.14%). The variance, in this case, is statistically not significantly different (F-stat = 2.16, F-crit(1) = 2.80). The correct t-test is applied with the following result: t-stat = 2.31, t-crit(1) = 1.72; it leads to rejection of the null hypothesis, and the idea of the faster recovery of UNESCO sites represented by the year-to-year growth is supported in the adjusted sample.

Approaching the second research question: What role does international tourism play in the UNESCO sites during the COVID-19 pandemic? The first hypothesis H2a: The UNESCO sites are more dependent on international tourists than the non-UNESCO sites, will be tested. Data from the CAE in 2019 are analysed.

The mean shares of international tourists in UNESCO and non-UNESCO sites are 27.24% and 19.42%, respectively. Firstly, the F-test supports the null hypothesis, and samples have statistically the same variance. The difference in the share of international tourists and nights in UNESCO and non-UNESCO sites is compared. The t-test 1.25 and 1.50 are within the criteria 1.71 and support the null hypothesis that the shares are similar. We can reject hypothesis H2a that the UNESCO sites depend more on international tourism based on this sample. This correlates with the second part of hypothesis H1a, that the decrease in tourist

Table 3 Tourists in CAE in 2019

Name	UNESCO?	Number	(1)	(2)
Český Krumlov Castle	Y	193425	71.20	64.40
Hluboká Castle	N	46533	53.12	43.01
Svatý kopeček Mikulov	N	51901	41.75	33.82
Kostnice/Kutná Hora	Y	16455	32.35	33.68
St. Barbora Church/Kutná Hora	Y	16455	32.35	33.68
Italian Court/Kutná Hora	Y	16455	32.35	33.68
KoNpiště Castle	N	7899	31.29	31.26
Telč Castle	Y	4891	28.88	29.45
Vsetín Chateau	N	4465	28.30	34.65
Velehrad Basilica	N	2520	27.41	27.69
Litomyšl Castle	Y	5174	25.50	29.03
Kroměříž	Y	7779	25.06	24.13
Jindřichův Hradec Castle	N	6533	21.30	23.49
St. Prokop Basilica	Y	5670	20.99	19.60
Třebíč Castle	Y	5670	20.99	19.60
Lednice Castle	Y	11154	19.59	17.12
Karlštejn Castle	N	4161	19.18	19.14
Buchlovice Chateau	N	2478	15.26	14.42
Valtice Castle	Y	4791	15.25	13.57
VraNv nad Dyjí Castle	N	2435	14.21	6.96
J. Nepomuk Church Zelena Hora	Y	3083	12.57	14.07
SvojaNv Castle	N	348	9.40	8.44
Želiv Monastery	N	793	8.08	6.14
Hrad Lichnice	N	932	7.19	6.97
Bítov Castle	N	1572	7.06	6.58
Cimburk Castle	N	102	4.92	2.80
Lipnice Castle	N	67	2.78	1.88

Notes (1) share of international tourists, (2) share of international tourists in nights, in percent. Based on data from the Czech Statistical Office (https://vdb.czso.cz/).

numbers in CAE is not significantly different in UNESCO and non-UNESCO sites.

To decide about hypotheses H2b and H2c, the correlations are calculated in SPSS for both groups, UNESCO and non-UNESCO. The following variables are included: change in visitor numbers (attraction), change in total tourist numbers (CAE), change in domestic tourist numbers (CAE), change in international tourist numbers (CAE). Results are presented in Tables 4 and 5.

Table 4 Correlation Matrix for UNESCO Sites

		UNVIS	UNTOT	UNDOM	UNINT
UNVIS	(1)	1	0.170	−0.167	0.467
	(2)		0.596	0.603	0.126
UNTOT	(1)	0.17	1	−0.163	0.744**
	(2)	0.596		0.612	0.006
UNDOM	(1)	−0.167	−0.163	1	−0.404
	(2)	0.603	0.612		0.193
UNINT	(1)	0.467	0.744**	−0.404	1
	(2)	0.126	0.006	0.193	

Notes UNVIS – visitors change in the UNESCO attraction, UNTOT – tourists change in CAE in total in UNESCO sites, UNDOM – domestic tourists change in CAE in UNESCO sites, UNINT – international tourists change in CAE in UNESCO sites, (1) correlation, (2) significance (2-tailed). ** Correlation is significant at the 0.01 level (2-tailed). Based on data from the Czech Statistical Office (https://vdb.czso.cz) and from the Czech Tourism (www.tourdata.cz).

The table works with changes in the numbers, not with the absolute numbers. The correlation indicates how much a decrease in one variable correlates with a decrease in another variable. First, the UNESCO sites are analysed.

The tourist change in CAE in total is strongly and significantly correlated with the international tourists' decrease in CAE, demonstrating a significant role of international tourism in these sites for CAE and the effect of losing this segment. The other correlations are not significant. The correlation between change in visitors in attractions and the decrease in international tourists in CAE is, however, high (0.467) and is the second highest out of the analysed variables. The correlation is not statistically significant. Even if this is a correlation, from the logical perspective, we can assume that the loss of international tourism had the most significant impact on the visitor numbers at UNESCO sites. In contrast, the decrease in domestic tourists did not play a role.

Table 5 Correlation Matrix for non-UNESCO Sites

		VIS	TOTAL	DOM	INT
VIS	(1)	1	0.486	0.457	0.393
	(2)		0.066	0.087	0.147
TOTAL	(1)	0.486	1	0.843**	0.653**
	(2)	0.066		<0.001	0.008
DOM	(1)	0.457	0.843**	1	0.440
	(2)	0.087	<0.001		0.101
INT	(1)	0.393	0.653**	0.440	1
	(2)	0.147	0.008	0.101	

Notes VIS – visitors change in the non-UNESCO attraction, TOTAL – tourists change in CAE in total in non-UNESCO sites, DOM – domestic tourists change in CAE in non-UNESCO sites, INT – international tourists change in CAE in non-UNESCO sites, (1) correlation, (2) significance (2-tailed). ** Correlation is significant at the 0.01 level (2-tailed). Based on data from the Czech Statistical Office (https://vdb.czso.cz) and from the Czech Tourism (www.tourdata.cz).

In the non-UNESCO sites, the total decrease in tourist numbers strongly and significantly correlates with the decrease in domestic tourist numbers (0.843). However, in the sample, the decrease in international tourists is also significantly correlated with the total decrease (0.653). This confirms the dominant effect of domestic tourism in non-UNESCO sites from the CAE perspective. Considering the change in visitor numbers in the attractions, both domestic and international tourist numbers are correlated. The correlation of domestic tourism development is stronger; none of them is statistically significant.

Conclusion and Discussion

Based on the analysis, the authors can answer the question: is inscription into the UNESCO heritage list an advantage during the COVID-19 pandemic? The results reveal that for the attractions, UNESCO inscription was rather a disadvantage in the first year of the pandemic. This answer is supported by comparing the UNESCO and non-UNESCO attractions and the comparison of the regions as a whole. The second year brought a faster recovery in UNESCO sites. The second question, dealing with the role of international tourism in the UNESCO sites during COVID-19 pandemic, is also answered, even if the answer is ambiguous.

Hypothesis H2a has been rejected. The *t*-test did not support higher dependence in terms of tourist numbers nor in terms of tourist nights for the UNESCO sites. The difference in share of 27.24% vs. 19.42% was not statistically significant enough. Within the discussion, it must be mentioned that the non-UNESCO sites in the sample were the most important ones. Considering that the others will be rather of regional and local importance and their share of international visitors will be even smaller, the share of international tourists in UNESCO vs. non-UNESCO sites, in general, could be seen from a different perspective. The further hypotheses confirmed the effect of decrease of international tourists in terms of CAE in UNESCO sites and revealed a high correlation with the decrease in visitor numbers (not significant). The CAE in non-UNESCO sites performs higher dependence on domestic tourism changes. Indeed, the analysis also confirmed the significant role of changes in international tourist numbers. The correlations with the change in visitor numbers are stronger for changes in domestic tourism; the change in international tourism is also positively correlated.

Authors can conclude that the UNESCO sites are less influenced by domestic tourism than the non-UNESCO, but international tourism plays a role in both types. It must be mentioned again that important and highly visited attractions were selected for the research.

The main limit of the research is the number of the analysed sites in the sample. The size of the sample is influenced by the objective conditions. The number of UNESCO sites is given in the Czech Republic. To be able to compare data from CAE for UNESCO and non-UNESCO sites, only similar attractions located in towns/villages with own accommodation facilities were needed. And, therefore, the number of non-UNESCO sites is also limited.

Regarding the future research directions, an analysis of larger destinations (Prague, Budapest, etc.) would be worth researching. The cities offer more types of tourism, and cultural tourism is only one.

More factors will influence the changes and results. It is also interesting how the COVID-19 pandemic affected the perception of the UNESCO brand in domestic tourism.

The COVID-19 pandemic had a devastating effect on tourism. The pandemic and the restrictions especially endangered entrepreneurs. However, some attractions suffered in 2019 by overtourism, and this is a good opportunity to restart the strategy and manage the attractions in more sustainable ways. The pandemic showed the vulnerability of tourism and especially of international tourism. From the managerial perspective, it is important for UNESCO sites (Pedersen, 2020) to diversify the target groups and audience, and to focus on quality instead of quantity. The pandemic was a shock and caused a crisis. But after the crisis it is important to take the good from the development. The pandemic showed the potential of virtual reality, ICT, reservation systems, and other technologies. The situation forced both UNESCO and non-UNESCO sites to communicate current issues and restrictions on time, mainly online, and to inform visitors what to expect. This might be taken as an opportunity to continue with communication and to educate future visitors in terms of sustainability and responsibility. The second lesson learned is the diversification of the products offered. Open-air attractions were less affected; this might be an impulse to develop additional products which will offer a different kind of leisure activity and can complement the indoor product. This approach could increase resilience and help with spatial distribution of the tourists and contribute to sustainability.

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eLearning Courses for Tourism and Heritage during a Pandemic: The Case of 'Tourism Management at UNESCO World Heritage Sites (Vol. 3)'

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The tourism industry relies heavily on new technological advancements; through them, hospitality and service businesses can perform their operations, influence and predict future trends and visitors' demands, and create new experiences. Due to its characteristics – high staff turnover, seasonality, a delicate equilibrium of micro, small and medium enterprises as well as global business conglomerates – the tourism sector must adapt at the same pace of innovations in digital technologies in order to survive. Education and training have been adopting digital media and Information and Communication Technologies (ICTs) extensively in instances where traditional face-to-face lessons are not possible or sustainable. Where learning activities happen online thanks to digital means, we speak of 'eLearning,' which has shown to be beneficial in terms of cutting costs, offering time and space flexibility and, in the case of the tourism industry, in keeping tourism operators continuously updated, upskilled and engaged with industry and consumer trends. With the outbreak of COVID-19 in 2020, the usefulness and flexibility of digital technologies for education and training have become even more apparent. Remote work or telecommuting have become an integral part of people's lives and workplaces. In many instances, eLearning proved to be the key element for an industry's survival – and in some cases success. In this paper, the case of a particular type of eLearning phenomenon will be analysed: that of so-called Massive Open Online Courses, or 'MOOCs.' The example of the third volume of a MOOC series dedicated to tourism and heritage, 'Tourism Management at World Heritage Sites (Vol. 3),' will be used to outline the characteristics of its learners, as well as to show the significance and relevance of eLearning for the tourism and heritage sector.

Keywords: eLearning, Tourism, Heritage, MOOCs, ICTs

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Introduction

Tourism's properties must be understood in order to truly understand the sector. One of its defining features is that the majority of its firms are either small, medium, or even micro enterprises, along with all of the issues this entails for their operational structures and dynamics. Only a small number of tourism businesses are huge international conglomerates, yet they face the same difficulties as their smaller peers, but on a larger and global scale. Coordinating their branches through standardized strategies and skill sets is already one of the most important responsibilities for the enterprise's sustainability.

Even more daunting is the industry's tendency to suffer from skill shortages and employee turnover (one of the worst in the world) (HEFCE, 1998); training proves thus to be a significant time- and resource-consuming issue (Cantoni et al., 2009). The ability to afford and deliver continuous education and advanced upgrading courses to one's personnel is a critical success factor for tourism as an industry (Boisevert, 2000). Information and communication technologies (ICTs) have repeatedly shown to be an ideal instrument for training in this context. Indeed, digital technologies are being used to overcome constraints regarding accessibility, time, and cost, as well as to bring additional flexibility in learning and training to meet distinct work conditions (Sigala, 2002).

In the years following the outbreak of the ongoing COVID-19 pandemic, the numerous inter- and intranational restrictions on movement of people (if not outright travel bans) and lockdowns have, in many instances, halted the whole world, including tourism. The pandemic's impact on already faltering economies has rendered tourism particularly vulnerable, making it the most damaged sector thus far (Pololikashvili, 2020), although the trend seems to be reversing in 2022. During the first months of the disease's global spread, many tourist operators had to discover new methods in order to adjust their companies. This was a chance for everyone, from the housebound tourist to the CEO of an international tour operator, or even the policymakers or stakeholders of national tourism ministries attempting to reorganize their country's tourism business, to rediscover the value of ICTs for training and tourism. Some organizations or institutions, such as the UNESCO Chair in ICT to develop and promote sustainable tourism in World Heritage Sites at USI – Università della Svizzera italiana (Lugano, Switzerland), had already begun focusing on and researching the various ways ICTs, particularly eLearning, can be applied to tourism education, and had made their archives and resources available all.

The focus of this article will be on a Massive Open Online Course (MOOC) published in English and Arabic in May 2021 (and closing in December 2022) available on the French platform FUN MOOC: 'Tourism Management at UNESCO World Heritage Sites (Vol. 3).'[1] Following its presentation, it will serve to outline the learners' motives for taking a course focusing on tourism in heritage sites, as well as to display how they interact with e-classmates, instructors, and course materials. The UNESCO UNITWIN Network 'Culture, Tourism, Development,' coordinated by Paris 1 Panthéon-Sorbonne (Paris, France), created the MOOC, which was released on 24 May 2022. The course addresses many areas of tourism management at UNESCO World Heritage Sites: Tourism Interpretation, Tourism Marketing, Site Management Systems, UNESCO's Heritage Conventions, Local Communities' Involvement, Sustainable Tourism, and ICTs for Heritage Tourism. This training course is designed for and intended for policymakers, site managers, students, and other professionals of the tourism sector.

By 25 June 2022, the course had attracted 5,974 students from 164 countries. Based on the number of free course completion certificates provided as of their latest creation on the same date, 373 students eligible to receive a certificate (only a grade of 80% or higher would is awarded the free certification, so more students have surely finished the course with a lower grade) finished the course, indicating a completion rate of at least 6.2%.

Massive Open Online Courses (MOOCs): An eLearning Phenomenon

MOOCs appeared for the first time in 2008. Stephen Downes and George Siemens, two Canadian academics, created the first of its kind, which was based on a distributed peer-learning model. MOOCs are examples of open education resources (OER), which encourage researchers and institutions to make educa-

[1] https://www.fun-mooc.fr/en/courses/tourism-management-unesco-world-heritage-sites-vol-3/

tional materials available to everybody, allowing students and educators to reuse, repurpose, and remix them (Universities UK, 2013). Indeed, MOOCS are, by definition, online learning environments that provide full and free open access to an unlimited number of participants to various learning resources without the need for prior knowledge on the topic or entry requirements, and can be accessed from anywhere as long as an internet connection is available (Tracey, 2013; Murphy et al., 2017). MOOC resources often exist in the form of recorded or live video lessons, ad hoc written materials, quizzes, other peer-reviewed activities, and discussion forums (Lin & Cantoni, 2018; Lin et al., 2018).

The rising popularity and spread of MOOCS, as well as the growing number of famous schools and universities rebranding themselves as MOOC providers are generating major media interest. As a matter of fact, as reported on the website Class Central, the Indian Institute of Technology and MIT have the second and third biggest MOOC catalogue as of 2022, with 494 and 435 courses, respectively (the number has approximately doubled for both since 2021, when they had 230 and 235 courses); The Open University overtook them in 2022, reaching a total of 1,023 published MOOCS. The openness, flexibility, and scalability supported by these online courses is appealing to higher education institutions as well as tourism organizations wishing to train and educate their own staff.

At the close of 2021, approximately 19,400 MOOCS and 70 MOOC-based degrees had been launched or announced (Shah, 2021). The number of courses addressing tourism or historical subjects is unclear; no comprehensive list is available. Studies that attempted to establish one, such as Ryan et al. (2016), discovered at least 30 tourist MOOCS; in 2017, the Europeana Foundation (2017) estimated that there were approximately 400 heritage MOOCS. Still, this list of courses has at best a generic categorization, since it defines them as dealing with arts, humanities, or cultural heritage, but without specifying the objective they seek.

MOOCS are relatively new phenomena that have grown more important by the year. Their appearance and success spurred researchers to examine this eLearning method to a greater extent. Some of the principal investigation foci of MOOC studies will be briefly mentioned in the following paragraphs.

Research on Massive Open Online Courses

Before delving into the case at hand, various studies devoted to MOOCS will be presented: they were done to investigate the course structure, pedagogical and instructional design, evaluation, reception, usages, and efficacy. There is a considerable interest in understanding learners' perspectives in eLearning. In an article on learner motivation and self-directed learning (Fournier et al., 2014), control of learning was shown to be mainly maintained by learners. Furthermore, assessing the characteristics of participants through the use of learning analytics generated by them might reveal learner types and motivations, as well as draw attention to engagement, which Deboer et al. (2013) describe as a 'promising MOOC measure.'

Other studies have directed their focus on teachers' experiences in an effort to fill a vacuum in the current state of MOOC research. According to Lin and Cantoni (2018), instructor experience follows the three steps of the innovation-decision process: decision, implementation, and confirmation; their motivation to design and develop the MOOC was documented through semi-structured interviews.

Some researchers sought to identify the prospective providers with an interest in developing and delivering ICT-based training services. Studies attempted to map the eLearning offer by analysing the types of eLearning course distributors and their features and approaches in terms of delivery formats, eLearning tool types, and even reach. Academic institutions, public entities (divided into international institutions and destination management organizations), cultural heritage sites, museums, or UNESCO World Heritage Sites, NGOS, and individuals were identified as MOOC providers in the tourism and hospitality field (Cantoni et al., 2009).

MOOC research trends are another noteworthy subject: knowing which topics, models, theories, research methodologies, frameworks, and concepts are employed and how they lead to focused studies that are able to address the gaps in MOOC research literature (Bozkurt et al., 2016).

Some studies have sought to analyse the success of MOOCs by measuring student engagement. Kahn et al.'s (2017) research put at its centre reflexivity and how it may be induced by student interaction in online learning settings. Gamage et al. (2016), on the other hand, measured the effectiveness of 22 MOOCs by enrolling and participating themselves in the course experience, analysing the quality of the learning experience through the evaluation of the platforms used to host the courses.

Objectives

MOOCs dealing purely with tourism are still uncommon, but their importance, potential, and limitations have been newly recognized, leading to the development of fresh instances of online courses teaching about the industry's reality. Some of the inherent benefits of MOOCs include the fact that the Internet, which includes ICTs in general and eLearning in particular, provides great flexibility in specific work conditions; in an information-intensive domain like tourism, these adaptable characteristics are greatly valued, especially in situations comparable with the limits and restrictions of the COVID-19 pandemic.

Due to the scarcity of eLearning courses and MOOCs on tourism at heritage sites, the goal of this research is to find and outline what motivates learners to enrol in such MOOCs and how they engage as they advance through the course. This will ideally aid other course creators in constructing and incorporating MOOCs into their teaching programmes. The primary research objectives were thus: (a) to identify the learners' motivations for participating in such a MOOC; and (b) to identify their behavioural patterns in terms of effort, engagement, and satisfaction.

Methodology

To answer the research objectives, two distinct surveys were released for the course 'Tourism Management at UNESCO World Heritage Sites (Vol. 3)' – one at the start of the course on 24 May 2021 and one after all chapters had been published, on 28 June 2021 (henceforth they will be referred to as 'first survey' and 'final survey,' respectively). On 15 May 2022, when the data for this article was collected, the first survey had received 533 replies, while the final survey had 199 responses. On the same date, 5,832 students were registered in the course. The information gathered relates to demographics, education, participation motives, past eLearning experiences, level of effort and involvement, and transfer to professional practice. Data was collected and evaluated in order to discover learners' behavioural patterns and incentives to engage.

Results

The survey results pertinent to addressing the study goals will be presented and discussed in the following paragraphs.

MOOC Participants

When responding to the first survey, students were requested to share information on gender, age, educational level, and employment status. Before moving on to the data on motivations to participate, effort, and engagement, the findings are briefly presented to offer an indication of who the learners of tourism and heritage MOOCs are.

Starting with *gender distribution,* female learners made up 63.1% of survey respondents, compared to only 35.6% of male respondents. The remaining either did not state their gender (0.9%) or did not respond to the question (0.5%).

In terms of *age,* learners were born between 1946 and 2006. The birth intervals were distributed as follows: 1940–1949 (0.5%); 1950–1959 (2.2%); 1960–1969 (11.4%); 1970–1979 (16.1%); 1980–1989 (23.0%); 1990–1999 (31.8%); 2000+ (14.3%). This indicates that the average student ranged between the ages of 16 to 42.

The *educational level* of the respondents tended to be graduate: 40.3% of MOOC participants held a Master's degree, and 7.8% a PhD. Undergraduate degrees accounted for 37.4%, while secondary education or lower degrees accounted for 11.6%. Respondents having academic training outside of standard categorizations made up 2.0%, while learners that had not received any academic training and those that did not respond both represented 0.4% of the sample.

In terms of *employment,* 40.7% of respondents were employed; 20.8% were seeking employment; 0.7% had no occupation; 1.1% had previously retired; and 26.4%

Table 1 Demographics, Educational Level and Employment Status of Learners

Gender	Male	35.6
	Female	63.1
	Other/Not Specified	0.9
	No answer	0.4
Age	1940–1949	0.5
	1950–1959	2.3
	1960–1969	11.5
	1970–1979	16.2
	1980–1989	23.2
	1990–1999	32.0
	2000–	14.4
Educational level	Doctoral or equivalent	7.8
	Master or equivalent	40.3
	Bachelor or equivalent	37.4
	Secondary ed. or lower	11.6
	No academic training	0.4
	Other academic training	2.0
	No answer	0.4
Employment status	High school student	1.1
	University student	25.3
	Employed	40.7
	Looking for work	20.8
	No occupation	0.7
	Retired	1.1
	Other	9.8
	No answer	0.4

Notes In percent.

were still completing their education (of which 1.1% were high school students and 25.3% university students). Participants that did not respond were 0.5%, and 9.8% could not be sorted into a specific employment or education category.

Learners' Motivations for Their Participation in the MOOC

The first survey asked learners why they wanted to take a tourism and heritage MOOC. The questions would reveal the intrinsic and extrinsic motivations of learners: intrinsic motivations refer to activities performed because they are fundamentally interesting or delightful, whereas extrinsic motivations are described as acts performed because they result in a 'separable outcome' (Ryan & Deci, 2000). Students could choose multiple answers from a pool of three intrinsic motivations, four extrinsic motivations, and an option for undecided learners. The results are shown hereafter.

Examining the reasons for participating in the MOOC, the most common is intrinsic in nature: 'Because I am particularly interested in this topic' (47.5% of respondents chose this option). 'Because I enjoy learning new things' (39.6%) and 'Completing this course is a personal challenge' (16.1%) are second and third in the key intrinsic motivations.

The most common extrinsic motivation was connected to the respondents' careers: 39.2% of respondents answered 'Because in my opinion it could be an asset in my career (or my future career).' Others included: 'to assist me with my professional integration' (27.4%), and 'in order to access a better job' (12.2%). Other, more specific, reasons included the respondents' jobs being connected to tourism and heritage, and they were searching for more in-depth information and knowledge to better perform in their respective roles (1.7%).

A few of the respondents also stated that they were taking the course for no specific purpose: 'I have no particular reason' (1.3%).

Learners' Expectation about Effort and Engagement

In many instances, MOOC literature seeks to assess learner effort and engagement – defined as the time and energy students dedicate to educationally purposeful activities (Kuh, 2001) – in order to discover how learners act and what interests them and makes them engage in a course (Harper & Quaye, 2009), be it more general or more topic-specific material. In most situations, this information is gathered using surveys; some researchers, however, prefer interviews, student self-reports, experience sampling, direct observation, focused case studies, checklists and rating scales, instructor assessments of students, and work sample analysis (Mandernach, 2015).

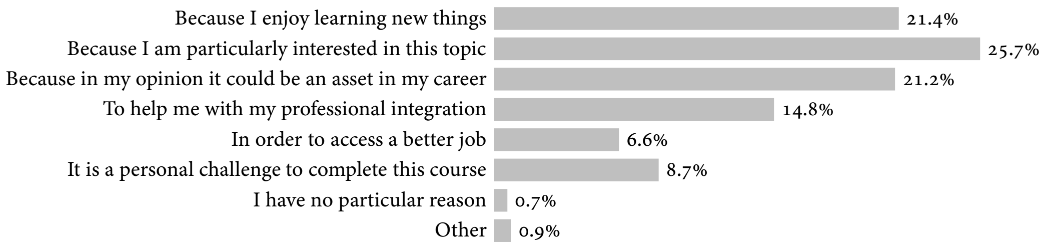

Figure 1 Motivations of Learners for Their Participating in the MOOC

Learners were invited to share their expectations on how they thought they intended to arrange their learning experience as part of the first survey. When asked how much hourly effort they expected to put into the MOOC every week, The majority of respondents said that in terms of hourly effort, for the most part they expected to invest in the MOOC 1–2 hours (39.7%) to 2–3 hours (30.0%), as opposed to 4–5 hours (17.6%), more than five hours (8.4%), and less than one hour (4.2%).

The majority also demonstrated a willingness and eagerness to engage in the MOOC: they intended to view most, if not all, of the videos (28.5% and 58.8%, respectively). Only 8.7% claimed they would watch some, while 4.0% said they would watch half of them.

Similarly, learners were expecting to complete the majority (36.0%) or all (51.9%) of the course activities (quizzes, homework, exams), 7.2% intended to do some, and 5.0% half of them.

The following projections revealed a different picture: in regard to how much respondents planned to participate in the MOOC's 'social' features (general discussion forum, Facebook group, peer evaluations), a slight majority of responses indicated a preference for engaging in some of the social MOOC elements. Specifically, the percentages were: some of them (41.7%); most of them (30.0%); all of them (16.6%); and half of them (11.4%).

Table 2 Learners' Expectations about Their Own Effort and Engagement

Expected weekly effort	Less than 1h	4.2
	1h to 2h	39.7
	2h to 3h	30.0
	4h to 5h	17.6
	More than 5h	8.4
Do you plan to watch the videos?	Some of them	8.7
	Half of them	4.0
	Most of them	28.5
	All of them	58.8
Do you intend to do the activities?	Some of them	7.2
	Half of them	5.0
	Most of them	36.0
	All of them	51.9
How much do you plan to contribute to the 'social' elements of MOOC?	Some of them	41.7
	Half of them	11.4
	Most of them	30.0
	All of them	16.6

Notes In percent.

Actual Effort and Engagement of Learners: Kirkpatrick's Model and National Survey of Student Engagement

The final survey, based on Lin & Cantoni (2017), was conceived as an assessment strategy using two frameworks: the Kirkpatrick model (Kirkpatrick, 1975) and the National Survey of Student Engagement (NSSE) tool. The Kirkpatrick model delineates four levels of training outcomes (reaction, learning, behaviour, and results) and established itself as an international reference point for training evaluation. The current study, based on its scope as well as on the survey's structure, focused only on the first two layers.

The NSSE survey has repeatedly demonstrated its reliability as the most established tool for measuring learner engagement; for this reason, it was used to address the second layer of Kirkpatrick's model, learning.

In 2014, it was later expanded into the *UKES MOOC Engagement Research Survey* (Wintrup et al., 2015). The 2014 version was used in the MOOC's final survey.

The term *reaction* refers to how much participants appreciated a particular training programme and the amount of time they dedicated to it. Reaction measures affective responses to the programme's quality or usefulness of training (Bates, 2004). The final survey revealed learners' high level of *time investment:* 73.8% spent 1 to 3 hours in the 'Tourism Management at UNESCO World Heritage Sites (Vol. 3)' MOOC and 18.1% studied for more than 4 hours every week. The remaining 5.4% claimed to engage with the course for less than one hour every week. The percentage of those who did not respond to this question was 2.7. The findings were comparable to the results of the first survey for students' expected weekly hourly effort.

Of all survey respondents, 96.6% were quite satisfied (24.8%) or completely satisfied (71.8%) with the competences they gained thanks to participating in the MOOC. The students that voiced some dissatisfaction were a total of 0.7%, while 2.7% of those that answered the final survey did not express their opinions.

The overall satisfaction of learners is demonstrated further by the fact that almost all would recommend the course to other peers or friends: 96.0% (yes, definitely 74.5%; yes, probably 21.5%). Only 1.3% would abstain from recommending this MOOC (0.7% for each of the answers: no, not really; no, not at all) and 2.7% gave no answer.

More than half of the participants claimed that they reached a good degree of *Higher order learning* (a learner's ability to undertake cognitive tasks, e.g. application, analysis, judgment, and synthesis, as opposed to simply memorizing facts and data) during the MOOC. The most agreed-upon statement was 'During this MOOC, you formed a new understanding from various pieces of the course' (very much 21.6%; quite a bit 26.1%), closely followed by 'During this MOOC, you memorized course content' (very much 19.1%; quite a bit 27.1%). The least agreed-upon statement was 'During this MOOC, you evaluated or judged a point of view, decision, or information source' (very much 11.1%; quite a bit 24.1%).

The perception of learners as to whether the course *challenged them to do their best* was measured: the outcomes showed that they are more interested in educational activities that are achievable with some degree of challenge. Almost three quarters of those polled (73.7%) confirmed they pushed themselves to perform their best in their learning efforts, 42.1% by answering somewhat agree, and 31.6% by answering strongly agree. Only 4.5% strongly disagreed with the statement, and similarly, 3.8% somewhat disagreed with it. Undecided respondents numbered 13.5%, and 4.5% did not respond to this question.

Collaborative learning regards the extent to which peers work together to solve issues or tackle challenging subject matter. The MOOC was mostly tackled individually by the learners – roughly a fifth of them interacted with other participants, while the others chose not to. To the question 'During this MOOC, you asked another learner to help you understand the course material' learners gave answers that ranged from never (72.9%) to sometimes (13.5%), with the other options achieving much smaller percentages of the total replies: 6.8% for often, and 3.0% for very often. The remaining 3.8% concluded that no response was required. The results for the question 'During this MOOC, you explained course material to one or more learners' revealed that 62.4% never did, some occasionally did (18.8%), and a small share of respondents

Table 3 Survey Respondents' Higher Order Learning

Item	(1)	(2)	(3)	(4)	(5)
Formed a new understanding from various pieces of the course	32.3	39.1	20.3	1.5	6.8
Evaluated or judged a point of view, decision, or information source	16.5	36.1	32.3	8.3	6.8
Analysed ideas or theories in depth by examining their parts	22.6	36.1	23.3	9.8	8.3
Applied facts, theories, or methods to new situations	26.3	34.6	19.5	12.0	7.5
Memorised course content	28.6	40.6	17.3	6.0	7.5

Notes In percent. Column headings are as follows: (1) very often, (2) often, (3) sometimes, (4) never, (5) no answer.

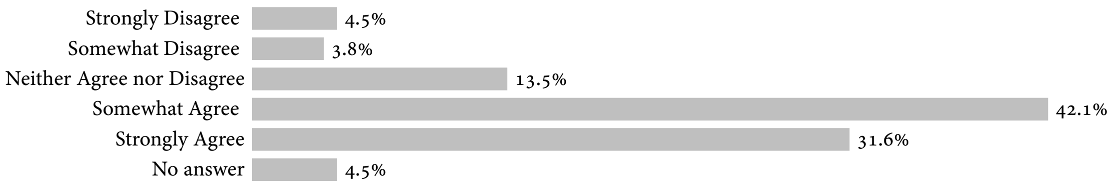

Figure 2 Course Difficulty as Perceived by Learners

Table 4 Survey Respondents' Collaborative Learning

Item	(1)	(2)	(3)	(4)	(5)
You asked another learner to help you understand the course material	3.0	6.8	13.5	72.9	3.8
You explained course material to one or more learners	6.8	7.5	18.8	62.4	4.5

Notes In percent. Column headings are as follows: (1) very often, (2) often, (3) sometimes, (4) never, (5) no answer.

Table 5 Academic Integration of Survey Respondents

Item	(1)	(2)	(3)	(4)	(5)
Discussed ideas from the course with others outside the course, including by email/online	6.0	15.0	32.3	40.6	6.0
Asked questions or contributed to course discussions	8.3	10.5	30.8	45.9	4.5

Notes In percent. Column headings are as follows: (1) very often, (2) often, (3) sometimes, (4) never, (5) no answer.

did so frequently for 7.5% of the time or very frequently for 6.8%. The remaining 4.5% did not respond.

In *Academic integration* the focus is not limited to course-related channels, but can potentially extend beyond the course scope and course learner base. A similar tendency noticed in *Collaborative learning* is replicated here. During the MOOC, only 18.8% of all replies (often 10.5%, very often 8.3%) indicated that they 'asked questions or contributed to course discussions.' A high percentage of the students (76.7%) chose not to exchange with fellow MOOC participants (never 45.9%, sometimes 30.8%). Those who did not respond were 4.5%. Interaction with others (not necessarily only learners) outside of official and related MOOC channels or even offline was limited: never 40.6%, sometimes 32.3%, often 15.0%, and very often 6.0%. Students that decided not to answer were 6.0%.

Reflective and integrative learning requires creating connections between learning materials and the settings in which they are presented, as well as re-examining and re-evaluating one's own beliefs and viewpoints, sometimes also through the eyes of others. Many of the 'Tourism Management at UNESCO World Heritage Sites (Vol. 3)' MOOC students used reflective and integrative learning throughout the duration of the course. In terms of integrative learning, for the most part students 'connected ideas from [the] course to prior experience and knowledge' during the MOOC: Often and Very Often both received 35.3% of answers for a total of 70.7% (sometimes 21.0%, never 1.5%, no answer 6.8%), followed by 'During this MOOC, you learned something that changed the way you understood an issue or concept' and 'During this MOOC, you examined the strengths and weaknesses of your own views on a topic or issue,' which gathered 61.7% and 57.1% of affirmative answers, respectively (sometimes 31.6% and 30.8%, never 0.8% and 4.5%, no answer 6.0% and 7.5%). Approximately half of those surveyed 'tried to better understand someone else's views by imagining how an issue looks from his or her perspective' (often 33.1%, sometimes 30.8%, very often 18.1%, never 10.5%, no answer 7.5%) and 'connected [their] learning to societal problems or issues' (sometimes 32.3%, often 23.3%, never 21.1%, very often 18.8%, no answer 4.5%).

Skills development assesses leaners' perception of whether there was an improvement in their analytical, critical or job-related skills thanks to their participation and learning in the course. More than half of MOOC participants acknowledged (often, very often)

Table 6 Survey Respondents' Reflective and Integrative Learning

Item	(1)	(2)	(3)	(4)	(5)
Connected ideas from your course to prior experience and knowledge	35.3	35.3	21.1	1.5	6.8
Learned something that changed the way you understood an issue or concept	24.8	36.8	31.6	0.8	6.0
Tried to better understand someone else's views by imagining how an issue looks from his or her perspective	18.0	33.1	30.8	10.5	7.5
Examined the strengths and weaknesses of your own views on a topic or issue	24.1	33.1	30.8	4.5	7.5
Connected your learning to societal problems or issues	18.8	23.3	32.3	21.1	4.5

Notes In percent. Column headings are as follows: (1) very often, (2) often, (3) sometimes, (4) never, (5) no answer.

Table 7 Survey Respondents' Skill Development

Item	(1)	(2)	(3)	(4)	(5)
Understood people of other backgrounds (economic, racial/ethnic, political, religious, nationality, etc.)	2.3	18.0	38.3	33.1	8.3
Developed or clarified personal values	3.8	25.6	33.1	29.3	8.3
Were innovative and creative	9.0	32.3	31.6	18.0	9.0
Became an independent learner	3.0	12.8	36.8	38.3	9.0
Acquired job or work-related knowledge and skills	13.5	22.6	33.1	23.3	7.5
Analyzed numerical and statistical information	21.8	38.3	20.3	9.8	9.8
Thought critically and analytically	2.3	18.8	38.3	33.8	6.8
Wrote clearly and effectively	14.3	25.6	31.6	21.1	7.5

Notes In percent. Column headings are as follows: (1) very often, (2) often, (3) sometimes, (4) never, (5) no answer.

that they indeed learned new skills. This was true for the following statements:

- 'During this MOOC, you became an independent learner' (very often 38.4%, often 36.8%, sometimes 12.8%, never 3.0%, no answer 9.0%),
- 'During this MOOC, you thought critically and analytically' (often 38.4%, very often 33.8%, sometimes 18.8%, never 2.3%, no answer 6.8%),
- 'During this MOOC, you understood people of other backgrounds (economic, racial/ethnic, political, religious, nationality, etc.)' (often 38.4%, very often 33.1%, sometimes 18.1%, never 2.3%, no response 8.3%),
- 'During this MOOC, you developed or clarified personal values' (often 33.1%, very often 29.3%, sometimes 25.6%, never 3.8%, no response 8.3%),
- 'During this MOOC, you acquired job or work-related knowledge and skills' (often 33.1%, very often 23.3%, sometimes 22.7%, never 13.3%, no answer 7.5%),
- 'During this MOOC, you wrote clearly and effectively' (often 31.6%, sometimes 25.6%, very often 21.1%, never 14.3%, no answer 7.5%).

Conversely, learners appear to have been not very innovative and creative throughout the MOOC (sometimes 32.3%, often 31.6%, very often 18.1%, never 9.0%, no response 9.0%), as well as avoided analysing numerical and statistical data (sometimes 38.4%, never 21.8%, often 20.3%, very often 9.8%, no answer 9.8%). The latter outcome might possibly lie in the fact that the course was not focused on numerical or statistical analysis.

As the seventh engagement indicator in the MOOC Engagement Research Survey (*Engagement with research*) was rated less relevant for the final survey of the 'Tourism Management at UNESCO World Heritage Sites (Vol. 3)' MOOC, *Course Resources* took its place. It investigates the relationships between learners and course content from the perspective of learner engagement. According to the final survey's responses, 53.4% of the MOOC's students viewed all and 19.6% most of the video lectures for a total of 73.0%, which is lower compared to learners' projections in the first

Table 8 Survey Respondents' Engagement with Course Resources

Item	(1)	(2)	(3)	(4)	(5)
Chose to purchase resources directly related to the course subject matter	9.8	15.0	17.3	48.1	9.8
Used additional resources that were not suggested within the course	13.5	24.8	33.1	20.3	8.3
Found the given resources useful	51.9	32.3	7.5	0.8	7.5

Notes In percent. Column headings are as follows: (1) very often, (2) often, (3) sometimes, (4) never, (5) no answer.

survey (87.3%). In terms of quizzes and peer-to-peer assessed activities, 85.7% and 28.6% completed all or most of them, respectively, compared to the first survey's 87.9% and 46.6%. When asked if they found the MOOC's materials useful, 84.2% of respondents indicated they indeed did (very often 51.9%, often 32.3%), while 7.5% found them useful occasionally, and 0.8% considered them to be of no use to them. The remaining 7.5% did not select an answer. For the most part, students chose to use course materials and materials recommended by instructors. Slightly more than a third of respondents looked for additional documents on their own (sometimes 33.1%, often 24.8%, never 20.3%, very often 13.5%, no answer 8.3%), while a fourth chose to 'purchase resources directly related to the course subject matter' (never 48.1%, sometimes 17.3%, often 15.0%, very often 9.8%, no response 9.8%).

Discussion

In the preceding sections, the data gathered through the two surveys of the MOOC 'Tourism Management at UNESCO World Heritage Sites (Vol. 3)' have been illustrated. This investigation had the goal of identifying and explaining characteristics and behavioural patterns of tourism and heritage MOOC participants in regard to why they enrol, how and to what extent they engage in such MOOCS. By having access to this, course designers are able to understand on a deeper level if their MOOCS perform well or not, and for what reason. It is essential to determine what these learners are seeking so that the offer may be adapted properly, both in terms of its content and instructional design and delivery.

Beginning with demographics, the surveys showed that the characteristics of the participants of the MOOC are comparable to prior findings in tourism eLearning research (Rosani et al., 2018; 2020). After three volumes of the 'Tourism Management at UNESCO World Heritage Sites' MOOC, these results may in part be explained with a certain amount of returning learners. However, with the data available to us, which was gathered automatically by the FUN MOOC platform, a precise 'census' of these returning learner base could not be done.

A differing result was the employment status of learners: there were fewer employed learners and more unemployed learners compared to the results in Rosani et al. (2018; 2020); seeing how tourism was one of the hardest hit industries during the first year of the COVID-19 pandemic, this result is not unexpected.

Considering students' stated motives, it is clear that acquiring information and skills is their leading objective. This occurs primarily for intrinsic reasons, but a more pragmatic angle can also be observed. This pattern is also confirmed by Fournier et al. (2014): students enrol in MOOCS for a variety of reasons, with knowledge and skills as their top priorities, while course completion is not as highly valued.

In other research studies where the NSSE was part of the tools employed, a positive association between the adoption of learning technology, learner engagement, and learning outcomes has been noted (Chen et al., 2010).

A defining quality of online learning environments is that they can motivate students and teachers to interact and communicate asynchronously (Robinson & Hullinger, 2008), which enables learners to think independently and critically. In the present study, this was reflected in the responses to the survey questions corresponding to higher order learning, reflective and integrative learning, and collaborative learning.

Previous research outcomes regarding student engagement in online training courses have had differing results. Student retention rates are usually significantly lower than in courses with required in-class attendance (Dietz-Uhler et al., 2007). Studies have indicated that the completion rate for MOOCs lies between 5% and 10% (the 'Tourism Management at UNESCO World Heritage Sites (Vol. 3)' MOOC analysed in this paper reaches at least a 6.2% completion rate). This discrepancy between offline and online class retention may be due to various reasons but can be mostly ascribed to learners needing to prioritize other work or personal obligations (or any kind of issue taking precedence over course completion) (Moore et al., 2003), technical and technological obstacles (Jaggars, 2014), inability to self-regulate their learning schedule and attendance (Dabbagh & Kitsantas, 2004), or a combination thereof.

When communicating with one another, students can be passive, active, and community contributors, according to Koller et al. (2013). Positive correlations have been found between reciprocal interaction and achievement rates in a certain selection of MOOCs (Cisel, 2014). The percentage of learners who interacted with one another throughout this MOOC was low, according to the responses provided for collaborative learning and academic integration. In addition, just a few students were very active in completing peer-evaluated tasks. Furthermore, compared to the outcomes on the actual learner effort of the studies on the previous two MOOC volumes (Rosani et al., 2020), learners appeared to be interacting less with the videos, approximately to the same degree with the quizzes, and a bit more for the activities in comparison to the previous MOOCs. However, percentages regarding the engagement with course resources grew.

Conclusion

The research objectives of this paper were to investigate the factors that motivate and explain learners' participation in a tourism and heritage-themed Massive Open Online Course. To achieve this goal, two surveys were developed for the 'Tourism Management at UNESCO World Heritage Sites (Vol. 3)' MOOC. The results of those surveys were examined, which helped to gain insight into what learners likely anticipate in such a MOOC: an entertaining and challenging eLearning course with the opportunity to obtain career-relevant knowledge and skills. In addition, learners have high expectations about the relevance and specificity of the offered material (as well as the quality of its delivery).

We can cite the following limitations of the paper: primarily, the limited number of tourism MOOCs with which the findings might be compared. Possessing wider data pools regarding learner personas and motivations to participate in particular, but also engagement, retention, and transfer to professional practice gathered from tourism MOOCs or other online courses in general would shed more light on how effective online training for tourism in heritage sites should be achieved.

The MOOC, as it is still open for enrolment, might yield different outcomes or confirm the ones presented in this paper at its closing in December 2022. The results shown might thus be considered partial, as more learners will submit their answers to the first and final survey. To paint a definitive picture of this MOOC volume, a final analysis of the two surveys should be undertaken in 2023.

Finally, several of the identified features might be investigated in greater depth. Specifically, issues pertaining to engagement and retention should be examined further in order to comprehend why specific outcomes were discovered. For instance, understanding the dynamics of a MOOC requires consideration of not only peer-to-peer interaction but also communication and relationships with instructors. MOOCs are massive and open by nature as well as definition – hence, it is even more difficult to have enduring, substantial, or on-topic interactions with the few instructors available. Therefore, eLearning course providers must carefully consider how to arrange their content and delivery in order to increase engagement, retention, and course completion rates. Especially due to the pandemic, it became apparent that engagement between learners, and learners and instructors became lower, but the completion rate still increased compared to the previous volume of the MOOC. While COVID-19 is a plausible factor that can explain these changes, there is not enough data to confirm or deny if, in addition to the correlation, there is also a causality.

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Original Scientific Article

Data Mining of Visitors' Spatial Movement Patterns Using Flickr Geotagged Photos: The Case of Dispersed Plečnik's Architectural Heritage in Ljubljana

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The aim of this study is to analyse the patterns and structure of spatial visitor behaviour in Ljubljana, focusing on the spatially dispersed attractions of Jože Plečnik's architectural heritage recently inscribed in the UNESCO World Heritage List. Meaningful incorporation of architectural heritage into the overall tourist experience of the city poses several challenges for DMOS – how to properly communicate the role and the value of remarkable architectural units, how to regulate uneven visiting times and place over-concentration, how to provide visitors the opportunity for a rich and comprehensive tourist experience, and finally, to form 'cumulative attractions.' In the case of Ljubljana, these challenges are compounded by the spatial dispersion of the elements of the chosen attraction. The objectives of our study were: to illustrate the spatial interactions between the World Heritage attractions in Ljubljana and their interaction with other tourist 'hot spots,' and to investigate the movement patterns of visitors to the Plečnik attractions. To this end, Big Data analysis was performed on geotagged photos uploaded by visitors to the photo-sharing platform Flickr. Spatial clustering and movement patterns were used to achieve the objectives. The results show that Ljubljana's landmarks designed by Plečnik in the old city centre are integrated into a broader attraction network, while the more remote landmarks appear to be less visited and isolated. It is reasonable to assume that one-day visitors who have visited one or more attractions in the historic centre rarely venture further away and therefore they do not experience the World Heritage Site entirely. The main contribution of this research is a better understanding of the behavioural patterns of dispersed UNESCO site visitors, their structure, and the role of these attractions within the destination.

Keywords: visitors' spatial movements, Plečnik's architectural heritage, big data analysis, geotagged photos, spatial behavioural patterns

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Introduction

Understanding inter-destination and especially intra-destination tourists' movement patterns is important for strategic policy-making decisions, organisation of public transport, planning of road networks and public spaces, safety issues, and management and marketing of the tourist destination, which includes product development and visitor use policies (Caldeira & Kastenholz, 2020; Lew & McKercher, 2006, 2006; Li et al., 2019; Park et al., 2020; Vu et al., 2015). While inter-destination movements have received considerable attention within tourism studies (Flognfeldt, 1999; Oppermann, 1995; Tideswell & Faulkner, 1999), there have been a relatively limited number of empirical studies on intra-destination tourist's movement patterns. One of the main reasons for this is the complexity of tourist movements within the destination, with a virtually unlimited number of combinations of places tourists might visit and stochastic individual movement patterns, which make the study of movements within a destination more challenging compared to movements between destinations (Mckercher & Lau, 2008). Another challenge is the difficulty in obtaining relevant and reliable data (Lau & McKercher, 2006). In the past, data for movement analysis was usually collected through resource-limited surveys. However, with the bloom of social media, evolution of mobile technology and data mining procedures these patterns have become easier to monitor (Park et al., 2020). In the last few years, user generated content (UGC) has become an important source of information for intra-destination movement patterns analysis. In particular, if we wish to monitor tourists' movement patterns in connection to freely accessible tourist attractions or points of interest, which can be accessed from many different directions, this approach has strong potential.

Tourist intra-destination movement is influenced by a set of destination's and a set of tourist's characteristics. The latter include time and money restrictions, motivations, transport mode preferences, interests, knowledge, familiarity with the destination, emotional attachment to the destination or attraction, etc. (Lew & McKercher, 2006; Zoltan & McKercher, 2015). On the other hand, destination configuration, type and locations of attractions and accommodation facilities location, and transportation accessibility – including costs, congestion and quality of signage and other destination features – affect tourists movements as well (Lau & McKercher, 2006).

Architecture as objectified cultural capital is a vital element of city tourism. It characterises a particular sense of the place. Especially, 'the iconic architecture (buildings, landmarks, monuments) is particularly alluring as it identifies a place' (Scerri et al., 2016, p. 1). As such, it has a major role within destination marketing. The touristic role of urban architecture is twofold. It can, on the one hand, be seen as a townscape, offering pleasant scenery for various touristic activities or, on the other hand, can represent an attraction per se. For architecture in urban spaces, Ebejer (2021, p. 65) suggests the following definition: architectural attraction is 'a site that is of sufficient aesthetic, narrative and cultural interest to provide for the enjoyment, amusement, entertainment and education of visitors.' Understanding the function and relative importance of specific architectural attractions is vital for their sensible inclusion into the overall tourism product and city marketing activities. This is especially true in the case of highlight attractions such as UNESCO protected buildings.

The aim of this study was to analyse the spatial movement patterns of visitors in the newly declared World Heritage city of Ljubljana, focusing on the spatially dispersed attractions of Jože Plečnik's architectural heritage.

Theoretical Framework

Tourism implies movement, and tourism attractions spatial distribution undoubtedly plays a crucial role in shaping tourist spatial movement patterns. As tourists usually cannot consume all the destination attractions in a few days' visit, they have to decide which attractions they will visit and which not (Shoval & Raveh, 2004). There are several tourist personal traits and destination specifics influencing these decisions, which to a great extent overlap with general factors defining intra-destination movement. Many scholars have investigated the role of tourists' socio-demographic, psychographic and behavioural characteristics in connection to visited attractions. They found that tourists with limited time budgets, those with low incomes, or those travelling in organised groups, first-time visitors, and foreign tourists tend to visit only the main attractions of the destination, while those who are less constrained in terms of time and finances, individual tourists, repeat visitors, and domestic tourists are more active and explore more and also more remote areas (Zoltan & McKercher, 2015; Shoval & Raveh, 2004; Cooper, 1981). Regarding tourist personality traits, previous studies show that tourists from the allocentric pole tend to visit and explore a wider set of attractions compared to more psychocentric tourists (Debbage, 1991). Another obvious factor affecting the decision on the attractions visit is the length of stay in the destination (Kang et al., 2018).

On the other side, tourist movement patterns also depend on the destination's characteristics, including number, spatial distribution and density of attractions. Lue et al. (1996) introduced the concept of cumulative attraction, where the compatibility of attractions plays an important role. If there are many compatible attractions within an area, they have a greater chance to be visited than in the case where there is only a single attraction in the area (Lue et al., 1996). In addition, popularity and ratings of attractions cause co-occurrence of visits between specific attractions (Hernández et al., 2021). A destination can thus be perceived as a (more obvious) geographical space or as a relational space (of attractions), which can be different from each other (Van der Zee & Bertocchi, 2018). The authors (Van der Zee & Bertocchi, 2018) stress that the two spaces tend to be more interrelated for international tourists and less for domestic ones. Another theory that can explain the effects of the spatial distribution of attractions on movement patterns is gravitational theory (Park et al., 2020). According to this theory, primary attractions have greater gravitational pull than secondary attractions, while clustered attractions can create a greater gravitational effect than a single attraction. Another approach, the so-called anchor-point theory, was introduced by Couclelis et al. (1987). The so-called anchor points refer to primary nodes or reference points of distinct regions and define the spatial cognition of individuals. That means that tourists tend to create their specific cognitive maps of the destination according the relative importance and hierarchical arrangement of attractions (Couclelis et al., 1987).

Movement patterns within the destination are undoubtedly also affected by tourists' specific motives and affinity for different types of attractions. Spatial distribution of architectural attractions, for example, has a greater impact on movement patterns for cultural tourists than for recreational ones (Stebbins, 1996). Therefore, understanding the structure of tourists and the movement patterns of different segments in relation to the architectural attractions is also important for destination marketing decision-making.

Urban Spatial Structure, Architectural Attractions and Tourists' Spatial Behaviour

In the context of tourism, spatial behaviour refers to the sequence of attractions visited by tourists within a geographic space and the sequence of movements between one attraction and another (Caldeira & Kastenholz, 2017). Studies from the field of urban tourism have confirmed that spatial behaviour and spatial structure are interdependent (Ashworth, 1988; Karski, 1990; Law, 1996). Urban spatial characteristics that have a major impact on tourist spatial behaviour are 'the physical configuration of space, the location of attractions, and the relative distance between accommodation and attractions' (Caldeira & Kastenholz, 2020, p. 25).

Architecture has a specific role in urban spatial structure as it aestheticises spaces with recognisable markers that create a particular sense of place and draw tourists into an area by providing a focal point for tourist attention and experience (Hayllar et al., 2008). Iconic architecture provides, in the words of Marcus Vitruvius, the great Roman architect and historian, 'firmness, utility and delight' (Scerri et al., 2016). While firmness refers to structural durability and utility refers to its spatial functionality, delight refers to architectural aesthetics. As stated by Maitland and Smith (2009), architectural aesthetic value is particularly important to tourists because it involves intense sensory presence, resonates meanings, and expands awareness.

According to Maitland and Smith (2009), the aesthetics of the built environment influences tourists' spatial behaviour in three ways. First, the tourist experience is affected by the built environment design and the way in which it is consumed. Second, the tourism experience affects people's aesthetic judgments and influences their demands. Third, the form, appearance and aesthetic qualities of built environments are to some degree shaped by the desire of cities to impress visitors (Maitland & Smith, 2009, p. 171).

Urban cultural tourists tend to behave in a specific way – in order to visit as many historical sites as possible, they move predominantly in the central areas and frequently at a fast pace (Caldeira & Kastenholz, 2020, p. 8). Edwards and Griffin (2013) propose the use of spatial syntax in the analysis of tourists' spatial behaviour in cities. Space syntax theory, introduced by Hillier and Hanson (1984) and further elaborated by Edwards and Griffin (2013), explains spatial relations that consider how different groups organise and arrange space in which they find themselves. In their study, Edwards and Griffin (2013) used GPS tracking to find out how various segments of tourists moved around the cities. Using this method, the authors diagnosed, for example, the lack of spatial dispersion of tourists in Sydney and proposed more efficient wayfinding systems and tourism information policies. Paulino et al. (2019) noted that, despite the tendency of tourists to explore areas close or immediate to their accommodation, tourist movements can be more concentrated or dispersed due to the influence of various factors. These include the spatial relationship between attractions, attraction characteristics, agglomeration of attractions, and spatial characteristics of the destination. Generally, tourists are more willing to visit remote places if they are unique or more attractive (e.g. iconic sights, landmark cultural institutions, places of historical significance) (Paulino et al., 2019).

Urban intra-destination spatial behaviour can be examined through movement patterns and multi-attraction visitation patterns. The former are determined by territoriality (attractions visited and distance from accommodation), linearity (patterns of movement that depend mainly on spatial configuration), locomotion (means of transportation used), and wayfinding (orientation in physical space), while the latter refer to intensity (number of nodal points) and specificity (particular features of attractions) (Caldeira & Kastenholz, 2020, p. 11).

Over the past two decades, among the multiple sources of information used to monitor human mobility, location loggers, cell phone satellite position records, and geotagged content from social media have been used to track the spatial behaviour of tourists in urban destinations (Domènech et al., 2020). User-generated content (UGC) has become a central subject of examination in tourism studies, as users now produce, share, or tag large amounts of their own information, including images and videos. Költringer and Dickinger's (2015) research shows that UGC is the richest and most diverse source of online information used to analyse tourists' destination image and tourists' spatial behaviour at destinations.

Visualising the geographical positions of photos taken by tourists is a commonly used method for measuring tourist activity in cities, including World Heritage cities (cities with UNESCO World Heritage assets) (e. g. Domènech et al., 2020). Using Big Data, researchers have tracked tourists and identified areas of congestion and underutilisation (case of Akka, Israel; Shoval, 2008); compared spatial behaviour patterns of first-time and repeat visitors (case of Hong Kong; McKercher et al., 2012); measured public use of iconic buildings (Bilbao case; Plaza et al., 2015) and identified spatial shift of attention to exceptional architecture (Hamburg case; Alaily-Mattar et al., 2022).

Numerous studies have demonstrated the usefulness of network analysis in studying tourism system related networks. In the context of tourist destinations analysis, more recently, Kádár and Gede (2021) used network analysis to determine the spatial and temporal complexity of tourist flows in the cross-border Danube region, Xu et al. (2022) and Jin et al. (2018) analysed the characteristics of the tourist flow network in Nanjing City, Paulino et al. (2019) analysed the boundaries of destinations, Mou et al. (2020) used network analysis to study the spatiotemporal changes of tourist flows in Shanghai, Lozano and Gutierrez (2018) studied global tourism flows, and Zheng et al. (2021) analysed the spatiotemporal behaviour of Chinese tourists in the Nordic countries of Europe. These authors used various network and node centrality indicators (e.g. degree centrality, weighted degree centrality, betweenness centrality) to assess the network as a whole and the importance of individual destinations/attractions.

The Case of Plečnik's Dispersed Architectural Heritage in Ljubljana

In 2021, the UNESCO World Heritage Committee inscribed the selected works of architect Jože Plečnik (1872–1957) in Ljubljana in the UNESCO List of World Heritage Sites. The UNESCO World Heritage property consists of a series of dispersed public spaces (squares, parks, streets, promenades, bridges) and public institutions (national library, churches, markets, funerary complex) created in the period between the two World Wars and sensitively integrated into the pre-existing urban, natural and cultural context, thus contributing to the city's new identity.

As a result of Jože Plečnik's intervention between the two world wars, the urban design in Ljubljana has the easily recognisable characteristics of a symbolic capital city (UNESCO, 2021). This is apparent through the urban landscape design of the two axes: the land axis and the water axis. The design of both promenades is based on the continuous use of space, which determines the structure and use of bridges, parks, squares, markets and other public spaces, as well as buildings. These public spaces serve as spiritual places (the churches of St. Michael and St. Francis of Assisi, Plečnik's Žale – The Garden of All Saints) and spaces for relaxation (archaeological park along the Roman walls and promenades along the embankments of the Ljubljanica River, Trnovo Quay), as well as enabling market activities (Plečnik's Market), socialising (Congress Square, the Three Bridges, the Cobblers' Bridge), and intellectual and cultural activities (Vegova Street, National and University Library). The selection of Plečnik's works in Ljubljana comprises 14 components:

I The Green Promenade

1. the Congress Square with Zvezda Park
2. Vegova Street
3. the National and University Library
4. the Square of the French Revolution with the Križanke open-air theatre

II The Promenade along the Embankments and Bridges of the Ljubljanica River

5. Plečnik's Arcades/Market
6. the Three Bridges
7. the Cobblers' Bridge
8. the Trnovo bridge
9. Trnovo Quay
10. the Sluice Gate

III Other Plečnik works

11. the Church of St. Michael
12. the Church of St. Francis of Assisi
13. Plečnik's Žale/the Garden of All Saints
14. The archaeological park/the Roman wall in Mirje.

The locations of the designated Plečnik's heritage in Ljubljana are shown in Figure 1.

Previous studies show that the designation of architectural heritage as a World Heritage Site increases its value in the eyes of tourists, arouses their interest and influences their spatial behaviour (Khairi et al., 2022). Plečnik's architecture was a highlight of the city even before the inscription on the UNESCO list. The city DMO 'Tourism Ljubljana' was awarded 'the best emerging Europe tourism campaign of the year' in London in 2018. The campaign was based on the Plečnik heritage. According to DMO staff, the Plečnik House is one of the most visited tourist spots (Bandur, 2018).

To better understand the role of Plečnik's heritage in the tourism system of Ljubljana, questions arise about the nature of the tourists' urban experience. As suggested by Gravari-Barbas (2020), analyses of heritage tourism should 'move away from the heritage attractions *per se* to the tourists and their motivations as *constitutive* of the visited heritage' (Gravari-Barbas, 2020, p. 5).

Study Area, Data and Methods

Data Collection and Database Construction

The data for this study has been retrieved from the photo-sharing platform Flickr (www.flickr.com). Flickr is one of the first and largest social photo sharing platforms to offer a geotagging service, and unlike Instagram, Panoramio, Facebook and others, is available almost worldwide. There are numerous tourism studies that use Flickr data, as it is the only major platform that offers free access to photos and metadata.

Moreover, previous research has demonstrated the feasibility and reliability of using such data. Su et al. (2016) analysed the geographical preferences of foreign and domestic visitors to China using photos from the Flickr platform. The authors found an extremely strong correlation ($r = 0.9$) between the number of photos posted and the number of foreign tourists in official statistics. The same strong statistical correlation ($r = 0.9$) was also found by Kim et al. (2019) in a study of tourism in protected areas in developing countries when they compared the average daily number of photos posted over a year ('photo-used-day;' Wood et al., 2013) with tourism receipts.

An even stronger correlation ($r = 0.98$) between the number of photos on the Flickr platform and the official number of overnight stays in cities along the Danube was calculated in a study on tourism flows by Kádár and Gede (2021). Flickr data mining has been proved effective in previous studies of tourist movement behaviour (for details see e.g. Jankowski et al., 2010; Vu et al., 2015; Mou et al., 2020; Park et al., 2020; Kádár & Gede, 2021; Han et al., 2021).

To crawl the data, we used a Python code for recursive Flickr Application Programme Interfaces (API) calls. The API – flickr.photo.search returns the publicly available photos' meta-information including the photo ID, photo title, geocode (longitude and latitude), textual tags, photo timestamp, upload date, owner name and owner ID. A boundary box containing the administrative area of the city was used to limit a query response.

In the next step, the acquired owner IDs were used to retrieve the information about the user (API – flickr.people.getInfo), including the user's name and location. Then this information was merged with photos metadata using the owner ID. In this process, we also downloaded all available photos. However, the content of the photos was not relevant in this study and was therefore not included in this analysis. The collected dataset consisted of the meta-information of photos taken between January 2007 and December 2018. We were able to crawl 68,520 photo meta-information records that were taken by 4,735 individual users. Occasionally, the Flickr APIs returned duplicate photos, errors, spatial outliers and incomplete records. These records were deleted from the dataset during the data cleansing process. The final dataset contains 65,210 records.

In accordance with the purpose of the study, we developed a set of rules to distinguish locals (residents) from tourists. In previous studies (e.g. Kádár and Gede, 2013; Önder et al., 2016; Su et al., 2016; Li et al., 2018; Kádár and Gede, 2021) researchers have used various heuristic methods to identify tourists; however, none of these methods are completely reliable or statistically tested. Although our procedure follows the methods used in previous studies, we applied a more rigorous classification criterion. Specifically, all Flickr users who indicated a foreign home country or a hometown outside Slovenia and for whom the time span of a sequence of their uploaded photos (within one year) was less than one month were classified as tourists. All other users were classified as non-tourists and thus removed from the dataset.

In the next step, we followed the suggestions of Hu et al. (2015) and eliminated active user behaviour bias (caused by users uploading multiple photos of the same micro-location in a very short period of time) from the data. First, the photo collections of each user were sorted chronologically. Then, using a spatial and temporal filter, we merged multiple consecutive photos of the same attraction/location into a single record. After cleaning and filtering the dataset, we ended up with a dataset of 42,572 photos from 3,556 users classified as tourists. Their spatial distribution is shown in Figure 1.

The numbers of uploaded photos and users per year are shown in Table 1.

AOIs Identification and Network Construction

Since in this study we focus on intra-destination tourist movement, which in our case corresponds to tourists' trajectories from one spatial location to another (where locations represent tourist attractions or Areas

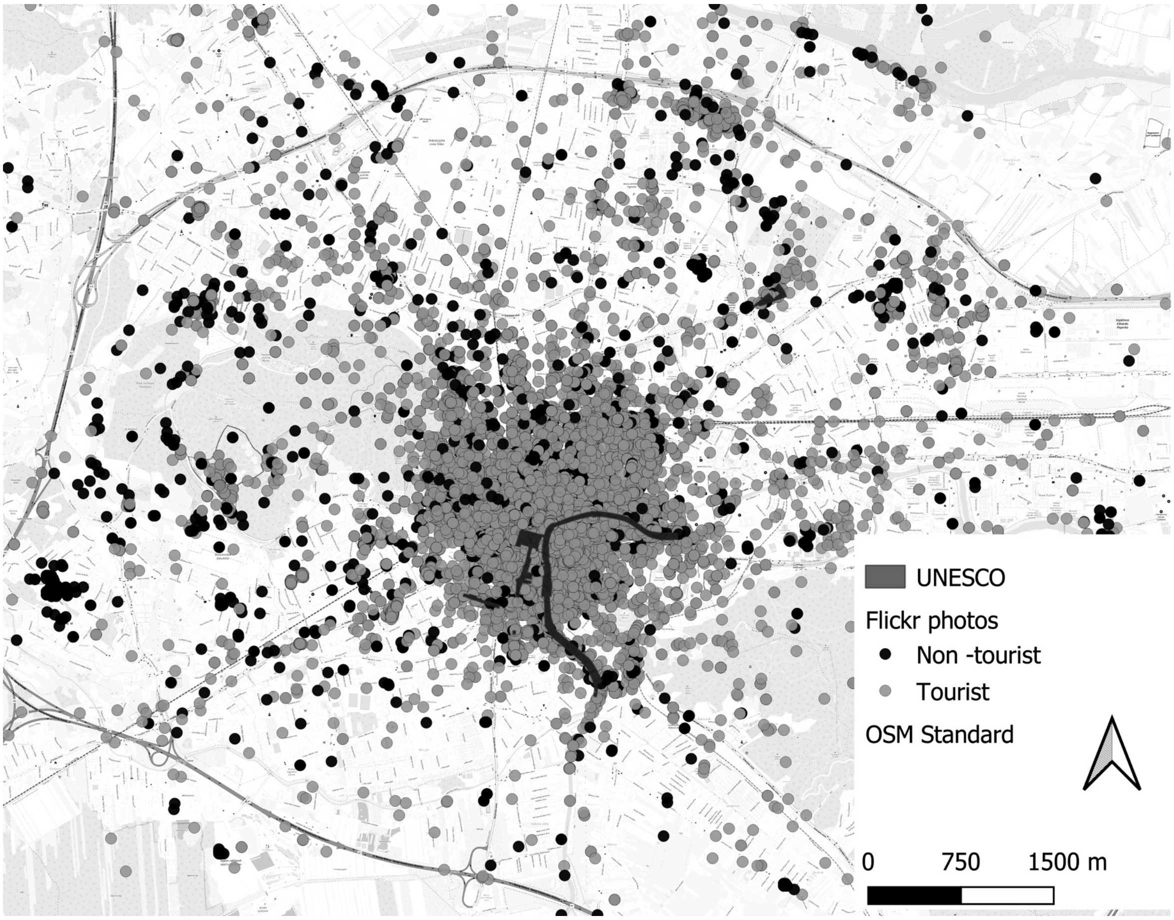

Figure 1 Spatial Distribution of Uploaded Photos in Ljubljana

Table 1 Number of Uploaded Photos and Users per Year

Year	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Number of users	737	754	732	865	1085	1144	926	845	760	647	464	270
Number of photos	4248	4775	3933	4672	4816	5826	5294	4957	3502	2639	3440	2518

Of Interest (AOIs)), the temporal sequence of daily photos of different users was used to create daily trajectories. In this process, the density-based spatial clustering algorithm with noise DBSCAN (Ester et al., 1996) was applied to identify the most popular AOIs. Details of this widely used data mining algorithm for identifying AOIs can be found, for example, in Park et al. (2020), Hu et al. (2015), Vu et al. (2015), or Paliska et al. (2022). We then aggregated the users' individual daily trajectories into daily cluster level (AOIs) trajectories (see conceptual scheme in Figure 2). In this way, we constructed a weighted directed network where the AOIs (clusters) represent nodes, the edges between each pair of *i* and *j* nodes represent the movements, and the weight *wij* of the edges equals the count of user trajectories (tourist flow) between *i* and *j* nodes. A total of 2,612 trajectories between 559 nodes and 8,537 tourist movements were extracted.

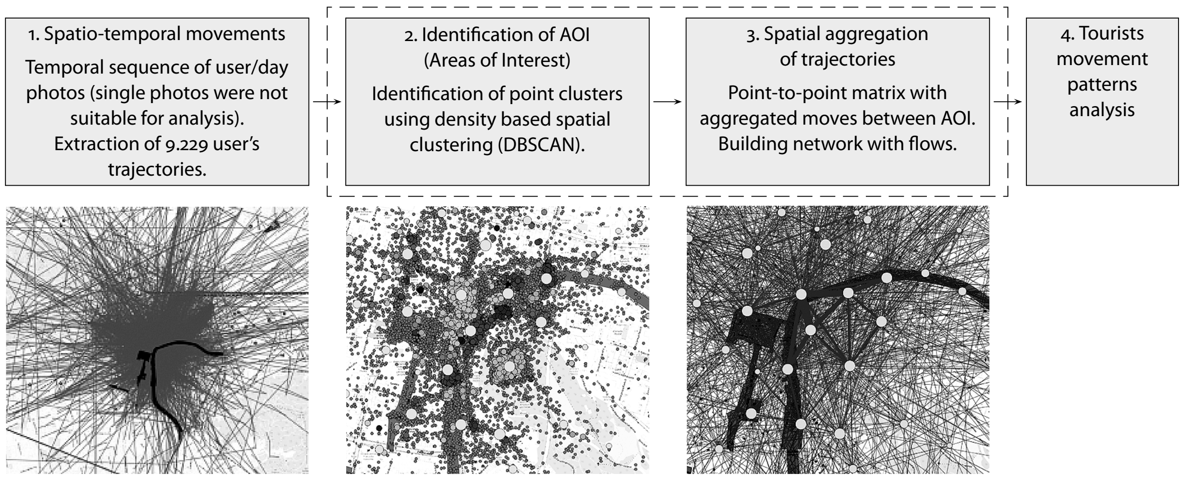

Figure 2 Conceptual Scheme of Tourist Trajectories Building Process

Network Analysis

The constructed weighted directed network of tourist movements provides an opportunity to quantitatively analyse structural properties of the tourist attractions and the relations between them. Following the previously cited studies (e.g. Kádár and Gede, 2021; Liu et al., 2017), we selected node degree centrality (Freeman, 1978), node weighted degree centrality (Barrat et al., 2004; Newman et al, 2004), and betweenness centrality (Freeman, 1978; Wasserman & Faust, 1994) to estimate the role and importance of individual attractions. In the context of tourism flows analysis, node degree (in-degree and out-degree for directed networks) measures the importance of attractions in terms of how well (number of edges between nodes) they are connected to other attractions.

A comparison of node in-degree and out-degree of each attraction can be used to determine the attraction's role in the tourists' route: as a beginning, core, or terminal (Shih, 2006). When analysing weighted networks, it is common to extend the node degree indicator to the weighted degree. The weighted degree reflects the connection frequency (sum of edge weights or tourist flows) between the target attraction and adjacent attractions. Opsahl et al. (2010) argue that it is important to consider both indicators when examining the centrality of a node because node weighted degree only takes into consideration a node's total level of involvement in the network and not the number of adjacent nodes to which it is connected.

The final indicator, betweenness centrality, measures the number of shortest paths (or weighted shortest paths) between pairs of non-adjacent nodes that pass through a given node and reflects the ability of a given attraction to control interactions between pairs of other attractions in the attraction network (Shih, 2010). A high betweenness centrality of a particular attraction means that tourists would most likely make a stop at that attraction while travelling between other attractions (Shih, 2010).

Results and Findings

By visualising the constructed network, valuable insights into the movement can be gained. As can be seen in Figure 3, movement patterns are spatially concentrated within the city centre. Additional analysis of the non-clustered movement trajectories shows that nearly two-thirds of the movements (63%) occurred in the city centre between the 10 main attractions and that the maximum number of moves (213) were recorded between the Three Bridges area (ID1) and the Robba Fountain area (ID3). In addition, the analysis revealed that more than half (51%) of the movements were related to only two attractions, 15% were related to three attractions, and 23% of trajectories connected six or more attractions. These results suggest

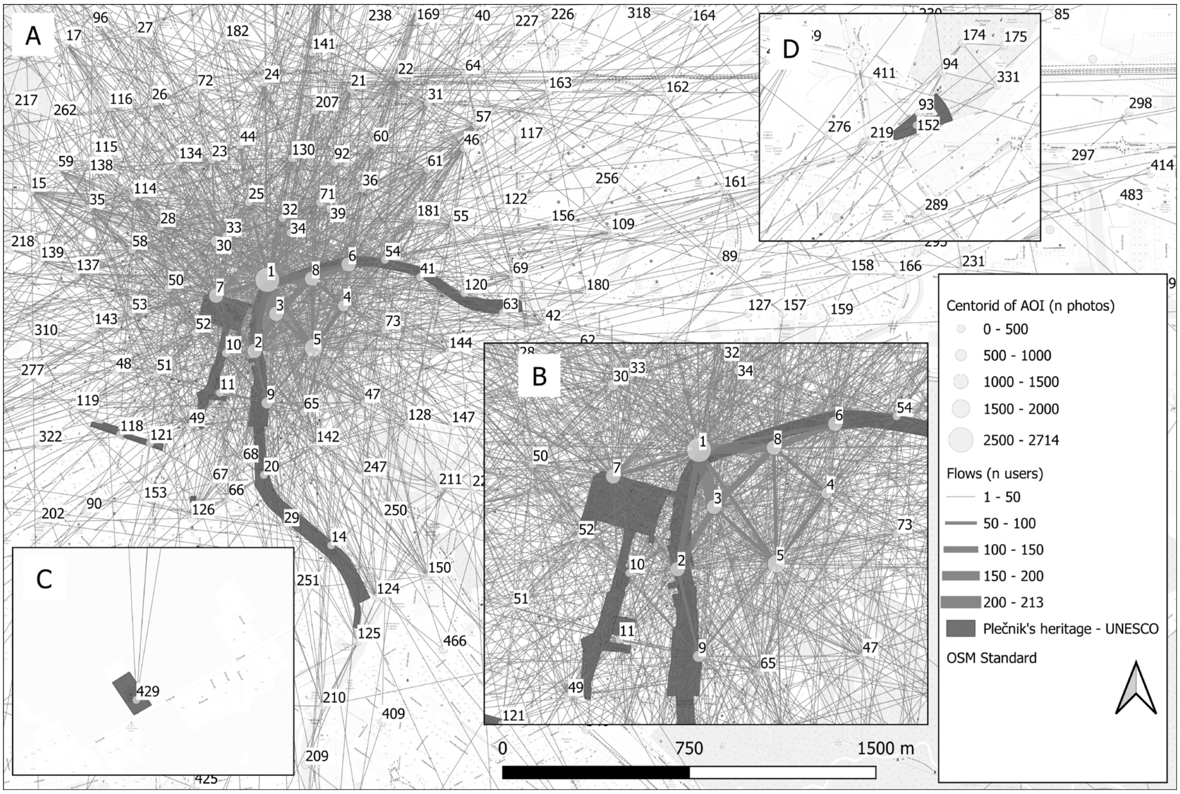

Figure 3 Network of Movement between Attractions in Ljubljana

that the destination attracts different tourist profiles – roughly, those who exhibited a greater spatial movement and are interested in detailed urban exploration, and those inclined to visit only a limited number of attractions. Since our network is composed of flows of one day-trip, differences in movement patterns can also be attributed to the length of stay at the destination. Unfortunately, our study was not designed to investigate those differences. The network also provides an overview of the popularity of attractions in terms of the number of photographs taken (Figure 3). The Three Bridges, together with Prešeren Square, are the most photographed attractions in Ljubljana (2714), followed by Ljubljana Castle (1406), Robba Fountain (1406), Plečnik Market (1357), Dragon Bridge (1322), Congress Square (1078), and Cobbler's Bridge (1055), just to name the places with more than 1000 photos in the cluster. These attractions are also the most visited in terms of tourist flows. The analysis of the structural characteristics of the network provides additional insight into the role and importance of the attractions in the network (Table 2). Due to space limitations, only the structural characteristics of the Plečnik works and the main other attractions are listed in Table 2.

In general, we can see that the attractions in the old city centre have higher values for node centrality and that these values decrease with distance from the centre. This indicates that centrally located attractions play a dominant role in the network (are connected with primary flows) and that the importance of other attractions in tourists' movement behaviour decreases with their distance from the core attractions. Furthermore, if we compare the values of in-centrality and out-centrality, no evident differences emerge. This implies that the attractions are balanced in the inbound and outbound connections (in-out degree) and flows (in-out weighted degree), which means that there are no typical beginning or

Table 2 Node Centrality Measures for Selected Attractions in the Network

Attraction	(1)	(2)	(3)	(4)	(5)	(6)
Three Bridges*	1	92	96	1030	1061	40114
Cobbler's Bridge*	2	63	54	592	575	15010
Robba Fountain	3	55	56	714	709	14612
Ljubljana Castle	5	68	70	490	458	25602
The Dragon Bridge	6	68	58	464	457	19481
Congress Square*	7	78	71	336	332	25329
Plečnik's Market*	8	63	58	683	671	9471
Old Square	9	52	47	319	310	11100
Vegova Street	10	31	32	154	145	2034
National and University Library*	11	33	39	121	115	6195
River banks – Trnovo Quay*	29	13	10	19	19	330
Skyscraper	33	37	41	121	123	6588
Križanke Open-Air Theatre*	49	20	19	30	27	1073
Slovenian National Drama Theatre	52	27	29	68	77	5113
Riverbanks – Sluice Gate*	63	13	14	21	21	521
Plečnik's Žale (area 1)	93	3	1	3	3	27
Roman Wall in Mirje (area 1)*	118	10	9	14	13	29
Roman Wall in Mirje (area 2)*	121	12	15	17	22	3017
Trnovo Bridge*	126	17	17	26	23	436
Plečnik's Žale (area 2)*	152	5	3	5	3	928
The Church of St. Michael*	429	2	2	2	2	0.96
The Church of St. Francis of Assisi*	430	1	2	1	2	0.31

Notes * Plečnik works. Column headings are as follows: (1) attraction ID, (2) in-degree, (3) out-degree, (4) in-weighted degree, (5) out-weighted degree, (6) betweenness centrality.

terminal attractions of the tourist routes. Looking at Table 2 and Figure 3, we can see that the core attractions consist of attractions ID1, ID2, ID3, ID5, ID6, ID7, and ID8. According to the values of node centrality (node degree, weighted degree and betweenness), the most important attraction in the network is the Three Bridges with Prešeren Square (ID1), which is also the most important stopover that connects pairs of other attractions.

Because of their popularity, these attractions are included in many thematic itineraries. In addition, four other Plečnik architectural attractions from the UNESCO WHS are among the top ten attractions in Ljubljana (in terms of node centrality), namely: Congress Square (ID7), the Plečnik Market (ID8), Cobbler's Bridge (ID2), and the National and University Library (ID11). This is a clear indication that the Plečnik architectural heritage is an integral part of Ljubljana's tourism system and plays a very important role in the network of core attractions. Less visited attractions are peripheral in the network and in blocks with low centrality values. In general, we can observe that as the distance from the main attractions in the old city centre increases, all centrality values gradually decrease. Although it is well known in tourism literature that spatial flows within a destination are less sensitive to distance than flows between destinations (Xiao et al., 2013; Liu et al., 2012; Jin et al., 2018), a significant distance decay effect can be observed in tourist movements in our case. Regarding Plečnik architecture, low centrality values can be observed for some Plečnik works on the water axis (ID126, ID63, ID29) and for Plečnik's architectural attractions at the periphery of the network (ID121, ID152, ID429, ID430).

Discussion and Conclusion

In the research we focused on the behavioural approach to the spatio-temporal behaviour of tourists in the city in relation to the architectural heritage of Jože Plečnik. For this purpose, a set of his works from the UNESCO World heritage list have been considered for interpretation. Movement patterns were identified by analysing temporal sequences of daily photos retrieved from the photo-sharing platform Flickr.

A clearly visible concentration of movements was identified in the relatively limited area with a high agglomeration of attractions, including the banks of the Ljubljanica River and the bridges, Vegova Street with the National and University Library and Congress Square with Zvezda Park. The area around the three bridges has proven to be a primary node which, together with the picturesque Old Town, cultural events, gastronomic establishments and lively social life, forms a cumulative attraction (Lue et al., 1996) with a strong gravitational pull (Park et al., 2020). The friction of distance related to the three 'detached' Plečnik sights – St. Michael's Church, the Church of St. Francis of Assisi, and Plečnik's Žale – despite relatively good accessibility, and popularity as well as promotional exposure of Plečnik's heritage is obviously a more important factor for (non)visitation than the uniqueness, iconic character, aesthetic and cultural value of these attractions (Paulino et al., 2019). Thus, the tourist attractiveness of Ljubljana seems to lie in its overall value, where no single element stands out. As Hernández (in Caldeira & Kastenholz, 2020) would put it, Ljubljana is an 'attraction city' rather than a 'city of attractions.' Indirectly, these results suggest that there is a high degree of compatibility of attractions (including Plečnik's heritage) around the primary node.

Our findings confirmed intuitive expectations regarding the role and degree of integration of Plečnik's architectural heritage into the destination's overall tourism offerings. Although there is undoubtedly a segment of tourists primarily interested in the architectural sites inscribed on the UNESCO World Heritage List, for an average visitor to Ljubljana these attractions seem to represent an organic part of the city's picturesque scenery.

The length of stay at the destination, promoted by Kang et al. (2018) as a factor in attraction visitation decisions, was not included in the empirical analysis as this is beyond the scope of our work. Still, preliminary research using official statistics data (https://pxweb.stat.si) suggests that this factor has some influence on the spatio-temporal behaviour of tourists. In the summer months, when the average length of stay is shorter, daily trajectories tend to be shorter, suggesting that tourists' movements are less dispersed and they visit fewer attractions that are further away. These relations are definitely worth considering in further research.

Of course, there are some limitations to the present study that must be mentioned at the end. One of the main limitations of this study is that it examines the movement patterns of tourists in a newly designated UNESCO WHS. According to previous studies (Khairi et al., 2022), tourists' behaviour, and consequently their movement patterns, are expected to change when they become aware of the UNESCO brand of the city's architectural attractions. With this limitation, the results of this study primarily serve as a situation analysis that can help destination management take measures to ensure timely and sustainable management of tourist flows in the destination.

The small number of photos by domestic visitors and deficiency and inconsistency of the personal information disclosed by Flickr users did not allow us to make comparisons that would show the differences in movements between segments of domestic and foreign tourists. Moreover, the information source itself is likely to be biased – it is virtually impossible to verify how representative the sample of Flickr users is in relation to the population of visitors to Ljubljana. Nevertheless, a brief overview of the tags (the most frequent are: Ljubljana, Slovenia, architecture, Europe, Plečnik, city, castle, river) suggests that these users are relatively 'serious' tourists who focus more on the city's features than on people or fun. In terms of the potential implications of the findings on destination management, we can note that Ljubljana is already an established destination with established tourist flows and 'roles' of individual architectural attractions. The organic embedding of Plečnik architecture in the city, defined in the UNESCO charter as the central value of its exceptional world heritage, is indeed reflected in the tourist 'consumption' of Ljubljana, which allows for an authentic and sustainable communication of its exceptionality with relatively little intervention.

As Plečnik's scattered attractions were added to the UNESCO list only last year, the destination management can better prepare for development, promotion and mobility measures related to Plečnik's attractions based on our analyses. We suggest that the destination be promoted as a 'new UNESCO World Heritage City,' as Plečnik's attractions are already a key component of tourist tours. This emphasis would increase the visibility and value of the architectural heritage and the city, especially in the eyes of cultural tourists.

The development of tourism products and marketing communication must also take into account the attractiveness/photogenicity of Plečnik's attractions and the existing patterns of their visits/viewing, which can be seen from the frequencies and sequences of visits of intra-destination points. Furthermore, it is also useful to adapt the tourist product and marketing communication to different visitor segments (according to average length of stay, motives and other criteria) and to the season. To this end, it would be useful to conduct additional research to identify differences between visitor groups and movement patterns in different parts of the year.

Finally, the impact of the UNESCO brand and its implementation on the spatial behaviour of tourists in Ljubljana and on the degree of attractiveness of individual Plečnik architectural attractions, especially in remote locations, definitely needs to be measured in the future with some time lag.

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Systems Approach in the World Heritage Site Bahá'í Gardens

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The Bahá'í religion is the world's youngest religion, founded in 1863 by the Persian sage Baha'u'llah. Its followers, including its founder, were persecuted for more than a century until they found peace in the 21st century when its two centres in Haifa, Israel, became UNESCO World Heritage Sites in 2008. The research aims to put the principles of systems thinking into practice in the case of the conservation of the Bahá'í Gardens, a World Heritage Site. The data for the causal-loop model (CLD) within the system dynamics framework, which we present in this paper, was obtained through a field survey of leaders of the Bahá'í religion. The theoretical model is followed by a practical demonstration of the functioning and management of the Bahá'í Gardens in harmony with the social environment, the natural surroundings, pilgrims, and tourists, which illustrates the interplay between theory and the practical application of systems thinking for the highest good of world heritage and tourism. The research goes further by presenting, through the literature, the possibility of integrating religion and science, which as independent systems, are linked by a systems approach. The essence of Bahá'í thought is compassion, equality of races, interdependence, harmony, and living aesthetics and symmetry. All these elements fit into the modern systems' principles, where systems cannot work until all their interdependent elements are balanced. The feedback loop and one's awareness of it bring balance to the system, which presents the systems approach as a valuable tool in modern science.

Keywords: Bahá'í Gardens, systems approach, CLD modelling, UNESCO, world heritage site, pilgrimage tourism

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Introduction

The Bahá'í faith began as a local religious movement in late 19th century Persia and is the youngest of the independent world religions. Today, the Bahá'í religion has more than 8.5 million followers, and is one of the world's fastest-growing religions and probably the most diverse. The religion has only eight centres worldwide, one on each continent and the two main centres in Israel. Many Bahá'ís converted from other faiths, and its members come from different religions, races, ethnic backgrounds, and nationalities (Hartz, 2009). As their faith forbids prejudice of any kind, they work together to break down prejudices and build a harmonious, balanced global society. Balance is also an essential feature of every living and non-living system: soft systems such as an individual being, global or local community, and complex technical systems. Modern society, which promotes sustainability, underlines corporate social responsibility, but this cannot exist if one does not include an individual's responsibility. The Bahá'í religion emphasizes individual responsibility and personal development in a physical and a spiritual sense. People must not only satisfy their basic physical needs, but must also recognize that to be truly happy is to develop their spiritual (non-visible) side (Hartz, 2009). The nature of Bahá'í faith and thought is systems thinking. Bahá'í texts intertwine with systems principles in the natural environment and sustainable soft systems such as successful companies, organizations, and societies. Some basic Bahá'í principles of physical and spiritual development go well with basic systems thinking since the religion considers all living systems, including flora, fauna, and human races, as parts of nature. This paper uses the term systems thinking, which is nothing more than sustainability thinking. All living systems strive for equilibrium or homeostasis, so systems thinking is about the stability of a system's elements. In the same way, sustainability thinking is thinking in terms of balance and equal use of the resources that are part of a system (nature or an organizational system). For this paper, we have chosen to use systems terminology for the most part.

Systems Methodology

Systems methodology includes methods of expert systems, causal loop modelling and simulations, thinking and system dynamics. Jay Forrester initially developed System dynamics (Forrester, 1961) and Wolstenholme (1996) describes it as a five-phase systems thinking and modelling process in which phases are interrelated and followed by a causal loop model (diagram). The steps go as follows:

1. problem structuring,
2. causal loop modelling (causal loop diagrams, CLD),
3. dynamic modelling,
4. scenario planning and modelling, and
5. implementation and organizational learning.

In our research, we set the analogy of Bahá'ís' way of thinking, living, acting, and systems thinking as a first step. The data we received helped us to go to the second step; we built a causal loop model (CLD), where we identified the main variables and developed a causal loop model to illustrate the relationships among the variables and discuss their behaviour. As we have focused on building a qualitative model to represent Bahá'í systems thinking, we have omitted the third step, i.e. making a simulation model, which is unnecessary for our research. Instead, as the fourth and fifth steps, we have presented the world cultural heritage of the Bahá'ís and its regulation in the context of tourism, which fully follows the modelling process and systems thinking principles (Anderson & Johnson, 1997).

Method of Systems Thinking

Systems thinking is a framework based on the belief that we can understand a system's parts in the context of a relationship with each other and other systems rather than in isolation (Capra, 1997). Systems thinking principles (below, in italics) complement the five-step modelling process described in systems methodology: (1) Problem structuring (*The Big Picture* or from the point of view of a whole, long term), (2) Causal Loop Modelling (complexity, *interdependency,* qualitative – *non-measurable data*) (3) Dynamic modelling (dynamics – *measurable data*) (4) Scenario planning and modelling (*short and long-term* scenarios), and (5) Implementation and organizational learning (*we are a part of the system*). Systems thinking is, at its core, a natural way of thinking. Our planet is a large system made up of nature with its living systems, technology with its technical systems, and consciousness as an evolutionary system. Aristotle spoke of systems and the systemic whole (when both contained and container are parts of the same whole, the whole may be said to be, since we can also say of the whole what is true of the parts) when he discussed the parts and the whole, and observed nature and things (Waterfield & Bostock, 1996). But throughout the planet's evolution, only people closely connected to nature, who have observed its cycles and learned from nature have thought systemically. The thought of Eastern civilization is based on nature as a system within which humans are also a part. Western civilization thought has gone its own way. It began to divide and to see the parts as the ones to focus on. As a result, systems thinking did not emerge as a leading way of thinking in Western society until the 19th century, when philosophers and mathematicians came to discuss systems, the relationship between the whole and its parts, and the human as a system (Hegel, 2008; Chardin, 1955; Peirce, 1998). However, it was not until the Austrian biologist Bertalanffy expressed systems thinking in his manifesto *General System Theory* (Bertalanffy, 1951) that the systems way of thinking came to wider social acceptance. From then on, systems thinking began to take hold in the Western world, and several works dedicated to the different models and methodologies, systems, and system dynamics arose. These include *Industrial Dynamics* (Forrester, 1961), System Thinking (Senge, 2006), Systems Theory (Kljajić, 1994), *Systems Thinking, Systems Practice* (Checkland, 2005), *Thinking in Systems* (Meadows & Wright, 2015), *The Tree of Knowledge* (Maturana & Varela, 1992), *Living Systems* (Miller, 1978), 'The Viable System Model' (Beer, 1984), and *Anticipatory Systems* (Rosen, 1985), as well as others. In practice, systems thinking is an upgrade of linear-analytical or conventional thinking, where one thinks about parts and what one sees. On the other hand, systems thinking achieves its upgrading in a feedback loop or the awareness that there are also elements that are not visible but are crucial for the harmonious development of society and the individual. These elements are thought patterns that are not visible but are part of human evolution. In modern times, many old thought patterns no longer serve a purpose. It is good for humanity to recognize them because they are becoming unnecessary and harmful. This recognition is a point where one can start talking about systems consciousness. An individual's, and later the society's, systems awareness, which leads to co-creativity, rather than competitivity, and must take into consideration the principles of living systems as brought out in Haines (2006): system clarity first; the whole is primary; understand systems holistically in their environment; each system functions uniquely; system purposes first; the role of parts – to support the whole; all parts are interdependent; small changes produce big results; maximizing parts sub-optimizes the whole; causes and effects are not closely related; faster is ultimately slower; feedback loop; multiple goals; flexibility; natural hierarchy; entropy; and tendency to run down. A system cannot be understood by analysis but by synthesis, looking at it within its environment.

With systems consciousness (not just knowledge) as a guiding mindset, social dynamics begin to circulate in a way that achieves synergy, connectedness, and interdependence with each other and nature. Through the example of the Bahá'í Gardens of Haifa, we will present the systemic consciousness of the members of the religion, who have achieved environmental symmetry through their thinking and work, and who represent an example of a systemically (sustainably) oriented tourism that, despite the increasing numbers of tourists, maintains the UNESCO World Heritage Site in balance with its social surroundings and physical environment.

Bahá'í Gardens and its Sinergy with Social Surroundings and Physical Environment

The International Bahá'í Community has been registered with the United Nations as a non-governmental organization since 1948. The Bahá'í Faith offers an advanced set of social teachings that teach how to think in systems. The individual's responsibility implies a commitment to the whole, in this case, Bahá'í society, whose approach to tourism reflects the system's qualities. These qualities – awareness of interdependency, connectedness, dynamics, big picture point of view, and feedback effect – lead the Bahá'ís to behaviour such as generosity, honesty, truthfulness, humility, and selfless service to others and nature. They are aware of their essential role in society, the economy, the environment, and tourism.

The terraced gardens of Haifa represent the synergy and symmetry of beauty and spirituality. They have a rich history linked to the founder of the Bahá'í Faith. When Baha'ullah came from Acre to Haifa, he pitched his tent and camped on a mountain whose name means God's vineyard – Mount Carmel (Worthington, 2011). Today, a tourist might say that these gardens are beautiful for their symmetry and spiritual peace and tranquillity that can be felt when walking on the terraces. The Bahá'í community has built them with love and care. The idea began in the early 20th century with the construction of the first shrine. The structure of the gardens was completed in 1999 and opened to tourists the same year. The photo below shows the terraced gardens in the evening light angled from German Colony Plaza up to Mount Carmel. The Bahá'í Gardens show the symmetry and the aesthetic of the WHS, which evokes in the modern tourist a desire to participate emotionally, intellectually, and psychologically in this experience of beauty (Sedmak & Brezovec, 2017). There are 450 plant species in the gardens, and the vertical rise of the terraced gardens in Haifa is 225 metres long. Altogether, the gardens have 1,206 steps, and annually about 1 million tourists and visitors. In the middle of the hill, one can see the Shrine of Báb, a prayer site for pilgrims. The Shrine is open to tourists and visitors only in the morning and not every day. Image 2 shows the Universal House of justice, a seat of the Bahá'í administration, and image 3 shows the terraced gardens from the German Colony Plaza, the bottom of Mount Carmel, up, in the evening with the distinctive aesthetic of the light.

Bahá'í Gardens in Systems Theory and Modelling

Bahá'í principles of physical and spiritual development represent the basic systems thinking model, which discusses understanding a feedback loop as their systems awareness. Bahá'ís, aware that they are building a religious and administrative centre for themselves according to their principles, which support nature, symmetry, aesthetics, and harmony with the environment, have made sure to consider the feedback loop as one of the important elements of modern systemic principles. They anticipated that their gardens in Haifa would be visited by pilgrims and tourists who have a different relationship to their sacred yet attractive tourist space, which is open to all. With a basic system model, we can demonstrate the awareness of a feedback loop that implies a sustainable solution and the regulation of tourist arrivals.

Figure 1 presents a basic system model, also called a causal loop diagram or CLD. Despite different names of models and practices, the term 'sustainability' appears in the context of connected or equal evaluations that are re-established by post-modern society with its mainly liberal rules (Zabukovec Baruca & Brezovec, 2014). The basic system model is a regulation circle, represented by two arrows showing the interaction between the attractiveness of gardens and tourists. The bottom arrow represents the feedback loop that com-

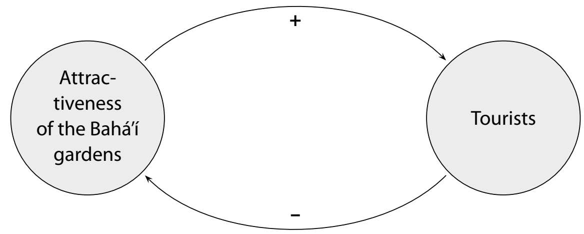

Figure 1 Basic CLD (Causal Loop Diagram) of the Bahá'í Gardens' Attractiveness and Tourists

pletes the process. The interpretation of a model is the following: the Bahá'ís are aware that the greater the attractiveness of their gardens, the more tourists they will attract, which is indicated in the model by the + sign, representing the magnifying effect and growth. However, by being aware of the feedback loop, indicated by the – sign in the figure, they have shown that they are aware that the attractiveness of their gardens decreases as the number of tourists increases. This basic demonstration of systems thinking goes beyond linear thinking in considering the feedback loop. Without the awareness of the feedback loop, linear thinking shows only one interest: the goal of continuous growth, sometimes dramatically. Constant rise is a cause of levelling off or falls depending on the strength of the limiting structure, which we name a systems archetype of 'limits to success' (Kim & Anderson, 2011). With their level of consciousness, Bahá'ís have avoided the pitfalls of linear thinking. They believe that the challenges facing humanity today call for spiritual transformation in the hearts and minds of individuals and the systems of structures of society (Fisher, 2017), representing their shift of consciousness from linear to systems. The Bahá'ís say that human history is a spiritually dynamic process (Hatcher, 2017), representing consciousness's evolution.

> Humanity has emerged from its former degrees of limitation and preliminary training. Man must now become imbued with new virtues and powers, new moralities, new capacities. New bounties, bestowals and perfections are awaiting and already descending upon him. The gifts and graces of the period of youth, although

> timely and sufficient during the adolescence of the world of mankind, are now incapable of meeting the requirements of its maturity. The playthings of childhood and infancy no longer satisfy or interest the adult mind. [Bahá, 1979, p. 9]

This stage of maturation, the adulthood of our species, can only come about with a new consciousness of the oneness of humanity (Langness, 2020). With this information and the systems orientation, we could build a larger CLD model of interdependency among stakeholders who play essential roles in the sustainable growth of Bahá'í Gardens' tourism. We selected the following stakeholders.

- Bahá'í WHS in Haifa
- Investments in the Heritage
- Infrastructure
- Bahá'í Pilgrimage Events
- Programmes and Products for Tourists
- Attractivity of the Bahá'í Gardens
- Number of Tourists
- Local Community
- Environment and Water Preservation

Figure 2 shows the causal loop model as a complex WHS tourism system with all its interdependent elements (Jere Jakulin et al., 2020) that influence each other. The 'pluses' represent reinforcing cycles, where elements positively influence each other, and their values increase. The 'minuses' maintain systems stability, or 'harmony' in the language of Bahá'í.

The system presents the interdependency and dynamics among the elements. This whole cannot properly function without the strength of each of the stakeholders. In systems methodology and philosophy, one must always think of feedback loops. The system will decline if it contains too many plus signs, '+,' which denote growth. The minuses, '–,' are essential as they represent a sustainable or balancing factor. The interpretation of picture 2 would be as follows: Bahá'í WHS in Haifa increases and positively (+) influences the infrastructure in the gardens. The infrastructure

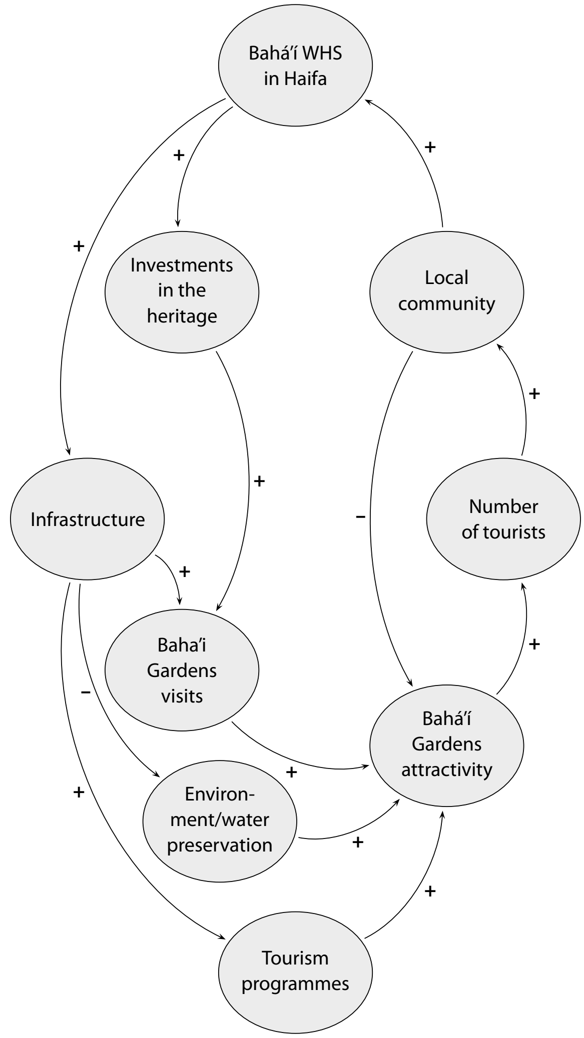

Figure 2 CLD Model Diagram of Dependency among Tourism System Elements

increases and positively (+) influences tourism programmes, which positively (+) influences the attractivity of Bahá'í Gardens. The attractiveness of the gardens increases (+) the number of tourists, and the number of tourists increases positively (+) in the local community. The local community ultimately (+) influences the WHS in Haifa. The description of a reinforcing circle shows upbeat (+) influences among the elements of the system. To maintain sustainability, one must anticipate and seek balancing elements to maintain sustainable (systems) growth. We can see from the model that infrastructure causes a decrease (–) in environmental preservation, but the preserved environment positively (+) influences the attractivity of the gardens. The gardens positively (+) influence the number of tourists, which causes growth (+) of crowds in the local community, and a crowded local community is a cause for the decrease (–) of the Bahá'í Gardens' attractivity.

Bahá'í practically operates on this systems level. They believe in harmony with nature and all living beings; they take proper care of the terraced gardens to conserve water in an arid climate and practise water-saving measures, energy conservation, and recycling. Bahá'í WHS administration increases (+) investments in the heritage, which influences (+) balanced visits to the gardens, and these positively (+) impact the attractivity of the gardens. Bahá'í Holy Places are associated with the green pilgrimage network. The Green Pilgrimage Network members teach visitors (tourists and pilgrims) about systems or sustainable thinking by 'walking the talk' rules.

Systems Approach in the Practice of Bahá'í Gardens Management

Managing Pilgrims and Tourists

The Bahá'í visitor management manages the flow of tourists with walk-in tours and tours for organized groups. There are many different tours and programmes available. The gardens offer a Lower Terraces tour (for less than 20 people), extensive group tours (for more than 20 people), and self-guided visits from Wednesday to Sunday in the forenoon and afternoon. The visitor management opened two entrances, one for the tourists, and a guided tour through the gardens (groups or individuals) from the entrance to Mount Carmel. The visitors climb down to the middle of the gardens. The pilgrims climb up Mount Carmel. This climbing up includes the Hakramin (134 steps) and Shifra (236 steps) stairs, which lead to the Pilgrim Reception Centre, where pilgrims register. There are 1,625 steps all over the terraces. Entrances are separated so that tourists and pilgrims do not meet. Both motivations are different, but the environment induces serene admiration of the symmetrical, floristic-rich garden terraces. Differentiation between pilgrims and tourists is essential when exploring the socio-spatial dynamics of tourism and pilgrimage landscapes (Gatrell & Collins-Kreiner, 2006). The Bahá'í visitor management created distinct spatial practices to preserve the integrity of pilgrims and tourists and their activities. In 2013, 917,031 tourists and 8,000 Bahá'í pilgrims visited the gardens (Collins Kreiner et al., 2015). In 2019 more than 1.6 million visited (Bahá'í World News Service, 2019). Noteworthy is that all tours are free of charge, representing the essence of this heartful and hospitable religion, which wants to share the beauty of their belief and thinking with society and those who wish to experience the symmetry of nature.

The entrance for the smaller group of tourists is located at the western edge of the Bahá'í Gardens at Hatzionut – up from the bridge. The tour takes approximately one hour and includes 600 steps. This tour is of medium difficulty and is not suitable for people with walking difficulties. The tour ends at the German Colony Plaza on Ben Gurion Avenue. The entrance for groups of more than twenty people is at the Bahá'í Gardens balcony and includes 750 stairs. The tours are unique experiences, offering views of the upper and lower terraces and the Haifa Temple. They include informal and formal gardens with a mix of native and adapted trees, plants, and flowers. As at most other places of this type, visitors are advised to wear modest clothing that covers the shoulders and reaches to the knees without modern rips, to help keep the place clean and beautiful, and to be considerate of the sensitivities of others.

Environment: Recycling, Water Conservation and Saving Measures

The Bahá'í Gardens in Haifa and Akko have been managed in an environmentally conscious way from the beginning, with a particular focus on water conservation. The recycling of green waste into mulch and compost, for example, dates to the 1950s, as does the practice of treating large areas of lawn in early summer and leaving them to lie fallow until the winter rains arrive, when they are re-seeded. During the planning of the construction of the terraced gardens on Mount Carmel in the 1980s, Bahá'ís carried out extensive research and discussions with the Water Commission, the water company Mekorot, and some of Israel's top consultants and academics in the fields of horticulture, irrigation, and water management. The conclusions were fully considered in the detailed design of the garden planting and infrastructure systems so that the project was based on sound ecological principles and incorporated the most advanced technology. The irrigation systems installed in the Bahá'í Gardens are among the most advanced in the world. At the heart of the system is a computer that controls hundreds of valves to direct water through a complex network of polyethylene pipes so that each type of plant gets the amount it needs at the right time according to atmospheric conditions. Evapotranspiration (ET) is the transfer of water in the form of water vapor from the earth's surface and through the leaf slits of plants into the atmosphere. It is the leading indicator of the amount of water the vegetation will need. The irrigation planner uses meteorological data from a detailed weather forecast to predict the evapotranspiration rate (Bahá'í International Community, 2020).

To reduce the strain on drinking water, the Bahá'í Gardens extensively use saline and contaminated water, which is drawn from licensed wells on the property and then treated to meet the Gardens' requirements. Most of the water is delivered directly to the roots of the plants at night by drips and sprinklers. At the same time, the occasional overhead irrigation, which must be carried out during the day to ensure the absorption of fertilizers and other agrochemicals, is planned for early in the morning when evaporation is at its lowest. The computer detects any leaks or other anomalies, and the irrigation team checks the equipment frequently to ensure any problems are detected and corrected immediately. In addition, there is an ongoing review of irrigation programming and water delivery systems, including the study and testing of new technologies, new types of equipment, and new approaches to improve system performance. The central design feature of the terraced gardens on Mount Carmel is the flowing water, which seems to always follow the visitor, pleasing both the eye and the ear. These effects are achieved without wastage, as the fountains and streams flowing along the steps are fed from a single closed system that circulates in each terrace unit. The amount of water added to the evaporation system each day for the whole area is less than the daily consumption of an average person (Bahá'í International Community, 2020). The Baha'i Gardens are members of the Green Pilgrimage network.

Infrastructure and Cooperation with Local Community

The magnificent infrastructure, reflecting the beauty, symmetry, and light of the Bahá'í Faith, has become a magnet for visitors, a source of strength for pilgrims, and a world attraction for tourists. The Golden Dome Shrine is the first thing one sees when entering the Bahá'í Gardens. The Golden Dome Shrine, located in the northern part of Mount Carmel, was built at the beginning of the twentieth century to bury the remains of the founder of the Bahá'í religion, the martyr and prophet of Shiraz, the Báb. The site was shown to 'Abdu'l-Bahá in 1891 by his father Bahá'u'lláh, a Persian nobleman who was persecuted for following the teachings of the Báb and had to flee Persia in 1853. 'Abdu'l-Bahá built a modest mausoleum on the present site in 1909 and buried the Báb's remains. The subsequent systematic, gradual, and strategic development of the surrounding gardens reflected the growth of the Bahá'í community. 'Abdu'l-Bahá's successor, Shoghi Effendi, expanded the Bahá'í faith and formed the world community. The construction of the Golden Dome Shrine was finished in 1953 (https://www.bahai.org/the-bab/shrine). The building of the Universal House of Justice is on the northern slope of Mount Carmel together with the Shrine of the Báb and other administrative buildings. It is the international governing council of the Bahá'í Faith. Bahá'u'lláh ordained its creation. He also conferred authority upon the Universal House of Justice to positively influence humankind's welfare, promote education, peace, and global prosperity, and safeguard human honour and the position of religion. It is charged with applying the Bahá'í teachings to the requirements of an ever-evolving society and is thus empowered to legislate on matters not explicitly covered in the Faith's Sacred Texts. The guidance provided by the Universal House of Justice ensures unity of thought and action in the Bahá'í community as it learns to translate into reality Bahá'u'lláh's vision for a spiritually and materially prosperous global civilization (see https://universalhouseofjustice.bahai.org/unique-institution).

Local Community and Cooperation

The Bahá'í religion encourages cooperation, helping, learning, and thinking about systems where everything is connected and interdependent. The work of volunteers, many among the Bahá'ís, plays a significant role. They maintain the gardens themselves, keep them tidy and run programmes and tours of the gardens. The many tours and the millions of annual visitors to the gardens help the local tourist board and the city of Haifa, which in 1909 became the most important city for the Bahá'ís and, for decades, a centre for Bahá'í pilgrims. Haifa became one of the most visited tourist attractions in Israel after listing the Bahá'í Shrines and Gardens as a UNESCO World Heritage Site in 2008.

Conclusions

The knowledge that World Heritage Sites are magnets that attract tourists and visitors from all over the world is attractive, but it is also the responsibility of all site managers. The Bahá'ís, through their work, voluntary contributions, love, and trust, have built the terraced gardens of Haifa and the buildings that have become part of UNESCO's cultural heritage. The harmony of scientific and spiritual truth functions as one of the central tenets of the Bahá'í Faith. Science and religion both contribute to a profound synergism. Both reveal themselves progressively. The great Faiths build upon and reinforce each other over time, just as the scientific method advances knowledge with each discovery (Langness, 2021). As wisdom is rarely explained in the language of science (Jere Jakulin, 2019), so is religion.

Nevertheless, religion and science have systems qualities: balance, common goals, dynamics, interdependency, and feedback loops. Consequently, it is necessary to consider the feedback loop that balances an overloaded system. In our field research, we have experienced that the Bahá'í religion's representatives are true systems thinkers. They follows systems thinking principles: the first principle is The Big Picture, which is visible in their tourism and pilgrimage organization for the benefit of the environment and future. Their respect shows the second principle of interdependency, dedication to the feedback, and symmetry of the surrounding. The third principle is visible in their measuring water supplies, numbers of visitors and pilgrims, which influences the fourth principle of short and long-term – they are aware of all the potential impacts of whatever strategy they choose. The fifth system's principle is the Bahá'í awareness that they are part of the environment in which they live. They care for it ecologically, sociologically and economically and preserve it for future generations. They anticipate the feedback loop and ensure that all activities are planned with clear rules and respect for balance of nature and fellow human beings. We have illustrated their systems or sustainable attitude in a qualitative causal loop model, which presents the first step in systems modelling, a basis for a quantitative model. At the same time, we have presented the parameters captured in the model through field observation and photographs.

The future of preserving the world's cultural heritage for the planet's and humanity's benefit lies in understanding the systems approach of those who make decisions about the future development of tourism. Understanding systems thinking and systems dynamics brings sustainability to tourism development in a natural way. The example set by the Bahá'í religion, with its systems practice of managing tourism to maintain a balance in the environment, is one that tourism operators, regardless of the type of tourism, must follow in the present and the future.

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The Role Higher Education Plays towards the Development of Sustainable Socio-Economic Opportunities for Mapungubwe World Cultural Heritage Site Communities

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Using Mapungubwe World Cultural Heritage Site as a case study, this paper investigates the role academics at Higher Education Institutions (HEIS) can play in facilitating the development of a more holistic approach to cultural heritage tourism (CHT). CHT is presented as a vehicle that can be utilised by higher education institutions within protected heritage areas towards mitigating poverty alleviation and socio-economic development, which contributes to addressing Sustainable Development Goals (SDGS) 1, 8 and 11. A sequential mixed method was adopted for this study. Focus groups were conducted with 15 participants using a semi-structured interview guide. The researcher also administered a survey of 100 questionnaires. Content analysis and SPSS were used to analyse the data. The key finding is that community engagement initiatives of HEIS could play an important role in socio-economic development. However, it is essential to involve different stakeholders in order to effectively identify socioeconomic opportunities aimed at addressing the primary needs of the communities. Stakeholders' involvement in decision-making processes about community development projects is vital because imposing development upon communities could result in disputes and withdrawal of community support. In the Mapungubwe area, HEIS, through community education, engagement and involvement in socio-economic development projects from an initial stage could contribute towards achieving sustainable socio-economic opportunities and in this way accelerate the implementation of SDGS. This study highlights the value of community engagement projects as potential drivers of a holistic approach to CHT and the drive towards more sustainable management of cultural heritage sites.

Keywords: cultural heritage tourism, community development and engagement, Mapungubwe World Cultural Heritage Site, higher education, Sustainable Development Goals

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Introduction

Globally, many cultural heritage sites are located in rural areas, and this often results in social and economic challenges related to job opportunities, infrastructure and socio-economic reforms. In some communities located near protected area sites, the declaration of a World Heritage Site can be viewed as an opportunity due to an increase in the number of visitors to the geographical area, and an associated increase in income through tourism activities (Lopez-Guzman & Santa-

Cruz, 2016). On that note, a declaration could suggest an answer to the socio-economic challenges faced by the respective local communities. The envisaged benefits of the declaration of World Heritage Sites speaks directly to SDG 1 that advocates for the end of global poverty in all its forms, followed by SDG 8, that alludes to the promotion of sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all. Lastly, SDG 11 strives to make cities and human settlements inclusive, safe, resilient and sustainable (United Nations, 2015, p. 18).

Closely aligned to the 2030 SDG Agenda (United Nations, 2015) implemented in 2015 is the South African Department of Higher Education and Training (DHET) agenda captured in the *White Paper for Post-School Education and Training* (DHET, 2013) that places the empowerment of society as one of the focus areas of Higher Education in South Africa. In addition, empowerment should include the building of a lifelong learning and training system that will not only assist in the eradication of the apartheid legacy but will also help to build a non-racial, non-sexist and prosperous South Africa where access to quality education (SDG 4) is viewed as an important component in the fight against poverty (SDG 1) and inequality in affected societies.

This paper investigated the role academics at Higher Education Institutions (HEIS) can play in facilitating the development of a more holistic approach to cultural heritage tourism (CHT). The focus of this paper was to investigate how community development initiatives undertaken by academics in the area of cultural heritage tourism has facilitated a more holistic approach in achieving sustainable development in a local community in South Africa, the Mapungubwe WHS communities. Such a study could play a role in empowering people to participate in the development of sustainable socio-economic opportunities in their own communities. Mapungubwe World Cultural Heritage Site (MWCHS) situated in South Africa, Limpopo Province has been adopted as the case study.

Background

The *White Paper for Post-School Education and Education* (DHET, 2013, p. vii) indicates that the purpose of an education and training system is to provide the relevant knowledge and skills that are needed within an economy. With such a system, populations can have a better understanding of their own communities and be able to provide a more meaningful contribution to political, social and cultural societies in South Africa. The authors of this paper contend that Higher Education Institutions (HEIS) can, through their community-engaged research, contribute to a cohort of citizens who can think, who are creative, who are more effective and are ethical in their actions to achieve better lives for themselves within their respective societies.

A robust connection exists between tourism and Cultural Heritage (CH) because cultural tourism gives an experience and is related to cultural treasures. Furthermore, the CH belongs to the people of the particular community, clan or tribe. Through CHT, CH can be shared by many through education and the promotion of tourism. Similarly, the social and economic action benefits the locals and the custodians of the culture. Nowadays, the CH is packaged or commercialised in a way that suits and caters for the specific segment that exists in the tourism market. Therefore, through research, academics in HEIS can play a vital role in connecting communities and the management of these sites to ensure that more suitable management models are used that will be to the benefit of all stakeholders, including communities. Over and above this, research can also add value to the role that academics can play in the lifelong training of community members through community engagement. UNESCO (2007b) is of the view that CHT is an extended developing segment that permits maintainable growth through the development of and commitment to local but sustainable cultural tourism projects and related practices to the benefit of the local community. In support of the view by UNESCO, the argument for a need to educate communities using community engagement (CE) as directed by the South African DHET to HEIS becomes paramount. Keitumetse (2014) and Kurin (2004) advocate for community education and knowledge enhancement within their respective geographic sites, and this must include the potential commercial benefits that would proceed from the preservation of the local cultural heritage such as relics, monuments, sites and physical and human landscapes. Furthermore, these scholars also indicate that educated communities tend to value heritage in such a manner that reinforces relations between the custodians of the culture and the project managers leading the process. Therefore, this paper suggests the importance of educating the custodians of the local culture, including the local communities that reside closer to protected sites. This education should relate to the systems, policies and the tangible and intangible gains or benefits related to CHT.

The World Heritage Committee (UNESCO, 2002) is aligned with the 2030 SDG Agenda (United Nations, 2015), and the *White Paper for Post-Schooling Education and Training* (DHET, 2013) declared job creation and community involvement as part of their key areas of performance. In acknowledgement of the declaration, the South African Government, through the National Department of Tourism (NDT, 2011), implemented the *National Tourism Sector Strategy 2016–2026,* (NTSS) supported by the *National Heritage and Cultural Tourism Strategy* (NHCTS) that was implemented in 2012. The NTSS maintains that tourism is a crucial global industry, for its contribution to the gross domestic product of many countries and in addition to the local trade power. This implies that tourism has the potential to contribute towards job creation and to mutual understanding when it is well guided and managed. This is most likely why the South African Government plays an important role in its viability and success. The strategy recognises tourism as an industry with a massive potential role in growing the economy as it is in accordance with the NHCTS vision to 'realise the global competitiveness of South African heritage and cultural resources through product development for sustainable tourism and economic development' (NDT, 2012, p. 15). Evidently, since the adoption of the *White Paper on Science, Technology and Innovation* (DST, 2019), the South African Government has been committed to using science, technology and innovation (STI), in which tourism forms a part, to develop the country through economic growth, job creation and socio-economic reform and to overcome the legacy of apartheid. For these reasons, academics in HE, through their expertise, such as research, and guided by the *White Paper for Post-Schooling Education and Training* (DHET, 2013) and the *White Paper on Science and Technology* (DACST, 1996) aligned with the 2030 SDG Agenda (United Nations, 2015) and the 2030 National Development Plan (NPC, 2011), can take the current status of the tourism industry, in particular CHT, to greater heights by taking a lead in advocating for STI acceptance and usage, and development and adaptation of community education methods/content, including management models enhancement. Furthermore, academics can also play a role in facilitating the proper implementation of the SDGS on the ground level, which could assist in improving the interaction between site management and communities. In addition, this facilitation could also alleviate the existing discourse, in particular the barriers to achieving a more holistic development approach to CH and accelerating the implementation of the SDGS in a local community in South Africa.

Furthermore, the NTSS and NHCTS deal with the credit granted to tourism as a needed instrument that can be utilised to stimulate reciprocal understanding and tolerance during interactions between tourists and host communities. For example, South African National Parks (SANParks) is working in conjunction with the MWCHS Management towards the implementation of the stated strategies into practice in order to benefit all the inhabitants of Mapungubwe and local community members. Although the contribution of tourism to this community is substantial, a number of challenges remains. The challenges must be afforded attention in order to successfully facilitate more opportunities relating to sustainable local development and poverty alleviation, through the localisation of benefits.

These challenges include issues of ownership, access, economic leakages (from the local economy and through imports), local employment, benefit distribution, social and environmental impacts and dependency. Such challenges are perceived to effectively yield positive impacts when addressed at the destination level with the active participation of the local communities. In addition, Landorf (2009, p. 53) notes that the concept of sustainable heritage tourism identifies two key principles of sustainable practice, namely: first, a planning process that is long term and holistic and second, multiple stakeholder participation in that planning process. On that note, the promotion of the integration of heritage resource conservation within urban and rural planning and in the context of social and economic development, utilising the reinforcement of policy and more operational administration with relevant legislative implementation, as is delineated in the National Heritage Resource Act (NHRA), No. 25 of 1999, could be envisaged as a tool to realise the desired goals. Similarly, the NTSS Strategy, UNESCO (2007a) Guidelines, Tourism White Paper (DEAT, 1996) and SDGS 2030 guidelines, including peer-reviewed literature (Triangulation), can also be utilised to serve this purpose.

A study conducted by Ayoo (2007) noted that the allocation of world heritage status could be utilised by the management of these areas as a very effective marketing strategy of their destination as the status could provide a competitive advantage when marketing a tourism site globally. On the same note, management can utilise the status to ensure that heritage management and conservation activities are perceived to be fundamental at all times, as alluded to by the NTSS, NHRA and UNESCO, just to name a few. In addition, Jimura (2019) alluded to the importance of sustainable tourism projects development relating to a proper management plan within WHS, as findings have established that through engaged research, tourism has the potential to address real life issues that can be beneficial to the local communities residing within and around the project area. It is noted that careful, considered and meaningful interactions with the local community are crucial to ensure a positive adoption of the management model by a WHS in order to eliminate a negative impact on the site. Through research and community engagement, academics in HE could position themselves to contribute meaningfully to the development of tailored-made management models that could benefit protected areas with unique characteristics, as is the case with MWCHS. Furthermore, HE, through their academics, could advise management or policy makers during the policy and strategy development process to ensure practicality and sustainability, by ensuring that the SDGS guidelines are imbedded during the development of management models or policies and are not treated as an add-on at a later stage. In this case, MWCHS management could draw a great deal of insight from academics by ensuring the inclusion of concerned communities from the initial stage and also practice the bottom-up strategy at all times although it is viewed as a practice that is time consuming by some practitioners/managers.

To complement the employed paradigms, the Complexity Science Theory and the Basic Needs Theory were employed. Saturation of employment of these theories is based on the nature of the study. Complexity Science Theory is perceived as complex because of many challenges that are often dynamic and unpredictable and of multi-dimensional nature through relationships that are interconnected (University of Victoria, 2012). In the case of MWCHS, complex issues, some relating to community involvement and engagement pertaining to sustainable community development, including decision making regarding projects initiation or project prioritising based on community needs, do exist. Within the Basic Needs Theory, as applied by de Wet (2018), community development expanded beyond earlier applications of the theory, through an integration of the multi-dimensional nature of community development, into a theory that acknowledges the complexity of the interdisciplinary approach to development. This is done by introducing a priority index into a basic needs assessment technique that enables the researcher to prioritise the 'real' basic needs in a particular community (de Wet, 2018, p. 1). Prideaux et al. (2008) noted that tourism and culture in any particular geographical setting could be utilised for a variety of purposes that could extend from entertainment, preservation, information, education, profit and propaganda. The stated utilisation could be done through socio-economic development that prioritises responsible and authentic tourism and in this way could speak directly to the various guidelines of the SDGS. In the case of MWCHS communities, it is clear that a number of 'real' basic needs require the attention of various stakeholders such as HEIS, MWCHS Management and Community Traditional Leaders. Appli-

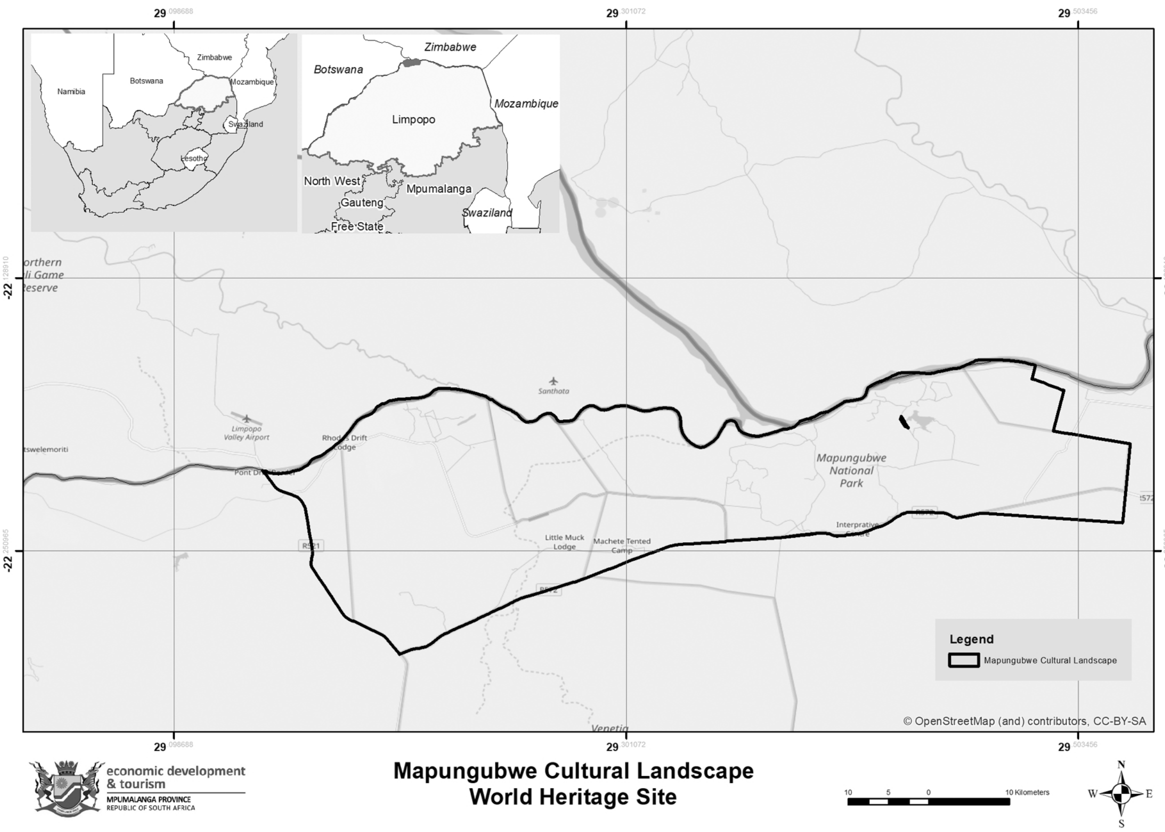

Figure 1 Mapungubwe World Heritage Site Map (adapted from Shabalala, 2020)

cation of a bottom-up strategy from the initial stage becomes key, as it gives a chance for affected and concerned stakeholders to contributes towards achieving a sustainable development and yield meaningful benefits for the community.

Description of the Study Areas and Methodology

Study Area

This paper makes use of a case study of Mapungubwe World Cultural Heritage Site as presented in Figure 1. The study extended to the local communities' residential areas, which included Musina, and the All-Days area, including the descendants' residential areas (in Venda) in Limpopo Province. This Province is geographically situated on the northern part of South Africa, and considered to be one of the developing provinces in the country (Tshiala et al., 2011, p. 14). According to Limpopo Department of Agriculture and Rural Development (2018), this province has distinct climate regions that vary from a semi-arid to a sub-humid climate.

Mapungubwe is celebrated as a National Park, declared in 2004, and a World Heritage Site, declared by UNESCO in July 2003 (South African National Parks, 2014, p. 2). Previously, the Mapungubwe National Park was referred to as the Vhembe Dongola National Park, and is now globally labelled the Mapungubwe World Cultural Heritage Site (MWCHS) under the management of South African National Parks. According to scholars such as Carruthers (2006, p. 1) and Schoeman and Pikirayi (2011, p. 1), the geographical area of Mapungubwe was occupied by one of the earliest kingdoms in the region and there is recorded evidence in the MWCHS of its extensive regional and continental links with East Africa, the Arabian Peninsula, Persian Gulf, India and the Far East. It must be noted

Table 1 Qualitative Data Collection Participants

Representative participants	Village, area and date	Sample size
Vhangona cultural movement member	Mutale Village, Thohoyandou, March 2019	1
Tshivhula representatives from the Royal family	Elias Resort, Ndzhelele, March 2019	2
Leshiba representative from the Royal family	Dzanani, Ndzhelele, March 2019	1
Lemba representative	Tzaneen area, March 2019	1
Sematla	Den Staat Farm (west boundary of Mapungubwe), May 2019	1
Mapungubwe staff member	Mapungubwe WCHS, April 2019	1
Machete Royal Council members	Andermark Village, All Days & Vivo, March 2019	5
SANParks: Head Office Staff Representatives	Pretoria: SANParks Head Office, March 2019	3

Notes Interview method: semi-structured interview. Adapted from Shabalala (2020).

that MWCHS boarders three countries, South Africa, Botswana and Zimbabwe, with a meeting point between the Limpopo and Shashe rivers (Schoeman & Pikirayi, 2011, p. 1). A study conducted by Chirikure et al. (2010, p. 34) described the site as important, firstly for its evidence of the earliest state system in the region and for the unique farming communities that existed on the 169 hectares of savannah southern Africa. According to Shabalala (2020), there are six Mapungubwe descendants groups who regard themselves as the heirs of the land as they claim to be the offspring of the indigenous people who were forcefully removed from the land by the colonial government, namely: the Vhangona Cultural Movement, the Tshivhula Royal Family, the Leshiba Royal Family, the Machete Royal Council, the Lemba Cultural Association and the Sematla people. In line with the purpose of this paper, due to the rich culture and heritage of the study area, an excellent opportunity is presented for academics at HEIS to apply their mandate of engaged research and community engagement to contribute to sustainable development of the area that will be of benefit to all stakeholders.

Study Methodology

The data used in this paper was collected as part of a bigger research project by the same author/researcher and only the data relevant to the purpose of this paper is provided as the basis of the analysis and discussion section. A sequential mixed method was adopted for this study. Focus groups were conducted with 15 participants formed by the Mapungubwe descendants traditional leaders using a semi-structured interview guide. The researcher also administered a survey of 100 structured questionnaires to the community. Content analysis was used to analyse the qualitative data and SPSS was used to analyse the quantitative data. Secondly, in order to determine the socially constructed reality, including the deeper meanings and significance of the respondents' responses, qualitative data was collected through interactions with respondents in the form of focus groups using interview guides. The data for the latter were then analysed and interpreted by the researcher.

Sample Selection

The study adopted a non-probability purposive method of sampling, to identify sampling participants (Table 1) that met specified criteria, i.e. had a direct connection with the research area as the claimant of the land, and also are one of the recognised traditional leaders from the six descendants groups. The Mapungubwe descendants traditional leaders, MWCHS Staff, and South African Parks staff, including a Heritage Sites Manager, formed the participants. The Snowball Sample Method was applied in an attempt to secure the participation of the community during the last days of stage 2 data collection. It must be noted that, in accordance with the wishes of the traditional leaders, hard copies of a translated version of the survey questionnaires were administered to encourage the local people to willingly respond to the survey questionnaire. The local community residing around the area formed part of the respondents (survey).

The target population for the descendants was geographically dispersed and the total is unknown to the researcher. For this reason, a non-probability purposive sampling method was applied to identify respondents who satisfied specific criteria and could thus be included as research respondents. As was the case with the collection of the qualitative data, the identification of participants for the quantitative part of the data collection was done through the knowledge of the researcher and referrals from other participants. Although the researcher interviewed 100 people, the responses of 17 respondents could not be utilised as the completed questionnaires were considered to be incomplete. Despite the loss of these responses, the 83 questionnaires utilised for data analysis was considered sufficient as data saturation had been reached. The researcher was accompanied by local field workers from the area who are fluent in the local language and who understood the local dynamics. The field workers guided the researcher in terms of the traditional protocols and observation, especially when meeting and interviewing the royals (chief/royal council members). As this research was undertaken in a traditional rural area, it was important for the researcher to gain an understanding of the community dynamics and traditional protocols as this played a vital role in building trust with communities and their leaders. The questionnaire was administered a month after the qualitative data collection. All data collection tools utilised in this study were applied using the indigenous language of the participants and respondents.

Data Analysis

Although the data collected was for a bigger research project by the same author/researcher, relevant responses related to the purpose of this paper were extracted. Both the qualitative and quantitative data collection questions included topics such as economic benefits derived from MWCHS for the descendants/local communities, and the role presented to descendants/local communities by MWCHS, including the level of knowledge of the descendants about the existing products/services in MWCHS. Respondents and participants were also asked to present or list sustainable opportunities that they wish to see being presented or developed by the park, that will not only benefit them but the park as well, especially CHT products/services.

Statistical Package for the Social Sciences (SPSS) was used to analyse the quantitative data and a content analysis (thematic and descriptive in nature) was used to analyse the qualitative data. The analyses were done according to content analysis style, where coding (Selective Coding, Axial Coding, Open Coding) was applied using themes and sub-themes, aligned with the research objectives. The identified themes included socio-economic benefits, role presented to descendants/local communities, existing products/services knowledge and so forth.

Results and Discussion

Qualitative Results and Discussion

The results of the study indicate that HEIS, in collaboration with MWCHS Management and Communities, can assist in mitigating challenges with the goals of achieving sustainable development. Communities reported that cultural heritage tourism in Mapungubwe should firstly be about bringing the communities close to the park to partake in activities that will contribute towards ensuring community development, as CHT seems to have the potential to develop communities. Park management style and strategy implementation becomes key. The findings indicate that park management style has an impact on community involvement and participation, including the fair benefit sharing to stakeholders. This has a direct impact on the role of MWCHS. As shown in Table 2, the quantitative results suggest that the Mapungubwe management style is very poor, with only 9% viewing it as good. The table shows that 32% of respondents rated MWCHS management style as poor and 59% as very poor, meaning that 91% view the MWCHS management style as poor. 2% of the respondents reported that they regard the MWCHS management style as good, and another 2% as very good, which gives a combined score of 4%. The remaining 5% reported that the management style is excellent. Overall, 91% of the respondents view the MWCHS management style as poor and 9% view it as

Table 2 Mapungubwe Management Style

Excellent	5
Very good	2
Good	2
Poor	32
Very poor	59

Notes Adapted from Shabalala (2020).

good. HEIs can assist with development of a stakeholder participation model and also assist management with ways on how to apply a bottom-up strategy in a fruitful manner or possibly provide workshops/training to both communities and park management under the pillar of community engagement.

The descendants of Mapungubwe also wish to see themselves benefiting economically, therefore, they wish for the park management to establish a form of benefits sharing whereby the proceeds derived from MWCHS can be shared with the descendants. An emphasis was placed on park management to consider offering bursaries to deserving students from local communities and descendants groups to further their studies in conservation or tourism and other related studies. The reality is that some of the children of the descendants' community sometimes need a place to do their Work Integrated Learning (WIL) for their formal qualifications, and they could be afforded such opportunities by the park. The findings suggest that academics and stakeholders such as HEIs, UN, and UNESCO have a crucial role to play in identifying socio-economic opportunities for sustainable development aimed at addressing the immediate needs of the targeted beneficiaries and potentially improve their lives. Given a chance, the very same communities could play a vital role by advising project managers on which projects to implement and prioritise based on the real needs of the respective communities. Therefore, researchers should be the voice of their respondents, ethically carry out their views and educate management about the importance of community engagement and involvement in order to achieve sustainable development and secure community buy-in. The study participants indicated, in various ways, that they should be part of the initial stages of any actions related to the socio-economic development of the area. This is reflected in the following comments of Respondents A, B and C (Table 3). For instance, this research established that the study participants wish to see the main roads leading to Mapungubwe fixed and well maintained. The community also expressed the need for the park management to look at the possibility of attracting other businesses (for example a petrol station) closer to the park and in this way reduce the travelling to refuel in towns located a distance from the site. In addition, the Mapungubwe descendants traditional leaders believe that constructing a cultural village in MWCHS could yield positive outcomes such as sustainable job creation opportunities, and enhance the value or authenticity of the cultural heritage tourism products and services offered by the park. In addition, it could enable skills transfer as the senior citizens could be presented with an opportunity to teach the youth on how things should be done (in line with their customs and traditions) while sharing their culture with the world (tourists). Furthermore, these seasoned traditional leaders could also serve as advisers to management, scholars and policy makers on certain matters, especially heritage, cultural and spiritual-related matters in protected areas such as Mapungubwe. In this manner, the achievement of accelerating the implementation of sustainable goals could be realised.

The focus of this paper was to investigate how community development initiatives undertaken by academics in the area of cultural heritage tourism has facilitated a more holistic approach in achieving sustainable development in a local community in South Africa, Mapungubwe WHS communities. The three SDGs underpinning this paper, namely: SDG 1, SDG 8 and SGD 11 advocate for achievement of sustainable development that comprises the nature of projects like the above narrated wishes from the MWCHS communities. On the same note, some of the wishes narrated by the MWCHS community can be realised sooner, provided HEIs, through their academics, take a lead in this agenda and contribute to sustainable development through the act of teaching, research and community engagement in CHT. In conjunction with the key finding and the results of the study, the paper demonstrates that the descendants' traditional leaders and the

Table 3 Study Participants' Views (Mapungubwe Descendants' Traditional Leaders) about Their Expectations towards Community Involvement and Engagement

Respondent	Excerpt
Respondent A	They wish to be consulted on the initial stage, not be treated as the park management is currently doing, only consulting them on the drafted document at the last minute for input and approval without giving them enough time to deliberate.
Respondent B	They wish to be a part of the products/service initiation and of development and enhancement of these products because they believe that they know what needs to be done and how it needs to be done culturally.
Respondent C	They want to be involved from the initiation stage, not when the project is already at an advanced stage, when all the important decisions have been made.
Respondent D	The communities expect to be included during the planning process; also to be consulted by management before starting whatever they want to do, and for them to also make use of a language that they will understand.
Respondent E	Since they are indigenous people, some of them have not acquired any formal education, therefore use of technical jargon when management make presentations in meetings makes things difficult, and at times results in communities not being able to interact. Instead they just sit there like a piece of stick lying down.
Respondent F	The communities wish for management to also give them a chance to present their proposals or suggestions that they have as communities, not it always being the park management that proposes or suggests. For instance, the communities' leaders indicated that they have been presenting the need for building a cultural village right inside the park. They also believe that they cannot say the site is a cultural landscape while there is nothing cultural, such as a cultural village.
Respondent G	As the descendants they communicated their thoughts regarding the park management plan draft with the park management but it was not reflected in the new draft.
Respondent H	Most importantly, the descendants indicated that they do not want to hear only what the park management is saying about the new management plan, instead they must also hear what, as the descendants, they have to say (their proposals), how they wish to see the place develop so that it will appeal to them, cater for their needs, and also attract tourists.

Notes Adapted from Shabalala (2020).

community members are better positioned to address their own needs and the needs of their communities as they were well informed about the community dynamics. As such, a bottom-up strategy is a key component in any community engagement and involvement. The study participants presented their views in line with their expectations towards community involvement or engagement and are captured in Table 3 (Respondents D, E, F, G and H). HEIS could contribute by aligning their SDGS-related research to advocate for community engagement and involvement. Furthermore, academics at HEIS can foster mutually beneficial ways of doing things and can actively document and/or develop models that will ensure the all-inclusive achievement of the SDGS in CHT sites. Community education, engagement and involvement in sustainable socio-economic development projects from the initial stages play an important role towards achieving the desired sustainable socio-economic opportunities creation. The descendants in particular are in possession of indigenous knowledge and skills; they also view themselves as heirs who are deserving to economically benefit through sustainable job opportunities and are in a position to improve their lives when they are involved or advising management. Therefore, it is important for researchers to take into consideration the views of respondents and participants on how they wish to see their communities contributing towards uplifting of the park. The same applies to management, practitioners and policy makers.

The findings of the paper established that communities and SANParks staff representatives were of the opinion that CHT should play a more prominent role in achieving community sustainable development. Furthermore, MWCHS should be the platform that can be utilised to facilitate the restoration of the presently non-existent (or limited) networks and connections that would use community development and participation in such a way as to restore the dignity of the descendants community.

Descendants group 1: 'It means the descendants of Mapungubwe should visit the site from time to time, because that is how they understand Mapungubwe; it must be a tourism centre which they could benefit from through the economy created by tourism led by SANParks or Mapungubwe.'

Descendant group 5: 'Their understanding would be that the descendants should have been involved in development of tourism in Mapungubwe in such a way that they have a full role that will result in the development of Mapungubwe Heritage Site communities.'

The SANParks representatives said, 'We view the role of Cultural Heritage Tourism regarding community development in Mapungubwe as one that contributes towards giving a sense of pride to communities about their culture and heritage.' In addition, 'we believe that the role will reflect back to the communities as they will be witnessing their own cultural heritage being expressed and shared with visitors, which gives them an opportunity to express themselves. As a result, this act could present the communities with a chance to tell their story as the owners of it, and also assist the communities to connect with their heritage in every possible way and result in a sense of belonging for them.'

Furthermore, The SANParks representatives said, 'We believe that the role of Cultural Heritage Tourism regarding community development in Mapungubwe could be perceived as one that contributes to the economic development of the communities. When tourists come to the park, they could be the ones involved in taking the tourists around the cultural heritage site and this could result in job creation for them as well.'

Therefore, HEIS, in partnership with MWCHS management and SANParks, should join forces with communities to ensure that CHT plays a prominent role in achieving sustainable development in local communities.

Quantitative Results and Discussion

In order to establish if the qualitative results were valid, the quantitative data collected used the Cronbach Alpha and Likert Scale to measure the involvement of stakeholders (descendants and local communities) and to establish their respective benefits. Amongst the variables and the items used in the scales, statistically significant correlations were established on the following:

- Economic benefit to descendants and those living in the local community.
- The need for descendent and local communities to provide substantial input into the protocols, products, service development and cultural preservation.
- Descendants and local community members' representation on various MWCHS committees.
- Regular consultation and engagement between descendants/local community and the management of MWCHS.
- The need for an active Park Forum.
- Proper implementation of the park management plan and park management style/strategy.

In terms of the first two correlations, it is established that some respondents reported that they were already actively participating in the MWCHS and were receiving some economic benefits. However, a number of community members reported that they were not given a chance to participate and had not benefitted in any way from the proceeds derived from MWCHS. Descendant group 3:

> Our great forefathers lived there in Mapungubwe for quite some time and they have everything that connects them with the Mapungubwe landscape. We believe that if we can sit down with the park management, there are lot

> of things that can be done, so that our community can benefit from cultural tourism, as currently our community does not benefit from tourism at all.

The responses to the semi-structured questionnaires completed by respondents indicated that the majority of the local people and descendants had little knowledge about the CHT products/services that exist in MWCHS. Statistical significance indicates correlation between the statement by the local community members and descendants indicating that they receive no benefits from the proceeds derived from MWCHS and their knowledge of the CHT products and services in MWCHS. Descendant group 2:

> Our communities who are directly descended from Mapungubwe must keep on going there, either for rituals for those who seek rituals, or for those [who go for a] tourism purpose let it be for tourism. Whoever comes to the park should be able to develop the park. Also, descendant communities must benefit from the revenue or any proceeds that come from Mapungubwe Park.

This extended to responses that some community members and descendants were not actively participating in the maintenance and preservation of cultural heritage tourism products/services in MWCHS. This finding could explain why many communities were losing interest concerning cultural heritage issues, and this can relate to their lack of knowledge and the scarcity of resources to obtain such knowledge, including the lack of traditions/customs adherence in the site. MWCHS staff alluded to the claim made by the descendants concerning their participation in the park, and stated that,

> though currently there is no clear community participation and involvement, he believes that it is something that can be worked on. It is believed that there are some engagements happening there though they don't meet the required standard. For instance, a few years back during the previous management, in 2005–2006, there was an issue of human remains that needed to be reburied; during those times communities were hands on, they were very much involved in these kinds of issues. It was like a full time kind of relationship between the park and descendants groups. But in recent times, a bond between the park and these communities is not being demonstrated. The new park management plan could be what the park needs to start fixing the disconnected relationship.

To address this matter and to ensure the achievement of SDG 1, SDG 8 and SDG 11, academics at HEIS could play a prominent role in the development of a general community education programme on the WHS and CHT, and more tailored education related to local culture and heritage.

In terms of the latter three correlations, research results related to the descendants community and local communities representation in any role in MWCHS and the level of involvement of these communities in relation to looking after the existing heritage are depicted in Table 4. The evidence revealed that 20% of the study respondents were definitely not involved in looking after the existing heritage in the site but 39% of the study respondents reported that they were not sure about their involvement. However, 22% of the study respondents were neutral about their involvement, which resulted in only 2% of the study respondents reporting that they were well involved in looking after the existing heritage. The remaining 17% of the study respondents indicated that they were very involved in looking after the existing heritage in the site.

The study respondents were further requested to indicate their level of involvement during the planning and decision making process of any activities that took place in MWCHS (Table 4). Only 41% of the study respondents stated that they were definitely not involved in planning or taking any decision in any activities that took place in the site. Interestingly, 37% of the study respondents noted that they were not sure about the level of their involvement during the planning and decision making process of any activities in the site. Only 17% of the study participants chose the neutral option as

Table 4 Comparison of Various Aspects of Community Involvement in Mapungubwe

Item	Very well	Well	Neutral	Not sure	Def. not
Involvement looking after existing heritage	17	2	22	39	20
Involved in planning and decision making	5	0	17	37	41
Any involvement on serving on the site/events planning	0	7	12	34	46

Notes In percent. Adapted from Shabalala (2020).

their answer regarding their involvement during the planning and decision making process of any activities in the site. However, 5% of the study respondents reported that they were very well involved during the planning and decision making process of any activities in the site, and no participant chose the well involved option as their answer. Table 4 also depicts the level of involvement of the study respondents in relation to any activities taking place in the site, such as events planning. Only 20% of the study respondents reported that they were definitely not involved in any activities taking place in the site such as events planning. However, 39% of the respondents said that they were not sure about their involvement in any activities taking place in the site, while 21% of the respondents chose the neutral option as their answer. A low 2% of respondents indicated that they are well involved in activities taking place in the site such as events planning. The remaining 17% of respondents reported that they are very well involved in activities taking place in the site such as events planning.

Concerning the development of sustainable socio-economic opportunities, the findings propose that management or practitioners consider the engagement and involvement of communities in all decision-making stages in its true sense, not solely deciding on projects to be implemented in those respective communities. In this manner, a number of possible sustainable socio-economic opportunities for communities can be generated and presented by protected areas such as the MWCHS. Lastly, educating the community about CHT products and services provided by the park is important. For HEIS to ensure the success of the idea stakeholders such as decision makers (sites managers), policy makers, leaders, and parastatals, including funders, should join forces in this agenda, as the goal for HE is to achieve sustainable development.

Consolidation of Results and Discussion

The presented evidence established that a correlation existed between the challenges that are experienced by descendants and communities and the MWCHS management style. The challenges include customs/traditional protocols adherence in Mapungubwe Hill (where some of the descendant's royal ancestors are laid to rest) and so forth. Therefore, many, including the traditional leaders, to bring the change that they are wishing for, hope for the proposed new park management plan. The excerpts in Table 5 present the voice of the descendants and MWCHS staff regarding community involvement in the site.

The study findings and excerpts demonstrated that HEIS could take a leading role in closing the existing gap as a facilitator for a more holistic approach. In fact, HEIS are in a good position to encourage research with a main focus on sustainable solutions to matters faced by protected areas such as MWCHS and its descendants and local communities, including the farmers bordering the site. In addition, HEIS could make use of community engagement as a tool to encourage park management or practitioners to acknowledge the importance of community involvement and engagement. Most importantly, during the identifying, planning and implementation stage of community development, projects that are aimed at the socioeconomic benefit of the communities can also be utilised to address immediate needs of the communities or beneficiaries. Furthermore, HEIS could be aggressively involved in educating the communities about the essentials of how protected areas should function and be managed against the traditional way of doing things and so forth, taking the SDGS guidelines and African Heritage Laws into account but not leaving out the existing tourism strategies and policies. As a result, this approach could revive the relationship between the

Table 5 The Voice of the Descendants and MWCHS Staff Regarding Community Involvement in Mapungubwe World Heritage Site

Respondent	Excerpt
Descendants group 1	The park invites people who know nothing about Mapungubwe and the history of the descendants to talk about Mapungubwe. They noted that due to the news about the new park management plan, they hope that they will now be involved in the activities taking place in the park. Therefore, the history of Mapungubwe should be rewritten to carry out the true reflection of Mapungubwe and be told by the owners of the culture, the descendants who know the history of the area.
Descendants group 2 concur with group 1, and expressed that	They are aware of the scripts used by the tour guides when they are sharing the history of Mapungubwe to the tourists or visitors; those scripts do not include any details about the descendants as part of Mapungubwe landscape history. They present their own history that goes hand-in-hand with what the professionals and researchers say. This is one of the reasons why the descendants are saying there is political interference in the site because people who are not descendants are the ones that Mapungubwe management trust and invite to tell our history or give input in the reading of the presentation of the history, including preservation of their culture in MWCHS.
MWCHS Staff	At present, when we talk about community participation and involvement in the park, it is a situation that is not pure; areas of improvement exist on the management side. In the same breath, the new park management plan is envisaged to be what the park needs to use as a tool to mend the disengaged relationship with the concerned communities or stakeholders. There is hope that the once-good relationship that the 2005–2006 management of park shared with the communities during the engagement regarding the reburial of human remains can be restored as communities are involved and engaged during the process. The participant alluded to the fact that the kind of involvement was like a full-time kind of relationship between the park and descendants' groups. Unfortunately, the same cannot be said about the current bond or relationship between the park and these communities; a disconnection exists.

Notes Adapted from Shabalala (2020).

site management and the communities to potentially start to see things eye to eye and achieve a healthy and fruitful partnership. This type of education could also be extended to the protected areas personnel as well. The realisation of the above-mentioned findings could yield sustainable socio-economic opportunities, benefiting the community members and eventually improving their lives, which can be viewed as one of the many ways that can be used to accelerate the implementation of the stated three SDGS.

SANParks representatives reported that they understand that MWCHS management is presently working on development of a new park management plan. The new management plan is expected by the concerned communities to turn things around for the better and restore the trust and relationship between the park management and the communities. This in turn would mean a partnership with all stakeholders, including descendants, and reflects SANParks's determination to forge more meaningful and positive partnerships for the future. HEIS could form a partnership with SANParks with an aim to assist with forming and maintaining healthy partnerships with its stakeholders, most importantly with local communities/descendants of each park. The partnership can start with academics proposing to site managers to consider bringing knowledgeable researchers on board as advisors when drafting or updating their park management plans, with an aim to guide and support the process for the plan to embrace the 2030 SDG Agenda and also be geared towards the achievement of sustainable development in CHT.

Beyond reasonable doubt, HEIS can, in collaboration with MWCHS Management and Communities, assist in the mitigation of challenges with the goals of achieving sustainable development. In line with the aim of the study, as an academic at an HEI, the researcher proposes that community involvement and participation in decision making will not only benefit CHT, but will facilitate a more holistic approach in achieving sustainable socio-economic opportunities development in CHT by 2030.

Conclusion

In conclusion, the study reveals how HEIS can utilise community engagement to contribute to achieve sustainable development in CHT through community development initiatives undertaken by academics in the area of cultural heritage tourism while facilitating a more holistic approach in achieving sustainable development in a local community in South Africa, Mapungubwe WHS communities. On the other hand, researchers can develop or enhance teaching methods when educating the descendants and the broader community, with the goal of achieving sustainable development. In addition, the study identified the role of HEIS in the development of sustainable management models that will present a platform for both management and community to work together in harmony. Through research, academics at HEIS can add value by connecting communities and the management of the sites, and provide a crucial role in the lifelong training of community members through community engagement. While encouraging the participation of academics in engaged research, it is crucial that academics take into consideration the views of the study respondents and participants. In this way HEIS, together with all stakeholders, can assist communities in their mission to ensure that their indigenous knowledge is retained in the park and at the same time be able to benefit economically through the creation of sustainable job opportunities and in so doing be in a position to improve their daily lives. On that note, it is important for sites like MWCHS to utilise knowledgeable practitioners who practice the roots-driven strategy and engage the communities to ensure they are included in the decision-making processes that will drive and accelerate the implementation of SDG 1, SDG 8 and SGD 11.

Study Suggestions

Based on the findings of the conducted investigation and conclusion of the research, the paper suggests that site management must be encouraged to involve communities in inclusive decision-making at the early stages of the development of projects. Only if communities are involved can site management truly claim that community development has been undertaken to the advantage of communities. Furthermore, it is suggested that HEIS play an active role through research and CE in seeking solutions to the longstanding issues between management of protected areas and its communities. Engaged research that addresses the real issues/needs of the communities could be used as a vehicle to make realistic recommendations/suggestions to policy makers and strategy developers, while ensuring alignment with the SDGS guidelines. Furthermore, scholars can use CE and community involvement as tools to understand community dynamics and in this way draw realistic findings/recommendations that could include identifying possible sustainable socio-economic opportunities for communities. Lastly, HEIS should consider making it a requirement for their researchers to share their research findings with the communities where they conducted their research. This will mean that researchers must not only visit communities for the purpose of data collection for research purposes, but will take full social responsibility of their activities for the betterment of the communities that have supported their research roles. This act may result in researchers building trust with communities and in return for communities to see the importance of research and community engagement initiatives undertaken by HEIS in their own lives. The result will be that communities might place more value on the research undertaken by HEIS, and the establishment of a better relationship with HEIS could assist with the holistic drive for sustainable development into the future. Suggested further research could include investigating the role of advisory boards or the importance of advisory boards in sites like Mapungubwe Heritage Site. Obviously, such a board will incorporate academics as experts in the field. The fact of not having an advisory board for this site could have contributed to some of the challenges experienced thus far.

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formal qualification at The University of Witwatersrand, South Africa. I dedicate this paper to my late mother Lily Nomsa Khoza-Shabalala (1952–2022) and to the Mapungubwe descendants.

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Original Scientific Article

The Role of Culture in Attracting Tourists Travelling by Low-Cost Carriers to Zadar

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Zadar is a tourism destination in the central part of the Croatian Adriatic coast. Its geographical position and climatic conditions largely determine its development in the direction of sun and sea and leisure tourism. However, Zadar is also positioning itself as a cultural tourism destination, because of its very rich cultural and historical heritage. To attract more tourists from distant markets, the destination has decided to co-finance and encourage low-cost carriers (LCCS) to connect with Zadar Airport. The aim of this paper is to determine the extent to which Zadar's strategic orientation towards cultural tourism is reflected in its communication through various platforms, and at the same time to examine the extent to which tourists arriving in Zadar by LCCS are attracted by cultural heritage. The research included a content analysis of Zadar Tourist Board's and Zadar Region Tourist Board's social media content. The results of the survey included data collected using a semi-structured survey questionnaire on a random sample of tourists, who arrived in Zadar by LCCS from July to November 2021. Descriptive and inferential statistics methods were used for the data analysis. The results indicate a mismatch between the strategic orientation of the destination towards cultural tourism and marketing activities on the aforementioned media, where culture is not really in the focus. Accordingly, tourists who come to the destination by LCCS are not significantly motivated by culture. The recommendations are aimed at overcoming the constraints, as well on further study of the behaviour of cultural tourists who use LCCS.

Keywords: culture, pull factor, destination marketing, low-cost carriers, Zadar

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Introduction

The liberalization of air transport has led to an increase in the use of aircraft in the tourism travel segment. Therefore, today the airplane is the first means of transport for reaching a destination. A total of 58% of all tourists arrive at their destination by air (UNWTO, 2019). Low-cost carriers (LCCS) have changed a number of elements of their business models to ensure lower travel costs (Bachwich & Wittman, 2017) and to attract a new segment of consumers – tourists who want to travel more often and have limited funds for tourist trips (Sarılgan, 2016). According to data from Statista (2022), LCCs make up 35% of the total capacity of air carriers in the world. At the same time, there is a strong growth in cultural tourism within the tourism market as one of the forms of special interest tourism that represents a shift from classic mass tourism to tourism aimed at satisfying the special wishes of consumers (Weiler & Hall, 1992). Cultural tourism, according to the definition of UNWTO (2018), implies 'a type of tourist activity whose primary motivation for visitors is to learn, discover, experience and consume tangible and intangible cultural attractions/products in the tourist destination.' The number of cultural tourists is constantly increasing, and destinations are finding ways to position themselves in this rapidly growing market. Cultural heritage protected by UNESCO is only one of the attractive factors that destinations use to attract tourists. From a strategic point of view, the city of Zadar wants to position itself as a cultural tourism destination, while at the same time it attracts and financially supports low-cost carriers. Therefore, the aim of this paper was to investigate to what extent the strategic orientation of the city of Zadar towards cultural tourism is reflected in its marketing communication through social media, and with this in mind, to determine whether tourists travelling by LCC are motivated by culture when choosing Zadar as their destination.

Culture as a Motivator and Driver of Tourist Movements

Motivation is determined by a person's emotional, spiritual or physical needs (Dai et al., 2019). Tourist motivation is a state of mind that in a certain way motivates an individual or a group to travel, and which is later interpreted by others as a valid explanation for making the decision to travel (Dann, 1981). The motivation that drives an individual to make a tourist trip can be different from the need to learn, get to know new cultures, escape from reality, or the need for adventure, etc. Culture represents one of the fundamental motives that drive tourists to travel (Richards, 2018; Cros & McKercher, 2015). Cultural tourism develops from the need to discover new cultures, acquire new knowledge and other cultural motives of tourist travel. The UNWTO Report on Tourism and Culture Synergies (2018) pointed out the importance of cultural tourism. According to their research, 89% of all National Tourism Administrations point out that cultural tourism is an element of their tourism policy. The same research showed that 39% of all tourist trips are motivated by culture. Such a share of cultural tourists may at first seem extremely high, but here, above all, the question related to the typology of who is considered to be a cultural tourist is important. Therefore, considering the typology of cultural tourists, this share can be considered low. A detailed elaboration of the motivation and typology of cultural tourists is offered by a whole series of authors (Pulido-Fernandez & Sanchez-Rivero, 2010; Barbieri & Mahoney, 2010), the most famous of which is the one given by Bob McKercher (2002), Bob McKercher and Hilary du Cros (2003) and Hilary du Cros and Bob McKercher (2015; 2020) through various papers. This classification, based on the motivation when choosing a destination and the depth of experience that tourists have while visiting cultural attractions, offers five types of tourists. It starts from tourists who set out on their trip solely motivated by culture and who achieve a deep cultural experience, to those accidental cultural tourists whose motivation by culture when choosing a destination is extremely small, but who, in the destination, participate in cultural tourism activities and whose depth of cultural experience is superficial. In this context, it can be determined that cultural tourists can be categorized as tourists who have consumed any cultural attraction or participated in some cultural event in the destination, regardless of whether they were aware of its existence when choosing the destination, or deeply impressed by that attraction/event. There are a number of papers that have explored the specific characteristics of cultural tourists. According to these, it can be determined that those tourists are usually of an older age, who spend more in the destination and have an above-average number of overnight stays (Vergori & Arima, 2020; Cros & McKercher, 2015; Falk & Katz-Gerro, 2017). Likewise, cultural tourists are on average more loyal guests, and their motivation is often related to factors such as satisfaction and the intention to return (Richards, 2018).

Too often it has been assumed that a person has one set of motivations and seeks one type of vacation to satisfy them. Here it is important to emphasize that tourists are usually not guided by only one, but that there are several motives for visiting a destination, i.e. there is a multiple motivational nature of making vacation decisions (Robinson et al., 2011). The findings also confirm that travel motives vary depending on the nature of the trip (Dunne et al., 2007).

Destinations often force the development of cultural tourism in order to valorize their cultural wealth, but also as a response to the ever-present seasonality in tourist movements. According to its characteristics, cultural tourism should be less seasonal (Butler, 2001; Vergori & Arima, 2020; Qiang, 2020), although some studies show that this is not necessarily the case, especially in cultural coastal destinations (Cuccia & Rizzo, 2011). With the aim of attracting a larger number of tourists, especially off-season, destinations decide to attract LCCs to nearby airports, offering them benefits in the form of reduced fees, advertising on their websites, etc. (Graham & Shaw, 2008; Mandić et al., 2017; Dobruszkes & Mondou, 2013). Tourists who come off-season are most often offered a cultural tourism product that is less seasonally sensitive, and cultural attractions are used as an attractive motivator for LCC tourists who come to the destination in the pre- and post-season (Davison & Ryley, 2010).

Low-Cost Carriers (LCCs) in Tourist Movements

Low-Cost Carriers represent perhaps the biggest change that has taken place in air transport, prompted by its liberalization, which has also had a strong impact on the tourism market. All LCCs share a commitment to the *cult of cost reduction,* a business model that offers low fares, reduces total costs and uses resources – both human and material – to the fullest (Graham & Shaw, 2008). However, in addition to price competitiveness, LCCs have recently started to use a differentiation strategy in their business (Akamavi et al., 2015; Mandić et al., 2017). These companies, in addition to the transport function itself, have also taken on active engagement in the promotion of the destinations they connect (Tsui, 2017). This also represents a conceptual change in the business of airline companies, which, in addition to the role of a carrier, also take on the role of a co-creator of demand for a certain destination. Therefore, it is expected that an increase in the number of LCC users leads to an increase in the total number of tourist arrivals and overnight stays in the destination (Smith, 2009; Tsui, 2017; Pulina & Cortés-Jiménez, 2010; Rey et al., 2011; Dobruszkes & Mondou, 2013). The reduction in air transport prices has enabled more tourists to reach more distant destinations. LCCs promote changes in the behaviour of tourists, who now travel more often (Martínez-Garcia et al., 2012).

A number of studies have been conducted with the aim of determining the profile of LCC tourists (Smith, 2009; Graham & Dennis, 2010; Clavé et al., 2015; Krce Miočić et al., 2018; Vidić et al., 2019). It has been established that most of the demand for LCC services is generated by tourist movements, and when viewed from a motivational aspect, they are most often tourists who travel for vacation and recreation, and to visit friends and relatives (Kuljanin & Kalić, 2015; Martínez-Garcia et al., 2012; Mason & Alamdari, 2007). Research has confirmed that tourists who use LCCs are usually younger, with medium and higher spending power and who stay in the destination for a shorter time than average (Graham & Dennis, 2010; Smith, 2009; Davison & Ryley, 2010; Eugenio-Martin & Inchausti-Sintes, 2016). One of the reasons for their greater buying power in the destination stems from the low cost of air transportation offered by LCCs, so the total holiday budget is partially redistributed to increased consumption in the destination (Eugenio-Martin & Inchausti-Sintes, 2016). LCCs found their market segment of passengers in tourists who want to travel for a short vacation (most often 2 to 5 days), who actually represent typical mass tourists, who in this way have the option of a more flexible choice of travel dates and can achieve a shorter stay in the destination (Smith, 2009; Pilling, 2008). According to research by Eugenio-Martin & Inchausti-Sintes (2016), the shortening of the stay of LCC users in the destination compared to tourists who did not use LCCs was 1 to 1.8 days. LCCs have changed travel habits, they have encouraged tourists to travel more often, to go on shorter trips and to use this transport for VFR (Visiting Friends and Relatives) trips, but also operate for the student population that decides to study abroad (Dobruszkes & Mondou, 2013; Kuljanin & Kalić, 2015; Craps, 2021).

Research conducted on tourists who visited Malta using LCCS (Graham & Dennis, 2010) showed that these tourists are younger, wealthier and more independent tourists than those who came to Malta by charter flights or through tourist arrangements, and they showed less interest in culture and history in comparison to other tourists. This reduced interest in culture can be seen especially in the post-season (autumn and winter), which, according to current knowledge about cultural tourism, aims to reduce seasonality, and should perhaps be the most important period for the arrival of cultural tourists. Likewise, destinations often resort to attracting LCCS in order to extend the season of tourist arrivals (Pulina & Cortés-Jiménez, 2010). Smith (2009) investigated in Malta how the introduction of LCCS affected the share of cultural tourists from the UK market. He found that before the introduction of the LCCS, this percentage varied depending on the season – 30% in autumn and winter, and 30% in the spring before the LCC flights to Malta were introduced, while after the introduction of the flights, the percentage was 24% in autumn, 27% in winter and 31% in autumn. As the intention of the Maltese government in promoting the LCCS was precisely the development of cultural tourism, these data show that tourists who came to the destination in this way were less motivated by historical cultural reasons. In no segment of tourists who used LCC transport was this motive among the first two reasons for arrival, nor did these tourists stay in an area with a high concentration of cultural attractions (Smith, 2009).

Furthermore, research into the motivation of city break tourists who visited Dublin (Dunne et al., 2007) using LCCS showed that there is no one-sided motivation to travel. In their research, they also do not find cultural motives to be an important motive when choosing a destination. Easy accessibility, ticket price, but also a number of other motives such as relaxation, social acceptance and escape are the motives that drive tourists who use LCCS. At the same time, destination management organizations (DMOS) encourage the establishment of LCC flights in order to attract cultural tourists (Smith, 2009; Dunne et al., 2007), and the existence of multidimensional motives has been shown. Vidić et al. (2019) determined that there are significant differences in destination satisfaction between groups of tourists with different primary motives (a total of 37 motives).

In a similar vein, Krce Miočić et al. (2018) provide an overview of longitudinal research in Zadar County (Croatia) from 2013 to 2016, in which it was shown that the motivation of LCC users for culture is relatively low, and that tourists primarily motivated by culture make up a maximum share of 2.8%. At the same time, if we look at those tourists who put cultural activities and events as one of the first three motives, then the share of cultural tourists in the total number of LCC users ranges from 13.10% to 33.6% depending on the observed year.

The lower price of air transportation does not represent a significant motivational factor among cultural tourists, who are less sensitive to price than tourists motivated by many other motives (Graham & Dennis, 2010). Cultural destinations have their own attractive power for most tourists (UNWTO, 2018), according to which tourists travelling by LCCS, when choosing a destination, most often choose those with cultural attractions. The links between the development strategies of tourist destinations and LCC business models point to the fact that LCCS have played a key role in the development of city destinations for short vacations, thus promoting cultural tourism (Graham & Shaw, 2008; Davison & Ryley, 2010). Davison and Ryley (2010) establish a statistically significant relationship between the destination and the length of stay of tourists, and the fact that cultural destinations are suitable for short vacations, but that some (like Rome) are also suitable for longer vacations. The same research showed that cultural destinations have priority among LCC users and that the most common motivation when choosing a destination is rich cultural heritage. From this it can be concluded that the segment of cultural tourists, regardless of price insensitivity, still recognizes the flexibility achieved by using

LCCs. It was also established that cultural destinations more often attract tourists travelling as couples, while summer destinations attract larger groups (Davison & Ryley, 2010).

Various studies show that these carriers strongly encourage the segment of emigrants who travel more often to their country of origin, so sometimes their share in total LCC passengers exceeds 1/3 (Dobruszkes & Mondou, 2013; Kuljanin & Kalić, 2015; Craps, 2021). Although methodologically these travellers can be seen as part of the tourist demand, their full contribution to the destination is still questionable.

The Arrival of LCCs and Tourist Movements to Zadar

The city of Zadar is located in the centre of Dalmatia, on the coast of the Adriatic Sea. It is the administrative and tourist centre of Zadar County. The city of Zadar and Zadar County are developed tourist destinations that abound in various natural and cultural beauties. The diversity of the attraction is the basis for attracting different segments of tourists, among whom the leading ones are those motivated by the sun, sea and comfortable climate. This is why Zadar and Zadar County are above all swimming destinations with distinct seasonality. Zadar Airport is located at a distance of 8 km from the city of Zadar, and is a relatively small airport with less than 5 million passengers. It has relatively low landing costs and is therefore an ideal port for attracting LCCs. LCCs base their choice of airports on the decision that they can be 100 to 120 km away from the city they serve (Graham & Shaw, 2008), thus Zadar Airport highlights its advantages in easy destination accessibility. Since 2007, the County of Zadar has made a decision to attract LCCs, primarily Ryanair as the largest LCC in Europe, with the aim of attracting off-season tourists with more paying power from more distant outbound markets who will not necessarily be attracted by the sun and sea, which is the main motive for coming to this destination (Vidić et al., 2019). Although tourism in Zadar County is still seasonal, the introduction of LCCs has led to an extension of the season. While tourist movements are concentrated in July and August with small shifts towards June and September, LCCs transport takes place from the beginning of April to the beginning of November. There is an evident increase in tourists in the preseason and postseason, and the share of tourists who came to the county by LCC in the pre-pandemic year of 2019 was as much as 18% of total tourist arrivals (internal data). In the same year, Zadar County achieved 1.75 million arrivals and 9.87 million overnight stays, with the city of Zadar contributing more than 30% (CBS, 2020).

Encouraging the arrival of LCCs took place through a joint advertising project in which all stakeholders in the tourist offer financially supported advertising, and thus the arrival of Ryanair. The very concept of attracting Ryanair through advertising payments is a controversial policy that can also represent illegal market competition (Graham & Shaw, 2008). It is important to emphasize here that the payment of compensation to Ryanair of EUR 1.5 million (Šćuric, 2021) represents a significant expenditure for the tourist economy of the city of Zadar and Zadar County, which affects the reduction of other forms of promotion of the destination. At the same time, the contracts of Croatian airports with LCC companies are short-term, which means that even the smallest changes in demand can result in the cancellation of routes. For destinations like Croatia, this is extremely important because LCCs play a significant role in attracting visitors from distant developing markets in peak season and off-season (Mandić et al., 2017). According to ACI Europe data, Zadar Airport is one of the five busiest small airports (up to 5 million passengers, group 4) in Europe. In the same category, this port recorded the second highest growth of 37.6% in 2019 (Naletina et al., 2019).

Heritage represents one of the foundations for destination branding. Every place has its history and heritage, which will influence the image that tourists get (Kotler et al., 2004). The city of Zadar and Zadar County are extremely rich in cultural heritage, which goes back over 2,000 years and is visible through the preserved urban planning of the city and the remains of the Roman Forum, but it is also enriched with modern heritage, such as the Greeting to the Sun monument and the Sea Organ. However, tourists did not particularly express their motivation for cultural heritage when visiting Zadar; rather, the sun and the sea are the most common motive (Gluvačević, 2016). The city walls of Zadar, as part of the Venetian defences of the 16th and 17th centuries, along with 5 other destinations in Italy, Montenegro and Croatia, have been inscribed on the UNESCO World Heritage List since 2017. Encouraging the inclusion of their cultural heritage on the UNESCO list of cultural heritage represents the goal that cultural tourism destinations want to achieve, with the aim of encouraging tourist arrivals. Research has shown that the entry of a destination into the UNESCO list of natural and cultural heritage does not bring an increase in the number of tourist visits in destinations that were not attractive to tourists until then; however, in destinations that already recorded significant tourist attendance, the number of tourist arrivals after entering the UNESCO list increased (Cros & McKercher, 2015). Zadar was an active tourist destination even before it was entered on the list, so it is expected that the cultural motivation of the tourists who come to it will grow. Strategic documents for the development of tourism in Zadar County and the City of Zadar (Matassi, 2013; Krce Miočić et al., 2016) recognize the strong resource basis of culture, and cultural tourism is one of the fundamental forms in which the destination's offer should be developed.

Research Methodology

Based on the defined research subject, and in order to achieve the set goals of this paper, two studies were conducted. In the first step, a qualitative research was conducted, the goal of which was to determine to what extent Zadar's strategic orientation towards cultural tourism is reflected in its communication through various digital platforms. At the same time, the quantitative research examined the extent to which tourists who arrive in Zadar by LCCS are attracted by the cultural heritage of Zadar and to what extent they actually consume it.

In the qualitative part of the research, an analysis of the content of the posts on social media of the Zadar Tourist Board and the Zadar County Tourist Board was carried out, since these are two organizations whose primary task is the promotion of tourism in Zadar and the Zadar region. An additional reason why the aforementioned digital platforms were chosen is that as many as 45.3% of surveyed tourists who come to Zadar County look for information on the Internet, with 59.7% stating that social media is their main source of information, and 32.8% citing websites of tourist boards as a source (Marušić et al., 2020).

Table 1 Number of Facebook and Instagram Tourist Boards of Zadar and Zadar County Users

Profile	Facebook	Instagram
Like Zadar	102,970	27,160
Zadar Region	100,966	48,853

For the purposes of this research, the social media Instagram and Facebook were chosen, since they are two different social media where both tourist boards have active profiles. Instagram is a content community that enables the publication, maintenance, management and sharing of image content, while Facebook is a social network where, in addition to networking and connection, it is possible to publish different types of content such as images, video content, text, links, etc. (Kaplan & Haenlein, 2009). It is also important to emphasize that these two social media attract different target groups. According to global data, Instagram is used by a younger population compared to Facebook. Instagram is mostly used by users in the age group of 16 to 34 years, while Facebook is used more often by users over 35 years old (We Are Social, 2022).

The Zadar Tourist Board has an official profile on the Facebook social network and Instagram called Like Zadar. The Zadar County Tourist Board has official profiles on Instagram and Facebook called Zadar Region. It has 48,853 followers on Instagram and 100,966 followers on Facebook (May 2022). Although the official Instagram profile of Zadar County Tourist Board has more followers than that of TB Zadar, the activity is approximately similar.

Therefore, within this part of the primary research, social media were used as sources of information for content analysis. For this purpose, quantitative content analysis was used. It is also called frequency analysis of content because, in addition to determining the presence and characteristics of content, the frequency and volume of content are quantitatively expressed (Tkalac Verčič et al., 2013). In doing so, the frequency of certain types of content was determined, but also the frequency of occurrence of the dominant attribute appearing on the content.

The contents were analysed for the period from January to November 2021. Considering that tourists arriving by LCC have the possibility to come to Zadar and Zadar County from March/April to November, when most low-cost air routes (especially Ryanair) with outbound destinations are available, this period was chosen for analysis. This is the period when the largest number of potential tourists are looking for information about the destination, so it is especially necessary to give attention to the communication strategy of the destination according to the outbound markets.

On Instagram, only image content published during the specified period was analysed, while video content and any other content were excluded from the analysis. In addition, it should be noted that only image content published on the profile feed was analysed, not posts in stories. On average, both tourist boards published one image per day on Instagram during the observed period. The analysis of Facebook profiles of tourist boards was more demanding, since tourist boards use this social medium to publish different types of content. This is also a limitation of this research. To begin with, it was determined that only the content on the timeline of each tourist board would be analysed. It was determined that the communication strategies of the Zadar Tourist Board and Zadar County Tourist Board differ greatly, and that this will significantly complicate the content analysis. The Zadar Tourist Board uses Facebook as a kind of 'bulletin board' on which it publishes a whole range of different types of content (links to websites, video content, photos, etc.), while the Zadar County Tourist Board uses this social media mostly for posting pictures, although it also occasionally publishes links to other websites and other content. In order to collect relevant data, for the purposes of analysis, the initial display of the website, which is visible to users if the link is shared on Facebook, as well as the first display of video content, was taken into account. The aforementioned was analysed using the same methodology as the image content, i.e. the initial dominant attribute that was displayed on the image content was analysed.

The analysis of the image content in this paper was carried out according to the paper of Stepchenkova and Zhan (2013). These authors classified image content into twenty categories according to the dominant attributes of the destination that are shown in the image content depicting Peru (e.g. nature and landscapes, traditions and customs, architecture/buildings). Given that this paper deals with the analysis of a Mediterranean destination, the categories have been slightly modified and a total of sixteen categories have been established. Each image content is determined by one dominant feature that prevails over the image content and is thus classified into categories.

The second part of the empirical research was a survey, which was conducted on passengers using LCCs that connect the city of Zadar and Zadar County with numerous European destinations. The aim of this part was to examine to what extent tourists who arrive in Zadar by LCCs are attracted by the cultural heritage of Zadar, whether they visit it, and ultimately, how satisfied they are with the offer and the destination. The research was conducted at the departure terminal of Zadar Airport from July to October 2021. It was estimated that this is the most favourable time for the consent of the respondents to participate in the research, because they are in a relatively small and closed space and thus have the feeling of reducing the waiting time. This research is part of a longitudinal research that has been conducted since 2013, but for the purposes of this paper, only the research conducted during 2021 was considered. The research was conducted using a structured questionnaire with the presence of an interviewer. Motivation testing is usually done through surveys, on a representative sample, on an annual basis (Vanhove, 2012). The questionnaire was answered by people over the age of 18 who spent at least 2 nights in Zadar. Considering the characteristics of the city of Zadar as a destination, it was estimated that this is the minimum time to get to know the destination, as this was an effort to ensure the suitability of tourists for the experience and evaluation of the city of Zadar as a destination.

The questionnaire contained a total of 35 questions related to the respondents' demographic characteristics, travel behaviour, satisfaction with the destination, etc. The question of motivation for visiting the destination was examined with the help of an adapted scale used in the research TOMAS – 'Attitudes and consumption of tourists in Croatia,' which has its origins in the research methodology carried out in Switzerland under the name 'Touristisches Marktforschungssystem Schweiz' (Kožić, 2009). Intention to recommend and return to the destination was examined using an adapted composite scale with three items according to Lam and Hsu (2006). For ease of understanding, the questionnaire was offered in German, English and French. Only results related to the subject and objectives of the paper were used in the paper. For this purpose, the characteristics of respondents motivated by the heritage that is under the protection of UNESCO were considered, given that the city of Zadar and other destinations in Dalmatia possess cultural and natural heritage protected by UNESCO. These respondents were considered in relation to other respondents in order to determine possible differences.

Results of Content Analysis

An analysis of the content of the posts of the Zadar Tourist Board (Like Zadar) on Instagram revealed that the local Zadar Tourist Board mostly publishes image content in which the dominant attribute is architecture (buildings, streets, squares, etc.) (35%), followed by people (dominant part of image content is concentrated on people) (19%), nature and landscape (sunset, sea, etc.) (18%) and lifestyle (everyday activities of people in the destination) (11%). The results of the analysis are somewhat different for the Zadar County Tourist Board, where the image content predominantly depicted nature and landscape (29%), while people (15%), architecture (14%) and gastronomy (food and drinks, groceries, food preparation and drinks, etc.) (15%) are almost equally represented. These are categories of image content that are represented by more than ten percent in the analysed content.

On the social network of Facebook, the analysis was more demanding, as previously stated. However, it was determined that the Zadar Tourist Board primarily publishes events as content (concerts, festivals, local events, etc.). At the same time, it should be noted that it is a presentation of a really wide range of different events, from sports to cultural and entertainment events. Next, the contents are dominated by depictions of architecture, followed by contents classified into the 'other contents' category, such as the promotion of products, accommodation, commercial attractions, etc., followed by lifestyle. This tourist board uses Facebook primarily to inform tourists and potential tourists about activities in the destination. In this way, it achieves one of the basic functions of social networks – it connects different users. At the same time, the Zadar County Tourist Board publishes content related to nature and landscape, architecture, people and lifestyle. So, its communication strategy is fairly uniform for both social media, and it should also be noted that it does not use the specifics and features of each of these social media, nor the specifics of the target market to which it communicates.

It can be concluded that the aforementioned tourist boards have different communication strategies on the analysed social media. This is particularly evident in the content that is communicated, which refers to certain forms of tourism. Given that the Zadar Tourist Board is related to the promotion of the city of Zadar itself as an urban destination, the emphasis on architecture is not surprising. Likewise, as previously emphasized, it is a destination that has a rich heritage. However, architecture is only one element through which cultural destinations can be branded. There are a whole range of other attractive factors related to culture that could be emphasized more on social media, especially intangible heritage. On the other hand, the Zadar County Tourist Board sees its attractive factor mainly in the nature and landscape, as well as the basis for various types of sports activities and recreation in the destination. This is not surprising considering the fact that for the last few years this destination has been positioned through the marketing campaign 'Say yes to everything!' in which there is a special emphasis on just such activities and outdoor activities. However, it should be emphasized here that Zadar County is rich in various resources of tangible and intangible cultural heritage, but apparently did not recognize them as a sufficiently attractive factor for the primary branding of the destination through social media.

The Results of a Survey Conducted on Tourists using LCCs

A total of 517 respondents who spent at least two nights in Zadar County participated in the research. As stated, certain characteristics of the behaviour of respondents whose arrival in Zadar and Zadar County was motivated by UNESCO heritage were considered, in relation to other respondents. In the total sample of surveyed tourists, only 5 respondents (0.97%) were primarily motivated by UNESCO heritage, while 136 respondents (26.31%) stated this as one of the three secondary motives. So, these 141 (27.27%) respondents were considered in relation to the other respondents.

At the beginning, it should be emphasized that all respondents in the sample were most often motivated by the sun, the sea and a pleasant climate, and then by new experiences. This is also the most common motive in past researches (Krce Miočić et al., 2018; Vidić et al., 2019). The demographic characteristics of respondents motivated by UNESCO heritage are given in Table 2.

Table 2 Demographic Characteristics of the Respondents Motivated by UNESCO Heritage

Gender	Male (53%); Female (47%)
Age	18–35 (63%); 36–55 (33%)
Education	Bachelor or master's degree (76%)
Employment	Yes (67%)
Income	>1,500€ (25%); 1,500–3,000€ (52%)
Marital status	Single (41%) or in a relationship (29%)
Travelling with	Family (38%) or friends (37%)
Travelling exp.	2 times or more a year (69%)
LCC experience	6 times or more (39%)

Respondents are experienced travellers because on average they travel outside their country of permanent residence 2 or more times a year (69%), with 39% of respondents using LCCs 6 or more times. The demographic characteristics of the other respondents did not differ significantly from those motivated by UNESCO heritage. The above characteristics are in accordance with the data on passengers who most often travel on LCCs (Graham & Dennis, 2010; Smith, 2009; Davison & Ryley, 2010; Eugenio-Martin & Inchausti-Sintes, 2016).

Respondents motivated by UNESCO heritage received their first information about Zadar and Zadar County via the Internet (54%), and then through the recommendation of friends and relatives (21%), which shows that the strongest communication channel is still the Internet and recommendations (Word-of-Mouth). As for gathering information about the destination, the respondents most often got information via travel agency websites such as Tripadvisor (41%), followed by recommendations from friends and relatives (38%) and social media (30%). It should be noted that only 17% of respondents got information about the destination through the Zadar Tourist Board website and Zadar County Tourist Board website, and 13% through the website of the LCCs they used. The other respondents were similarly informed about Zadar and Zadar County. They got their information a little more through recommendations from friends and relatives (41%), and a little less through travel websites (26%). With the other respondents, it is also evident that websites of regional or local tourist boards and websites of LCCs are not significantly represented when seeking information about the destination (about 10%), although Zadar and Zadar County allocate significant funds for promotion, especially for joint advertising through the websites of LCCs.

The main or primary destination for respondents motivated by UNESCO heritage was Zadar and Zadar County (66%), which is slightly more than other respondents (45%). However, at the same time, it is evident that these respondents visited other places in Dalmatia more often, such as Šibenik, Split and Dubrovnik, which also have heritage under the protection of UNECSO. Also, these respondents visited protected natural areas more often, especially Krka National Park and Plitvice Lakes National Park (32%), which is also a UNESCO heritage site. Considering the above, it can be concluded that respondents motivated by UNESCO heritage really actually visited these places. This is not surprising, because respondents also mentioned cities like Split and Dubrovnik, as well as

Table 3 Sources of Information about Zadar and Zadar County

Attitudes and behavior	Motivated by UNESCO heritage	Others
First informat. on Zadar & Zadar County	Internet (54%); Friends & relatives (21%)	Internet (53%); Friends & relatives (31%)
Information on Zadar & Zadar County	Travel websites (41%); Friends & relatives (38%); Social media (30%)	Friends & relatives (41%); Social media (30%); Travel websites (26%);
Other information sources	Websites of regional or local tourist boards (17%); Websites of LCC (13%)	Websites of regional or local tourist boards (9%); Websites of LCC (10%)
Main destination	Zadar and Zadar County (66%)	Zadar and Zadar County (45%)
Visiting other destinations on the trip	Šibenik, Split, Dubrovnik (UNESCO) (73%)	Šibenik, Split, Dubrovnik (UNESCO) (42%)
Visiting protected area on the trip	NP Krka, NP Plitvice Lakes (UNESCO) (32%)	NP Krka, NP Plitvice Lakes (UNESCO) (21%)

Table 4 Motivation and Consumption of Cultural Events and Facilities

Attitudes and behaviour	(1)	(2)
Cultural events and facilities as a motive to visit Zadar or Zadar region (%)	40	10
Consumption of thematic sightseeing tours (culture, religion, gastronomy, history, etc.) (%)	28	10
Consumption of cultural events and activities (museums, exhibitions, theatres, etc.) (%)	19	13
Average personal expenditure for cultural and entertainment event and facilities (€)	75	41
Average personal expenditure for museums (€)	25	20

Notes Column headings are as follows: (1) motivated by UNESCO heritage, (2) others.

Plitvice National Park, as the main/primary destination on their trip. It should be added to this that all respondents in the sample visited at least one protected area.

Respondents motivated by UNESCO heritage were also motivated by cultural events and contents in coming to Zadar and Zadar County (about 40% of these respondents), which is slightly more than other respondents (10%). The results on motivation and consumption of cultural events and contents are shown in Table 4.

However, it is evident that respondents motivated by UNESCO heritage consumed relatively little of the cultural offer. Only 28% of them (or 38 respondents) consumed cultural events and contents (museums, exhibitions, theatres, performances, etc.), and 22% enjoyed sightseeing cultural heritage and themed tours. This is also confirmed by consumption, as only 10% of the respondents actually spent on cultural and entertainment events and activities, and on average around €75 per person. As for museums, only 3% of the respondents spent on museums and on average around €25. Other respondents are not overly interested in the offer of cultural content, as indicated by the results on motivation and consumption of the same.

At the end of the survey, the respondents evaluated their satisfaction with the elements of cultural and natural heritage in Zadar and Zadar County. They could evaluate satisfaction with grades from –2 to 2, and the grades are shown in Table 5. From the table, it is possible to see that respondents motivated by UNESCO heritage are somewhat more critical about satisfaction with cultural heritage, that is, their grades are on average lower than the group for which this was not the reason for coming. So, given that they were partly motivated by cultural heritage and that they visited or consumed it, the aforementioned elements obviously did not meet their expectations. At the same time, it is

Table 5 Satisfaction with the Heritage and Recommendation

Category	Item	(1)	(2)
Satisfaction (from –2 to 2)	Maintaining of cultural heritage	0.73	1.42
	Accessibility of cultural heritage	0.87	1.31
	Presentation of cultural heritage	0.80	1.31
	The beauty and preserved nature and landscapes	1.58	1.71
Recommendation (%)	Yes	90	90
Reasons for visiting in the future (%)	Peace and the preserved environment, gastronomy	50	40

Notes Column headings are as follows: (1) motivated by UNESCO heritage, (2) others.

interesting to note how the other respondents rate cultural heritage highly, even though they consumed significantly less of it. Natural heritage was rated highly by both groups of respondents, with respondents motivated by UNESCO heritage being somewhat more critical.

Finally, one can add to this that both groups of respondents would come again to the city of Zadar and Zadar County, to enjoy the peace and preserved nature and gastronomy. Also, respondents would recommend the same destination to their friends, colleagues and relatives (90% of them). This data is not surprising, because in addition to these, the respondents were also very satisfied with other elements of the destination's offer. However, only 55% of all respondents would return to the destination again, which is in line with consumer behaviour in the tourist market, especially the younger population, which is more inclined to change destinations. Considering the extreme mobility of the respondents, all these elements related to the examination of the experience and satisfaction with the elements offered by the city of Zadar and Zadar County should be taken with caution, because their impression was partly influenced by the experience of other places and attractions.

Conclusion

Previous research has shown that LCCS have made a significant shift in the air transport services market. With their concept of low service prices, along with a reduced scope of services, they have enabled passengers with relatively lower incomes to use air transportation services. With this concept, they encouraged the segment of tourists who tend to take shorter trips to travel, and who want to travel several times a year, as well as the emigrants of the countries that were their destinations. Destinations competed to attract LCCS because they expected their arrival to attract more distant markets, but also to encourage off-season arrivals. Therefore, the destinations encouraged the arrival of LCCS through various discounts on the prices of port fees, as well as through online advertising programmes about the destination on the LCC websites. In this paper, it was determined that the extremely high investment for internet advertising of LCC companies is only one way to attract them. Namely, only 11.5% of surveyed LCC tourists were informed about the destination via the website of the LCCS they used. Therefore, the above cannot justify the high expenses that the Zadar County pays to the LCCS for connecting the destination with other destinations. The reduction of seasonality, which is the primary goal of both the development of cultural tourism and the attraction of LCCS, was not yet achieved in the example of the researched destination. LCCS achieve most of their traffic in the summer months, when it is common for this coastal destination to have the highest number of tourist arrivals and overnight stays.

By analysing the social media content, it was possible to determine that neither of the two observed tourist boards focused their communication strategy on digital platforms primarily on culture as an attractive element, although they have highlighted it as a primary strategic orientation and one of the tools for reducing seasonality. Therefore, there is no uniform positioning of Zadar and Zadar County as a cultural tourism destination. This is also indicated by the results of the survey, according to which it is evident that tourists using LCCs are not significantly motivated by culture and consume it even less. Although culture in the broadest sense is used as a resource in destination branding, it seems that this is not clear, nor emphasized enough. Although architecture is used as one of the fundamental attributes of the content that is published, especially when it comes to the city of Zadar, this is also not enough when it comes to highly motivated cultural tourists who are, for example, motivated by UNESCO heritage. According to the results of the conducted research, a relatively small percentage of such tourists consumed other types of cultural activities (museums, theatres, etc.), and the satisfaction with the various elements of heritage is lower compared to other surveyed tourists. It is not entirely clear from these results whether they could find information related to these other types of cultural activities or if this offer did not meet their expectations, and for that reason they were not satisfied and did not use it. Therefore, it is necessary to conduct additional research in order to determine the specific behavioural patterns of cultural tourists who travel by LCCs. In addition, it is necessary to conduct a content analysis of other digital platforms that tourists use when seeking information about the destination, such as TripAdvisor, the websites of other tourist boards and LCCs, in order to determine what type of content is published and to analyse tourist satisfaction through various tourist review sites.

In conclusion, it has to be stressed that, as seen from this research, Zadar and Zadar County did not sufficiently utilize the potentials that LCCs could bring to the destination. This potential is especially visible in the number of connecting flights between Zadar and distant European outbound markets (https://www.zadar-airport.hr/destinacije#zad), that are highly motivated by culture and sightseeing when visiting this destination and which, therefore, spend more than average on cultural activities in the destination, such as the United Kingdom, France, Scandinavian countries, Belgium, and the Netherlands (Marušić et al., 2020). These are also the markets in which a very high percentage arrive by plane to Zadar County. So, this is a very good basis to prolong the tourist season by attracting cultural tourists with higher spending power. Therefore, Zadar and Zadar County Tourist Boards should focus their marketing strategies on the rich cultural heritage and other cultural products to attract these markets, especially in pre- and post-season. The role of providing information about cultural tourism offers is crucial in this sense, as has been visible from the conducted research. This should be done through targeted digital marketing activities on their official digital platforms, and also other offline marketing channels on the above-mentioned markets.

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Original Scientific Article

Reviving Ancient Life: Segmentation Analysis of the Ancient Life Story Tourism Prospects

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This paper introduces a novel intangible heritage tourism product intended to enhance the heritage tourism sector. The Ancient Life Story Tourism concept is a new multidimensional cultural heritage tourism product that features fictional representations of ancient life as its core and includes many associated physical and digital products. Based on Kotler's STP theory, a market segmentation model has been applied to identify potential segments for novel heritage tourism products. An online quantitative survey was applied with the aim of identifying the demographic, behavioural and psychographic characteristics of a potential audience worldwide. In this study, cluster analysis was employed to analyse 766 foreign tourists, to identify potential ancient life story tourism market segments. Three potential market segments were identified: (1) Gen-Z, Adventure-Seeking Digital Natives, (2) Early Millennials, Explorers of Local Traditions, and (3) Late Millennials, Family Explorers of History and Culture. The segments were evaluated based on the alignment of their profile with the different levels of the proposed heritage tourism product. Overall, Segments 2 and 3 were more attractive targeting prospects due to higher alignment with the core, generic and expected product of Ancient Life Story Tourism. Due to this research, in the near future Ancient Life Story Tourism will be able to establish a strong positioning and branding strategy in the heritage tourism sector.

Keywords: cultural tourism, ancient life stories, tourism market segmentation, targeting, tourism product marketing

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Introduction

In the global tourism industry, authentic intangible cultural heritage (ICH) gives a community an edge. But the commercialization of ICH has made it less real, so alternative methods are needed to share and promote ICH as a tourism resource (Kim et al., 2019).

Tourism has helped protect and develop ICH, and some governments are using it as a revenue source. Many heritage sites have created tourism products to restore ICH, which may compromise authenticity and overcommercialize heritage. Academics prioritize ICH craftsmanship and aesthetic preservation (Qiu et al., 2019). On the other hand, it is necessary to strike a balance between ICH and non-heritage tourism development, whereby tourism-related products reflect value and satisfy the emotional needs of tourists. Thus, the ICH value can become the focal point of product development (Keeney, 1994). Therefore, destinations should aim to create tourist products that integrate ICH and non-heritage aspects so that both visitors and locals can benefit.

ICH is being leveraged by destination managers for the creation of novel tourist experiences. These products are not limited to historically supported cultural heritage but also include fictional cultural heritage creations, such as movies and TV series (Riley et al., 1998; Tkalec et al., 2017). Therefore, both historical narrative and fictional stories can spike tourists' interest in ICH. This paper introduces a novel ICH tourism concept: the Ancient Life Story Tourism. In a nutshell, 'ancient life story tourism' is a multidimensional tourist product that has ancient life stories as its core and combines a variety of associated physical and digital products and experiences.

The ancient life stories are based on osteobiographies, which are defined as 'fictional yet evidence-based, narrative interpretations of archaeological human remains' (Boutin, 2019, pp. 284-285). By themselves, the ancient life stories are insufficient to generate significant tourist interest. The introduction of ancient life stories as a tourist product necessitates the creation of relevant tourist packages to guide tourists through the experiences related to the core product. Traditional products and experiences that are associated with the ancient life stories can provide additional tangible and intangible evidences that stimulate tourists' emotions. Ancient life stories can be enhanced further with exhibitions and print media, while related digital technology experiences can serve as a medium for giving a tangible dimension to the ICH through digital storytelling (Tzima et al., 2020).

The rationale of this research will provide the basis for a market segmentation model that can be used by destination managers and tour operators to better understand and identify the relevant audiences and design more appropriate marketing strategies for novel tourist products. The research is based on the classic segmentation, marketing, and positioning (STP) marketing theory proposed by Kotler (2001), while the product of Ancient Life Story Tourism is analysed based on Kotler's five product levels model.

A quantitative questionnaire was developed based on the segmentation, targeting, and positioning (STP) framework proposed by Philip Kotler (2001) and was translated into seven languages. The questionnaire was structured around geodemographics, psychographics, and behavioural characteristics that are needed for creating comparable profiles for each segment. The survey was self-administered, anonymous, and distributed online.

A two-step cluster analysis was conducted to identify tourism market segments, which included 766 foreign tourists visiting Cyprus. Cluster analysis is a multivariate method used to group things that have similar traits, and this technique is ideal because it allows for the use of large datasets, automatically determines the number of derived clusters, and can analyse both categorical and continuous variables.

As part of this research study, we propose a unique form of ICH tourism named Ancient Life Story Tourism. Considering this is a novel concept, it is necessary to identify the potential market for this ICH product. For this reason, the main goal of this research is to approach in a unified way the characteristics of tourists who visit a tourist destination and at the same time are interested in ancient life and its revival through physical and digital products and experiences.

Since there is no typology of this tourist group, the originality of the study lies in the introduction of a new tourist product (Ancient Life Story Tourism product) and in the search for the tourism market segments that make up the profiles of those interested through demographic, geographic, psychographic and behavioural variables (Kotler et al., 2014). The objective of this paper is to provide a clear understanding of the specific tourist group by creating the framework on which a successful branding strategy may be developed in the future. Finally, the attractiveness of each segment is evaluated based on its alignment with the proposed product of Ancient Life Story Tourism. By doing so, this research will provide a solid foundation for the positioning and branding strategy of Ancient Life Story Tourism in Cyprus.

Literature Review

Cultural heritage is perceived as a major asset for tourist destinations. Both tangible and ICH can increase the attractiveness of a tourist destination significantly (McKercher & Du Cros, 2002). Like in any other market, the theories, strategies, and techniques from the discipline of marketing are being directly applied in the context of tourism with the end goal of attracting more visitors to destination countries (Oh et al., 2004). However, attracting more customers is not always the best and most profitable strategy for destinations. Therefore, the modern application of effective marketing practises in tourism considers attracting the right visitors at the right place in order to maximize satisfaction and increase customer loyalty (Chen & Gursoy, 2001). Buyers in any market have different demands, resources, locations, attitudes, and behaviours. Each market is different because customers have different demands, wants and needs (Kotler et al., 2014).

In the field of marketing, the most commonly accepted and widely used theoretical framework among marketing professionals and academic researchers for the formulation of marketing strategies is the Segmentation, Targeting, Positioning (STP) framework proposed by Philip Kotler (2001). This framework has been implemented in numerous studies for the research and formulation of marketing strategies for destinations (Tsiotsou & Goldsmith, 2012; Pyo, 2015; Cuculeski et al., 2017; Mihailović & Popović, 2017; Rudiana & Komarlina, 2018; Binbasioglu, 2020; Prayag et al., 2021; Rianty et al., 2022; Badilla, 2022).

Segmentation

According to Kotler, a market cannot be segmented in a single manner. Researchers must experiment with various segmentation variables and characteristics, either using single factors or a combination of factors, in order to determine the best method for perceiving and segmenting the market (Kotler, 2001). Segmentation is the process of putting together groups of possible target customers and trying to separate potential markets for different buyer groups and different types of goods, as well as putting together the right parts of the marketing mix. Marketing strategy is achieved by product segmentation based on differences in customer attributes, their motives for purchasing or consuming several items, and their brand preferences. Market segments can be divided by geographic, demographic, behavioural and psychographic factors (Kotler et al., 2014).

Geographic segmentation divides the market into geographical units such as continents, countries, states, regions, counties, cities, or neighbourhoods. Buyers in any tourist market have different demands, resources, attitudes towards purchasing, and buying patterns based on their geographic location (Kotler et al., 2014). Because customers have different requirements and desires, each may be considered a separate market. In an ideal world, a marketer would create a unique marketing strategy for each customer. A caterer, for example, can tailor the meal, entertainment, and environment to match the demands of a given customer (Tsiotsou & Goldsmith, 2012). The personalization of products and services based on location is considered a best practise in today's interactive marketing channels, such as social media, streaming platforms, email, and others, because of the channels' automatic capabilities to ask and identify the user's geolocation via GPS (Matloka & Buhalis, 2010; Buhalis & Amaranggana, 2015).

Demographic segmentation separates the market into groups based on factors such as age, life stage, gender, income, profession, education, religion, ethnicity, and generation. The most commonly used foundations for segmenting client groups are demographic factors (Kotler et al., 2014). One reason for this is because customer demands, desires, and consumption rates often shift in tandem with demographic characteristics. Another advantage is that demographic characteristics are simple to quantify (Kotler, 2001). Even if market groups are initially formed using other criteria, such as personality or behaviour, demographic parameters must be recognized in order to determine the size of the market and effectively reach it (Pyo, 2015).

Psychographic segmentation separates consumers into groups based on their socioeconomic status, lifestyle, or personality traits (Kotler, 2001). People in the same demographic category might have a wide range of psychographic features. As a consequence, marketers often segment their markets based on customer lifestyles, and their marketing methods are based on lifestyle attractions (Kotler et al., 2014).

In behavioural segmentation, customers are separated into groups based on their product knowledge, attitudes, use, and responses (Kotler, 2001). Numerous marketers feel that behavioural characteristics are the best place to begin when constructing market groups. Buyers can be classified based on their behavioural characteristics and behavioural patterns towards the product or service itself, as well as their relative patterns and characteristics regarding similar experiences (Kotler et al., 2014).

There are four prerequisites for efficient segmentation: measurability, accessibility, sustainability, and actionability. Measurability refers to the extent to which the segment's size and buying power may be quantified. Accessibility is the extent to which segments are capable of being evaluated and serviced. Substantiality is the extent to which parts are sufficiently substantial or lucrative to function as marketplaces. To support a customized marketing campaign, a segment should be the most economically viable homogeneous group. Finally, actionability refers to how well plans for attracting new customers and maintaining existing ones can be implemented (Kotler et al., 2014; Cuculeski et al., 2016).

Targeting

Choosing the target market presents a challenge. A target market is a group of purchasers with similar requirements or characteristics that a destination intends to serve. The selection of the best and most lucrative segments in the STP framework is called targeting (Kotler, 2001). Marketing segmentation exposes market-segment prospects for a destination. As a result, the destination must assess the different market segments and choose which to target (Rudiana & Komarlina, 2018). When analysing market segments, a destination must consider three factors: segment size and growth, segment attractiveness, and destination goals and resources. Instead of destination goals and resources, there are destination goals and resources in the case of tourist destination targeting (Kotler et al., 2014; Cuculeski et al., 2016).

A destination must first gather and evaluate data on current segment sales growth rates and anticipated segment profitability, if possible. Destinations should be interested in segments with the appropriate size and growth. However, 'appropriate size and growth' is a relative term, and in many cases, quality over quantity is a more profitable and sustainable approach (Tsiotsou & Goldsmith, 2012). Some destinations want to target markets with substantial present sales, a rapid growth rate, and a high profit margin. However, the biggest and fastest-growing areas are not always the most desirable for all tourist destinations, as factors such as carrying capacity are highly important. Smaller destinations often discover that they lack the carrying capacity and resources required to serve the bigger segments or that these segments are too competitive. These destinations may choose smaller but potentially more profitable market sectors and focus their offering portfolio on niche target segments (Delgado, 2017).

Even if a section has ideal size and growth, it may not yield desirable earnings. The destination must evaluate several significant structural elements that influence the attractiveness of its long-term segments. For instance, a market sector is less desirable if it already has several aggressive and powerful competitors. The existence of several real or hypothetical substitutes may constrain pricing and profits (Kotler, 2001). The relative purchasing power of buyers also influences the appeal of a segment. If buyers in a sector have great negotiating power compared to suppliers, they will drive down prices, demand higher quality services, and pit rivals against one another. When it comes to destination marketing, differentiation strategies are more challenging to implement, but their implementation can lead to great economic success if the right segments are targeted (Kotler et al., 2014).

Every destination must evaluate its own aims and resources with respect to accessible market segments. Because they do not align with the destination's long-term goals, certain appealing categories might be rapidly disregarded. Although such divisions may be enticing in and of themselves, they may distract a destination's focus and resources from its primary objective. Also, they might not be a good choice from an environmental, political, or social responsibility point of view (Binbasioglu, 2020).

Positioning

Once a destination has determined the segments to be targeted, it must determine its value proposition, or how it will provide distinct value for those markets, as well as what positions it will hold in those areas. Positioning is the process of giving a product a clear, unique, and desirable place in the minds of target segments compared to other products in the same market (Kotler et al., 2014). The position of a product in the eyes of customers in comparison to rival goods is determined by how the product is described by consumers in terms of significant features. Consumers are inundated with product and service information. They are unable to evaluate items with each purchase decision. To simplify purchasing choices, customers categorize things; they 'place' destinations in their brains (Kotler, 2001).

There are various positioning tactics available to destination marketers. Destination offerings may be placed according to certain characteristics. The attribution of physical, psychological, and emotional characteristics to the offering must provide valuable associations in the minds of potential visitors in each targeted segment (Kotler et al., 2014). The aforementioned value associations must be aligned with the value proposition of the destination's offering. Positioning plays a key role in the implementation of the differentiation strategy of a destination for either each tourist product or the destination as a whole (Binbasioglu, 2020).

In order to position its offering, the destination needs to find potential customer value differences that can provide distinct competitive advantages around which to create the positioning. The destination may increase consumer value by charging lower rates than competitors or by providing more features to justify higher costs (Rudiana & Komarlina, 2018). However, if the destination claims a higher value, it must deliver on that promise. Otherwise, visitors might respond with negative online reviews regarding their experience and, as a consequence, damage the brand of the destination and its global appeal to potential tourists (Delgado, 2017). Thus, effective positioning of destination offerings starts with differentiation really distinguishing the destination's market offering so that it delivers greater value to visitors (Neirotti et al., 2016). Once the destination has determined its desired stance, it must take aggressive actions to deliver and convey that position to its target segments. The destination's overall marketing campaign should complement the chosen positioning approach.

The 'Ancient Life Story' Tourism Product

Ancient Life Story-Based Tourism is a novel, ICH product. It is characterized by complexity and consists of many different levels and aspects. In the case of Cyprus, the life stories developed by the FF-MAC project were based on archaeological findings and the production of osteobiographies. The general theme behind each life story is to present interesting aspects of the lives of ancient Cypriots while introducing details about how they lived. The ancient life stories are fictional; however, they are based on archaeological evidence and therefore provide a more vivid representation of life in ancient Cyprus.

As an intangible cultural heritage product, ancient life stories rely heavily on other products and services in order to be converted into a tourist product. Left alone as is, their potential as a tourist attraction is very limited. Ancient life stories must essentially be combined with tangible elements that can be used to construct a tourist experience. Moreover, the techniques of digitization and digital storytelling can provide a tangible character to the intangible stories. As a result, the final proposed product consists of the following elements that are illustrated in Figure 1 and described in depth below.

Tourist Packages. Complete tourist packages that

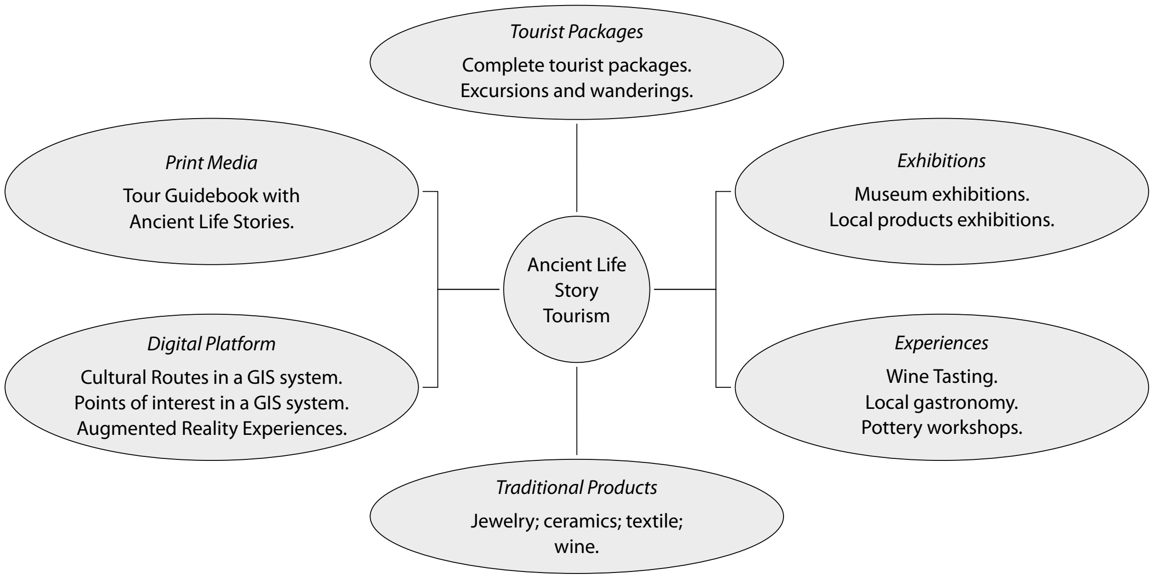

Figure 1 The Ancient Life Story Tourism Product

include points of interest and cultural heritage routes based on ancient life stories. The theme of the complete tourist packages is to provide the tourist with the experience of learning about and experiencing the life of ancient Cypriots, along with their life stories. Excursions and wanderings will have a similar but less integrated effect than complete tourist packages. Their purpose is to allow foreign and domestic tourists to learn about and experience the lives of ancient Cypriots.

Print Media. A tour guidebook with ancient life stories has as its goal to imprint the stories of ancient Cypriots into a tangible tourist guidebook that provides information regarding the various places tourists can visit and the experiences they can take part in. The goal with the guidebook is to connect the life stories with the associated experiences and products. The guidebook must be written in a way to stimulate the minds of tourists and foster a sense of connection with the past.

Exhibitions. Museum exhibitions are a valuable aspect of the product as they can connect the raw material that stories are inspired by, namely the osteobiographies. Exhibition visitors will be able to see exhibits from the archaeological excavations that inspired the ancient life stories and make connections in their minds. Local product exhibitions are completely different than museum exhibitions, and their purpose is to showcase products that are inspired by the lives of ancient Cypriots and how these products connect to the ancient life stories.

Traditional Products. While travel packages, books, and exhibitions can provide great intangible value, the traditional product creation is an essential element of connecting the life of ancient Cypriots with something tangible. Jewellery creation is the first traditional product category to be created based on the lives of ancient Cypriots. The goal of jewellery creation is to provide jewels that are branded and associated with the lives of ancient Cypriots and their life stories. Through these product exhibitions, visitors will be able to connect the traditional products with the stories from ancient times and gain a deeper understanding of life in ancient Cyprus. Ceramic utensils made of clay, such as pots and plates, are great for representing the traditional culture of the island, as well as its ancient history. The goal of ceramics creation is to recreate the atmosphere of ancient Cyprus and to provide visitors with a glimpse into the ancient ancestors' lifestyle. Alongside ceramics, textiles can play a huge role in the perception of tourists regarding the lives of ancient Cypriots. Textiles are a representation of the artisanal skills, culture, and social life of ancient Cypriots. Last but not least, the creation of wine based on an ancient grape variety is a key product for understanding and appreciating the culture of Cyprus and the ancient life stories. The wine of ancient Cypriots is a product that can bring the past to life and stimulate visitors' feelings because it is consumable. The overall goal of developing traditional products is to provide tangible evidence and make visitors connect with the lives of ancient Cypriots.

Experiences. While traditional products serve as great tangible evidence, experiences are essential for making visitors experience the lives of ancient Cypriots. The first experience that is based on the creation of the wine of ancient Cypriots is wine tasting. As a popular cultural experience, wine tasting will make tourists experience the lives of ancient Cypriots and help them connect with the past. The second, but not less important, experience is local gastronomy. Similar to wine tasting, through local gastronomy, the visitor should be able to associate the experience of tasting certain specially created dishes with the life of ancient Cypriots. Gastronomy and wine can be combined to create a more compelling experience that engages visitors' senses of taste and smell while also assisting them in developing psychological associations between wine, food and ancient life. Last but not least, pottery workshops can be a great experience that will show off the artisanship and creativity of ancient Cypriots. Pottery workshops offer visitors a hands-on experience that allows them to directly explore the artistry of ancient Cypriots. By visiting local oenogastronomy spots and participating in pottery workshops, visitors can gain an understanding of the tastes, smells and creative pursuits of ancient Cypriots.

Digital Platform. All of the above-mentioned products and services focus on the tangible and experiential aspects of ancient life story-based tourism. As ICH, ancient life stories can be presented in a tangible way through digital technology. The digitization should not be limited to the life stories but include all elements related to the concept of ancient life story tourism. As a result, the digital platform should be designed and developed with two goals: (1) serving as a tour guide for ancient life story tourists, and (2) providing interesting interactive information and experiences to enrich the experience of the life stories.

Cultural routes based on ancient life stories are the first feature of the digital platform. The routes include points of interest related to the geolocation of the life stories and the locations of the various experiences. The routes within the platform follow a linear narrative. The storytelling and the logic behind the presentation of the geoinformation, descriptions, and media on the platform is that of storymaps. User interface is divided between an interactive map and a container that contains the information and multimedia related to the stories. Routes are connected point-to-point, and by following them, tourists can experience the concept of 'ancient life story tourism' as a whole. The goal of the cultural routes is to guide users through experiencing the lives of ancient Cypriots.

A linear narrative is not the best choice for all tourists. Some of them might want to take a different path or select different experiences and points of interest to visit. As a result, many tourists might want to skip certain points of interest or experiences and customize their trips. In that case, an interactive map with all the available points of interest and experiences is necessary. The map will give users the ability to select and visit only the points of interest and experiences they want. The map will allow users to fully customize their visit experience by allowing them to selectively explore only those points of interest and experiences that appeal to them.

Finally, augmented reality modules will enable users to gain more information by adding digital elements to the ancient life stories. The augmentations consist of 3D models such as monuments and objects that are related to each story. Augmented reality enables users to see the 3D models in their own space through their mobile devices and enhance each story's narrative. By providing an immersive and engaging experience through the use of augmented reality, users can gain a more meaningful appreciation for the stories they explore. Moreover, the addition of digital elements can provide the users with deeper insights into each life story and connect them to ancient history in a more tangible way.

As mentioned previously, ancient life story tourism

Table 1 Product Levels of Ancient Life Story Tourism

Potential Product	*Future Expansion and Combination* Combination of experiences such as wine tasting & gastronomy. Adding new technological storytelling tools and techniques to the platform.
Augmented Product	*Exhibitions, Print Media & Digital Platform* Museum Exhibitions, local products exhibitions. Tour Guidebook with Ancient Life Stories. Cultural Routes in a GIS system, Points of interest in a GIS system, Augmented Reality Experiences.
Expected Product	*Traditional Products & Experiences* Jewelry, ceramics, textile, wine. Wine tasting, local gastronomy, pottery workshops.
Generic Product	*Tourist Packages* Complete tourist packages. Excursions and wanderings.
Core Product	*Ancient Life Stories* The life stories of Ancient Cypriot produced based on osteobiographies.

is proposed as a complex product that consists of many elements. As a result, a further, more structured analysis of the product is necessary. Theoretically, the analysis of each product element is based on Kotler's five product levels model (Kotler, 2001).

The core of the ancient life story tourism is based on ancient life stories. In and of themselves, fictional life stories based on osteobiographies are inadequate to spike significant tourist interest (Table 1). To introduce the ancient life stories as a tourist product, it is essential to develop relative tourist packages that will serve as the generic tourist product. The development of traditional products and experiences can create expectations among potential visitors due to their tangible and experiential nature. Traditional products and experiences can serve as the part of the product that tourists expect from ancient life story tourism. The introduction of exhibitions, print media, and the digital platform can go beyond the expected product by adding additional factors for visitors to engage in this type of tourism.

As a result, these product aspects can be classified as the augmented product. Finally, there is the possibility of future growth and the combination of experiences, which can provide additional tangible and intangible benefits. The potential developments and combinations can be classified as the potential product. The potential product is key for future expansion of ancient life story tourism growth, as it combines various elements from both the expected and augmented products.

Our purpose in conducting this study is to explore the characteristics of tourists interested in cultural heritage (tangible and intangible), with a particular focus on those who can potentially benefit from cultural heritage experiences through the Ancient Life Story product. As a means of achieving the above-mentioned purpose, four (4) research questions (RQ) have been proposed in this study:

- RQ1 *What are the potential segments that are interested in Ancient Life Story Tourism?*
- RQ2 *How are psychographic, behavioural and geodemographic characteristics defining the segments?*
- RQ3 *What are the most prominent segments for Ancient Life Story Tourism?*
- RQ4 *Why are certain segments of Ancient Life Story Tourism more attractive than others?*

Methodology

In order to identify tourism market segments, a two-step cluster analysis was conducted, which included 766 foreign tourists visiting Cyprus. Cluster analysis is a multivariate method that is used to group things that have similar traits (Hair et al., 2010). To classify and build a segmentation profile of the potential visitors

Table 2 Research Questions

What?	RQ1: What are the potential segments that are interested in Ancient Life Story Tourism?
	RQ3: What are the most prominent segments for Ancient Life Story Tourism?
How?	RQ2: How are psychographic, behavioural and geodemographic characteristics are defining the segments?
Why?	RQ4: Why certain segments of Ancient Life Story Tourism are more attractive than others?

for ancient life story tourism, a two-step cluster analysis was used. According to Sarstedt and Mooi (2014), this technique is ideal because it allows for the use of large datasets, automatically determines the number of derived clusters, and can analyse both categorical and continuous variables; attributes that other hierarchical and partitioning clustering methods cannot consider holistically.

It is also worth noting that we followed Dolnicar's suggestions for the methodological design of our segmentation investigation (Zopiatis & Pericleous, 2021), particularly in terms of sample size adequacy and the avoidance of both factor-cluster analysis and the use of ordinal data.

Two Step Cluster Analysis is a sort of analysis that groups items into two phases (Harantová et al., 2023). There are two stages to the two-step cluster analysis: (1) Pre-clustering is the first stage of the two-step clustering process. Sequential clustering is the method used to create subclusters from each variable object. Score (threshold) and maximum sub-cluster are two factors that influence the outcome of basic sequential clustering. (2) Hierarchical Cluster to Subcluster is the next stage to classify sub-clusters inside the larger clusters. Two-step cluster analysis uses a different type of ratio than previous cluster studies, the Log-Likelihood ratio (Harantová et al., 2023).

When data consists of both continuous and categorical factors, the log-likelihood ratio is used. The formula for the log-likelihood ratio between the ith and jth clusters is:

$$
\begin{aligned}
d(i,j) &= \xi_i + \xi_j - \xi_{i,j},\\
\xi_S &= N_S\left(\sum_{k=1}^{K^A}\frac{1}{2}\log(\acute{\sigma}_k^2 + \acute{\sigma}_{sk}^2) + \sum_{g=1}^{K^B}\acute{E}_{sk}\right),\\
\acute{E}_{sk} &= -\sum_{l=1}^{L_k}\frac{N_{skl}}{N_S}\log\frac{N_{skl}}{N_S},
\end{aligned}
$$

where $d(i,j)$ is the ratio between the ith and jth cluster; ξ_i is the ith cluster variance; S is ith, jth or combination between ith and jth cluster symbol; ξ_j is the jth cluster variance; $\xi_{i,j}$ is the ith and jth cluster variance; K^A is the number of continuous variable; K^B is the number of categorical variable; L_k is the number of category in the kth (categorical variable); N_S is the number of object in the ith, jth or combination between ith and jth cluster; ξ_S is variance in ith, jth or combination between ith and jth cluster; $\acute{\sigma}_k^2$ is the indicator for the kth continuous variable; $\acute{E}_{sk}$ is the estimated score of ith, jth or combination between ith and jth cluster in the kth continuous variable; N_skl is the number of object of ith, jth or combination between ith and jth cluster in the kth categorical variable taken from the lth category; $\acute{\sigma}_{sk}^2$ is the indicator of variance in the ith, jth or combination between ith and jth of the kth continuous variable.

The optimal cluster is calculated based on the cluster with the lowest BIC score or the greatest distance measurement ratio. Following is the formula for calculating BIC:

$$\text{BIC}(J) = -2\sum_{J=2}^{J}\xi_j + m_j\log(N),$$

where BIC(J) is BIC for total cluster count (E); J is $1, 2, \ldots, J$; m_j is cluster-j ratio determined during the hierarchical clustering step.

$$m_J = J(2K^A + \sum_{k=1}^{k^B} L_k - 1).$$

With the formula above we calculate the optimal cluster based on the lowest BIC score or the highest distance measure ratio, where m_J is the ratio in cluster j developed during the hierarchical clustering stage, $J = 1, 2, \ldots, J$; K^A is the number of continuous vari-

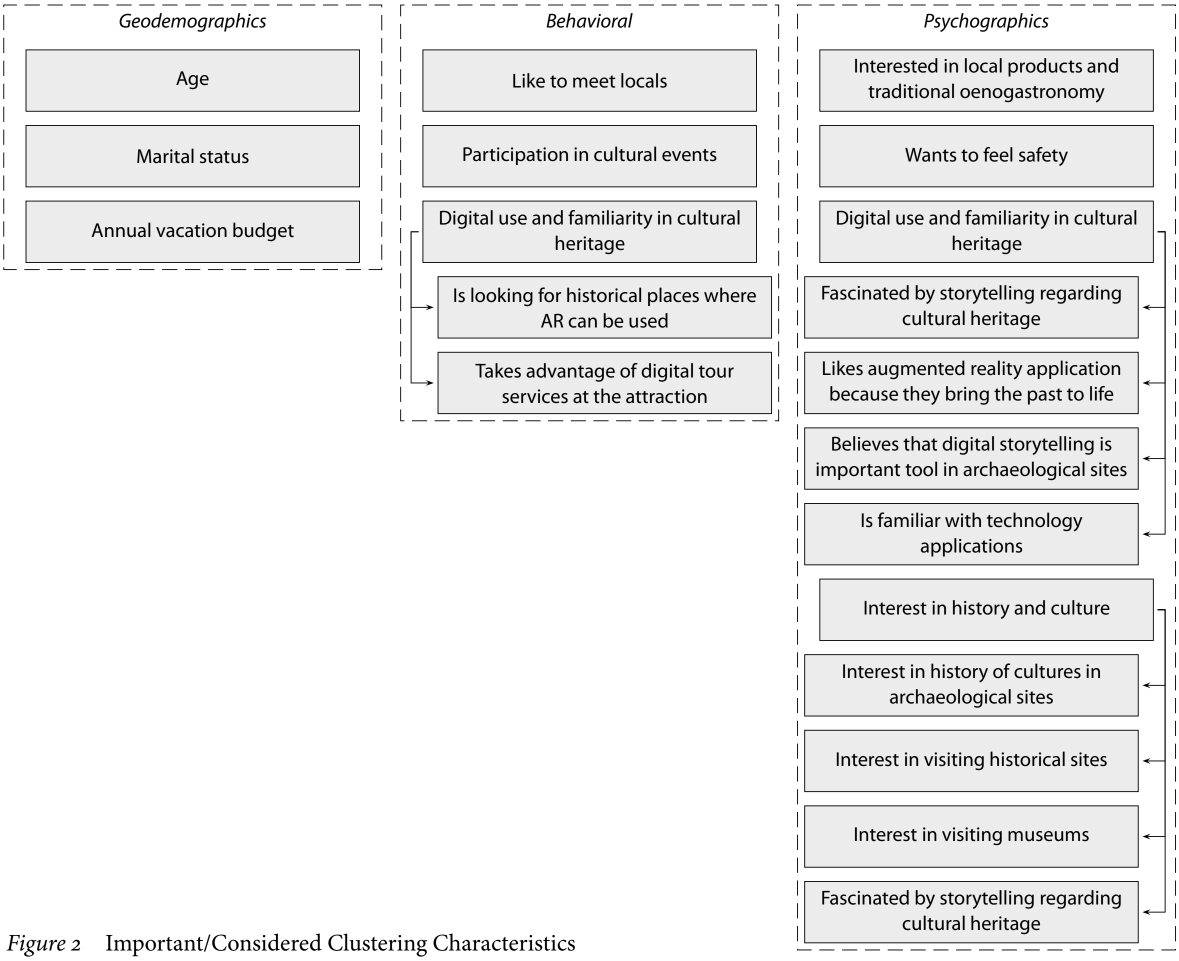

Figure 2 Important/Considered Clustering Characteristics

able; K^B is the number of categorical variable; L_k is the number of category in the kth (categorical variable).

Additionally, the corresponding tests (Chi-square and ANOVA) were performed for each variable within each cluster. These tests were conducted to determine whether the differences between the clusters are significant.

The Survey Research Tool

A structured questionnaire was utilized for the purposes of data collection. The questionnaire was fully self-administered, anonymous and was distributed online. It was developed based on the STP framework proposed by Philip Kotler (2001) and was translated into seven (7) languages followed by a pilot testing procedure. Thus, the questionnaire was structured around the following axes: a. geodemographics variables; b. geographic variables; c. psychographic variables; and d. behavioural variables.

In more detail, the questionnaire included four (4) sections. *Section A* includes questions concerning demographic variables (gender, age, education, marital status, occupation, annual income, annual vacation budget, country of residence). *Section B* includes questions related to the Cyprus Tourism Experience. These questions were focused on tourists who have visited or are planning to visit the island, in order to investigate their trip characteristics. A recent *Cyprus tourism Strategy* (THR, 2017), prepared by the Cyprus Deputy Ministry of Tourism, was utilized to select the relevant questions. For those participants who had never visited Cyprus and/or do not intend to, the survey ended at this point. *Section C* includes questions concerning tourists' motivations based on the typology proposed by McIntosh et al. (1995) and Cruz et al. (2006): physical; cultural; interpersonal; and status and prestige motivators. The motivation questions concern psychographic variables. They were based on Maslow's Need Theory and were structured on a 5-point Likert scale. Finally, *Section D* includes questions concerning behavioural variables (technology use, main activities, types of travel and travel means). The questions' formulation related to the use of technology by tourists was based on a relevant literature review (Eriksson et al., 2014; Neuhofer, 2015; Okazaki et al., 2015; Vallespín et al., 2017) and the questions were structured on a 5-point scale Likert. Multiple-item scales were used for the question categories 'type of travel' and 'main activities' preferences.

The Sample

The questionnaire was fully self-administered, anonymous and was distributed mainly online due to restrictions imposed by the COVID-19 pandemic. The data collection process was conducted between July and December of 2021. In particular, 676 questionnaires were collected online from various social media platforms, 48 from the Larnaca International Airport and 42 from the Paphos Airport. The quantitative research was based on a non-probability sampling methodology. The data was gathered using Qualtrics software and processed with the Statistical Package for the Social Sciences (SPSS v.20).

Among the 766 participants in the study, 60.7% were women and 39.3% were men (Table 3). The participants in the sample were relatively young, with 65.1% of them being between the ages of 18 and 44. A further 34.9% of those surveyed were over the age of 45. In terms of marital status, 50.8% of respondents were married and 40.7% were single. Moreover, according to the survey, 26.2% of visitors to Cyprus were from the United Kingdom. The next largest source of visitors was Greece, with 14.6%, followed by Russia with 9.5%. Most participants had a high level of education (71%) with 45.8% having a bachelor's degree and 25.2% a postgraduate degree. Approximately 54.8% were employed in either the public or private sector. In the survey, 60.9% of respondents stated that their annual family income exceeded 20,000.00€. The remaining 39.1% reported earning up to €19,999.00 per year. Most respondents (37.9%) reported annual

Table 3 Geodemographic Profile of the Respondents

Variables	Category	(1)	(2)
Gender	Male	301	39.3
	Female	465	60.7
Age	18–24	143	18.7
	25–34	211	27.5
	35–44	145	18.9
	45–54	123	16.1
	55–64	87	11.4
	65+	57	7.4
Country of Residence	United Kingdom	201	26.2
	Russia	73	9.5
	Israel	37	4.8
	Germany	23	3.0
	France	27	3.5
	Greece	112	14.6
	Nordic countries	30	3.9
	Other (please specify)	263	34.3
Marital Status	Single	312	40.7
	Married/Civil Partnership	389	50.8
	Divorced/Separated	48	6.3
	Widowed	16	2.1
Educational Background	Up to secondary education	195	25.5
	Bachelor's degree	351	45.8
	Master's degree	193	25.2
	PhD	27	3.5
Occupation	Student	139	18.1
	Stay-at-home Spouse/Partner	20	2.6
	Employed	420	54.8
	Self-employed	96	12.5
	Retired	72	9.4
	Unemployed	16	2.1

Continued on the next page

Table 3 Continued from the previous page

Variable	Item	(1)	(2)
Frequency of vacation taking	Once a year	310	40.5
	2–3 times a year	386	50.4
	4–5 times a year	48	6.3
	More than 5 times a year	20	2.6
Annual household income	Less than €10,000	139	17.6
	€10,000–€19,999	161	21.5
	€20,000–€29,999	113	15.1
	€30,000–€49,999	139	18.6
	€50,000–€79,999	126	16.8
	More than €80,000	88	10.4
Annual travel expenditures	Up to €999	289	37.9
	€1,000–1,999	255	33.5
	€2,000–2,999	123	16.1
	€3,000–4,999	53	6.6
	More than €5,000	47	5.9

Notes (1) frequency, (2) valid percentage. $n = 766$.

travel expenditures of up to €999.00 and 33.5% between €1,000.00 and €1,999.00. Additionally, 50.4% of respondents indicated that they take vacations two to three times per year, and 40.5% once per year (Table 3).

Presented in Table 4 are descriptive statistics for 28 behavioural and psychological items used in our study. Based on the table, it is apparent that all items used have low standard deviations and high mean scores.

Empirical Results

Analysis of the Segments

Based on the findings of the cluster analysis technique, we identified three main segments of potential tourists for ancient life story-based tourism in Cyprus (Table 5). Each of these segments has been named based on its generational membership and most prominent characteristics. As a result of the corresponding tests (Chi-square and ANOVA) performed for each variable within each cluster, significant differences were observed between the three clusters.

This section describes each segment in the following manner:

Segment 1: Gen-Z, Adventure-Seeking Digital Natives. They range in age from 18 to 24. Most of them are single, with an annual vacation budget of up to €999.00. They show above-average interest in local products and traditional oenogastronomy. They are adventure seekers and not so concerned with travel safety, while being less extroverted when it comes to meeting locals. They are Tech-savvy, emphasizing the use of technology as a storytelling tool to enhance their visits to cultural heritage sites and museums. Also, they were less enthusiastic about participating in cultural events and less interested in history and culture than the other segments.

Segment 2: Early Millennials, Explorers of Local Traditions. They range in age from 25 to 34. Most of them are single, with an annual vacation budget of up to €999.00. They show a very high interest in local products and traditional oenogastronomy. They are very concerned with travel safety while being very extroverted when it comes to meeting locals. Moreover, they are tech savvy and emphasize the use of technology as a storytelling tool to enhance their visits to cultural heritage sites and museums. Also, they were more enthusiastic about participating in cultural events and quite interested in history and culture.

Segment 3: Late Millennials, Family Explorers of History and Culture. They range in age from 35 to 44. Most of them are married or in a civil partnership, with an annual vacation budget of up to €1999.00. They show the highest interest in local products and traditional oenogastronomy. They are the most concerned with travel safety while also being the most extroverted when it comes to meeting locals. Moreover, they are less tech-savvy and place less emphasis on the use of technology as a storytelling tool for cultural heritage than the other segments. Also, they were the most enthusiastic about participating in cultural events and the most interested in history and culture.

Distinct similarities and differences are identified between the segments (Table 6). While there are differences between the segments in terms of travel safety, meeting locals, technology use, and enthusiasm for cultural events, they all demonstrate an interest in history and culture. All three segments expressed an interest in learning about history and culture, though

Table 4 Descriptive Statistics for 28 Behavioural and Psychographical Items

Construct	Question Item	Mean	SD
Behavioural	I am looking for historical places where I can use augmented reality applications to learn about culture in a more experiential way.	3.68	0.964
	I like to rest and relax.	4.43	0.773
	I like to visit theme parks.	3.52	1.255
	I follow fashion trends.	3.25	1.110
	I like to be physically active during vacation.	3.96	0.961
	Sharing the experiences on social media is important part of holidays.	3.43	1.249
	I participate in cultural events.	3.82	0.940
	I try to go places visited by wealthy and influential people.	2.75	1.194
	I take advantage of digital tour services if available at an attraction.	3.83	0.989
Psychographics	I'm interested in learning about different cultures.	4.37	0.785
	I participate in cultural events.	3.82	0.940
	I like to learn about local products and try the local wine and food.	4.44	0.808
	I enjoy the folk architecture.	4.08	0.881
	I enjoy the contact with nature.	4.35	0.784
	I am looking for intense emotions.	3.74	0.971
	I'm interested in having fun.	4.30	0.816
	I like to meet locals.	4.29	0.845
	I want to feel safe.	4.58	0.728
	I like to try something new.	4.28	0.786
	I like to listen and learn about the history of cultures when I visit archaeological sites.	4.27	0.838
	I like to visit museums.	4.25	0.858
	I like augmented reality applications because they bring the past back to life.	3.88	0.926
	I am familiar with technology applications.	4.14	0.942
	I am fascinated by storytelling and it helps me better understand the culture of a place.	4.25	0.874
	I like to visit historical sites.	4.25	0.858
	I like to visit museums.	4.08	0.924
	Digital storytelling is a very important tool in archaeological sites.	3.99	0.921
	When travelling I am interested in having fun.	4.30	0.816

Notes 1 – strongly disagree, 2 – disagree, 3 – neither agree nor disagree/neutral, 4 – agree, 5 – strongly agree. $n = 766$.

the early and late millennials were the most enthusiastic about it. Early and late millennials had the most in common when it came to interests and enthusiasm. They were both interested in meeting locals and engaging in cultural activities such as trying the local cuisine. On the other hand, Gen Z had a more independent attitude, emphasizing their need to understand the world and explore it with less interest in engaging with locals or trying the local cuisine. Furthermore, Gen Z are digital natives who use and appreciate the added value of technology use related to cultural heritage. Overall, both early and late millennials shared similar interests when travelling, but there was a significant difference between the use and

Table 5 Clusters

Variable	Cluster		
	(1)	(2)	(3)
Size	18% (131)	32.8% (239)	49.2% (358)
Marital status	Single 45.8%	Single 100%	Married 86.66%
Age	18–24 (28.2%)	25–34 (43.1%)	35–44 (24%)
Annual vacation budget (EUR)	<999 (53.4%)	<999 (47.7%)	1000–1999 (31.8%)

Table 6 Behavioural and Psychographic Profiles of the Segments

Variable	Cluster		
	(1)	(2)	(3)
Interested in local products and traditional oenogastronomy	3.17	4.69	4.78
Safety when travelling	3.48	4.79	4.84
Like to meet locals	3.12	4.51	4.61
Digital use and familiarity in cultural heritage	4.46	4.36	3.22
Participation in cultural events	2.94	3.99	4.06
Interest in history and culture	3.13	4.10	4.18

appreciation of technology for cultural heritage by the early millennials. On the other hand, Gen Z focused more on understanding the world through research and technology, as well as exploring the world independently.

Targeting

At first glance, it seems like Segments 2 and 3 are more attractive targeting prospects. The reason is that their behavioural and psychographic profiles align better with the core product, the generic product, and the expected product of ancient life story tourism. However, Segment 1 aligns better with the augmented product of ancient life story tourism and the potential product. Because ancient life story tourism is a novel tourist product, there is no prior research to indicate if it is better to limit the targeting to Segments 2 and 3 or to include segment 1 in the targeting procedure.

The segment that has the best alignment with all five levels of the product is the Early Millennials, Explorers of Local Traditions because their behavioural and psychographic profile is aligned almost perfectly with the product of ancient life story tourism. On the other hand, Segment 1: Gen-Z, Adventure-Seeking Digital Natives is less aligned with the core and generic product of ancient life story tourism. However, the current data cannot indicate if Segment 1 should not be targeted as their alignment with the product is less

Table 7 Geodemographic Profiles of the Three Segments

Variable	Category	Cluster		
		1	2	3
Marital status	Single	45,8% (60)	100% (239)	0.6% (2)
	Married	43,5% (57)	0% (0)	86.6% (310)
	Divorced	9.2% (12)	0% (0)	9.2% (33)
	Widowed	1.5% (2)	0% (0)	3.6% (13)
Annual vacation budget (EUR)	<999	53.4% (70)	47.7% (114)	27.7% (99)
	1.000-1.999	35.1% (46)	33.1% (79)	31.8% (114)
	2.000–2.999	7.6% (10)	10% (24)	22.6% (81)
	3.000–4,999	0% (0)	6.3% (15)	8.9% (32)
	>5,000	3.8% (5)	2.9% (7)	8.9% (32)
Age	18–24	28.2% (37)	41.8% (100)	2.5% (9)
	25–34	20.6% (27)	43.1% (103)	17.6% (63)
	35–44	22.9% (30)	8.8% (21)	24% (86)
	45–54	18.3% (24)	4.6% (11)	22.9% (82)
	55–64	7.6% (10)	1.7% (4)	19% (68)
	>65	2.3% (3)	0% (0)	14% (50)

when compared to the other segments, but in and of itself the alignment is high.

Conclusions

This research represents the first attempt to explore a new, innovative heritage tourism product based on archaeological evidence. As an ICH tourism product, Ancient Life Stories Tourism depends on and connects to other products and services in order to be a complete cultural heritage tourism offering.

The empirical research revealed three main segments of potential tourists for ancient life tourism in Cyprus: (1) Gen-Z, Adventure-Seeking Digital Natives, (2) Early Millennials, Explorers of Local Traditions, and (3) Late Millennials, Family Explorers of History and Culture. Similarities and differences were identified between the three segments. While there are differences between the segments in terms of travel safety, meeting locals, technology use, and enthusiasm for cultural events, all segments demonstrate an interest in history and culture. All three segments expressed an interest in learning about history and culture, though the early and late millennials were the most enthusiastic about it. On the other hand, Gen Z had a more independent attitude, emphasizing their need to understand the world and explore it with less interest in engaging with locals or trying the local cuisine. Utilizing digital technologies in order to highlight cultural heritage has proven to be extremely valuable to the young generation (Gen Z) segment.

Overall, segments 2 and 3 are more attractive targeting prospects due to higher alignment of their behavioural and psychographic profiles with the core product, generic product, and expected product of ancient life story tourism, while segment 1 aligns better with the augmented product and potential product. The segment that has the best alignment with all five levels of the product is the Early Millennials, Explorers of Local Traditions, as they are aligned almost perfectly with the product.

Due to the COVID-19 pandemic restrictions, the study has a limitation due to the large number of questionnaires collected online. During the study period, only a very small sample was collected from airports. A corresponding data collection should cover all tourist gathering points in order to ensure a more representative sample and more accurate results.

As a final remark, this paper presents a framework for market research for a novel heritage tourism product. The results of this research can be used as the groundwork for developing and implementing an integrated marketing and branding strategy for Ancient Life Story Tourism in Cyprus. Future research should evaluate the effectiveness and appeal of ancient life story tourism as a product, as well as how this novel ICH product can be further developed. Moreover, future research could explore what positioning and branding strategies can be applied to such tourist products based on this research framework.

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Original Scientific Article

Social Media as a Management Tool: Opportunities for Sustainable Heritage Destinations

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The popularity of certain tourist spots on social media triggers unexpected trends leading to unsustainable tourism development, commodification, cultural dissonance, and other negative impacts on the territory. The popularity is gained mainly due to the amplified dissemination of data through social media. Dealing with these impacts is especially challenging in heritage destinations where nature and culture are essential elements. In this paper a quantitative content analysis of posts and reviews on Instagram, TripAdvisor, and Airbnb is conducted for five World Heritage Sites, 13 Regional Nature Parks, and two UNESCO Biosphere Reserves in Switzerland. The results provide insight into the distribution of visitors within a larger heritage area during and after the COVID-19 pandemic. This will help management agencies develop strategies for a more balanced flow of visitors within the heritage area. The similarities between the heritage destinations allow for comparison, while the differences provide opportunities to apply the methodology to different contexts and heritage sites. Social media analysis of large protected areas opens the field for other applications, mainly with regard to adopting new site governance and visitor management systems.

Keywords: tourism management tool, social media, visitor flows, heritage destinations, sustainable development

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Introduction

Understanding Visitor Flows in Heritage Destinations

The importance of displaying and sharing information about visited places and about the impact of such behaviour was discussed in *The Economist* ('For some in China, the aim of travel is to create 15-second videos,' 2019). The article explains that 'it's not about where you've been, it's about where you're seen to have been.' As we become embedded within cultures of sharing and co-creation, travellers become even more active agents in the visual production and consumption of destinations (Kang & Schuett, 2013; Leung et al., 2013; Munar & Jacobsen, 2014; Urry, 1990; Xiang & Gretzel, 2010). Anyone who owns a mobile phone with a camera is now a photographer, and more photos are being taken today than ever before (Bonnington, 2011), with an intension to share them on social media (Siegel et al., 2022).

Photos not only document the tourist experience but may also shape it (Haldrup & Larsen, 2003; Larsen, 2008). The so-called 'Instagram Effect' implies that a point-of-interest becomes increasingly popular by highlighting it on social media (Miller, 2017), regardless of its capacity to absorb visitors (Falk & Hagsten, 2020).

The popularity of certain tourist spots on social media triggers unexpected trends leading to unsustainable tourism development, commodification, cultural dissonance, and other negative impacts on the territory. The popularity is gained mainly due to the amplified dissemination of data through social media. Dealing with these impacts is especially challenging in heritage destinations where nature and culture are essential elements.

Even in times when spatial movement of people is, to a certain extent, limited – e.g. during a pandemic – issues related to visitor flows are relevant (Sormaz, 2020). Due to their popularity among visitors, certain areas or spots inside destinations are more visited than others, which consequently leads to surpassing the carrying capacity (Ruoss & Sormaz, 2022a) and impacting cultural, social, environmental, and economic components of a heritage destination. This creates a disbalance in flows of visitors and pressures to the above-mentioned components.

Factors that contribute to the increase in the number of visitors and to the complexity of their flows are (Sormaz, 2020):

- historical facts (i.e. some areas have longer tourism history than others),
- availability of tourism infrastructure (e.g. accommodation facilities, attractions),
- spatial position of hotspots (i.e. concentration or distribution of main points of interest in geographical space),
- quality and authenticity of experiences,
- access (e.g. availability of transportation services and paths),
- seasonality,
- communication (e.g. through social media),
- presentation and interpretation of heritage values both tangible and intangible (Van Loggerenberg et al., 2015),
- destination attributes, image and attractiveness,
- cultural, demographic, and psychographic characteristics of visitors,
- perceived value and satisfaction (Chui Teo et al., 2014), etc.

New Opportunities for Tourism Management

Tourism statistics merely rely on accessible aggregate data such as arrival and overnight while relevant space- and time-related data on how visitors move spatially and what they do are missing (Beritelli et al., 2020). Big data data-sources are disparate, and encompass the internet and webpages (internet searches, social network activities, reviews), mobile phone data, bank card transactions, city-sensors (cameras, weather and air conditions) as well as user-generated content from reviewers, bloggers (Li et al., 2018) and other types of social media users. Collecting and analysing these kinds of big data offers new opportunities in tourism research, which provides contextual information (e.g. about traffic, weather) but also spatial and temporal data that is able to describe the behaviour and mobility of visitors (Bertocchi et al., 2021).

Content analysis is an explorative and systematic way to analyse images and data and is noted as especially appropriate for addressing phenomena in mass media (Rose, 2016). This type of analysis can be both qualitative and quantitative. Quantitative content analysis allows for features of textual and visual material to be systematically categorized and recorded so that it can be analysed. It involves following a set of instructions about what features to look for in a text and then making the designated notation when that feature appears (Coe & Scacco, 2017). The present study focuses on the user-generated contents (UGCs), that is, monitoring of the contributions produced by other users. This type of content is produced and published on social media that allow users to easily create and upload contents such as texts, videos, and photos (Marchiori, 2012).

The discussion on over- and undertourism in relation to social media has increased dramatically in the last decade, which put exposed heritage destinations especially – being more vulnerable – to external human impacts. Therefore, the investigations began with exploring the interactions of media – particularly digital media – and tourism development in UNESCO-designated sites, which coincided with the elaboration of a methodology to analyse visitor flows with social media.

The results led to the conclusion that areas with a special focus on conservation and nature protection are particularly endangered by such fast and intrinsic changes of visitor flows and that social media reflect tourism development as well as the reasons for unbalanced visitor flows (Ruoss & Somaz, 2020a, 2022b; Sormaz & Ruoss, 2020; Sormaz, 2020). The importance of social media has even increased during the COVID-19 pandemic and lockdowns. At that point the research mentioned above was extended to selected World Heritage Sites and Regional Nature Parks in Switzerland in cooperation with World Heritage Experience Switzerland and Forum Landscape, Alps and Parks of the Swiss Academy of Sciences (SCNAT). The aim of the study was to have a clear view of the state of the art of the influence of social media in relation to visitor flows, which will be the basis for assessments of tourism development in the post-COVID-19 period (Ruoss & Sormaz, 2022b, 2022c). The existing methodology was adapted so that more differentiated insights could be collected (Sormaz, 2020).

The study shows the methodology to analyse the content related to tourism destinations and published on social media, which then allows for monitoring, planning and controlling visitor flows and overall destination development in space and time, which is especially important in periods of uncertainty (e.g. COVID-19 and post-COVID-19). The analysis delivers tangible results on potential over- and undertourism spots within large heritage areas and provides a basis for monitoring during and after the COVID-19 pandemic.

Methods

The research method chosen for the study is a quantitative content analysis to find patterns, generalize results to wider populations, and suggest further development of strategies and plans.

Since the volume of data – i.e. number of posts and reviews – on social media is changing constantly, it is important to collect data within a short period to ensure reliability and comparability (Ruoss & Sormaz, 2022a).

Social media platforms considered for the study are Instagram, TripAdvisor, and Airbnb since the content that they contain is shared publicly, and is highly user-generated, travel-related, and experience-driven. Instagram is an open source for visual experience, communicating places one has visited, and collecting travel-related information and inspiration shared by travellers, locals, and tourism organizations. TripAdvisor and Airbnb are commercial providers that offer travel-related information, products and services by private or public businesses (Ruoss & Sormaz, 2022a). These differ from other social media – e.g. Facebook or Twitter – that are used rather as a large information or market place.

Functional differences among the three platforms chosen for the study require different approaches to their examination, as described below (Sormaz, 2020):

- The analysis of Instagram examines the number of posts within the most used hashtag related to an analysed tourist spot or area – particularly, the last 100 posts were examined as the most recent posts made by users of the analysed hashtags. Then the extraction of posts with the multiple-meaning is done by selecting those that do not relate to the analysed spot. The result is applied to the whole population and represents the total number of spot-related posts. For example, some of the hashtags that are monitored for WH Lavaux Wineyard Terraces are #corseaux (place), #terrassesdelavaux (wine terraces, natural and cultural area and attraction), #villalelac (cultural attraction).
- The analysis of TripAdvisor aims at providing insights into the number of reviews related to tourism facilities – e.g. attractions (sights and landmarks, nature and parks, museums) and businesses (restaurants, hotels, vacation rentals) – and generated by visitors, as well as the number of facilities offered by hosts in a heritage destination. The focus is on the number of reviews, which is data to be visually presented on a map. For example, the total number of TripAdvisor re-

views is collected for each of the localities within the site area of WH Lavaux Wineyard Terraces – e.g. Corseaux, Lutry, Grandvaux.

- The Airbnb analysis examines the number of reviews generated by visitors as well as the number of lodging rentals offered by locals and businesses. Also, it aims at providing insights into the relation between the frequency of rentals and reviews per lodging. For example, the total number of Airbnb reviews is collected for each of the localities within the site area of WH Lavaux Wineyard Terraces – e.g. Corseaux, Lutry, Grandvaux.

Prior to the examination of posts on Instagram and reviews on TripAdvisor and Airbnb, lists of key tourist spots need to be compiled for each heritage destination, which is done in collaboration with managing authorities of chosen World Heritage Sites (WHSs), parks, and Biosphere Reserves (BRs).

Data on posts and reviews were collected manually since there is not yet existing software that would be suitable for such analysis.

The visualization of the outcome allows presentation of the distribution of the posts and reviews in a spatial context and consequently, the presence and distribution of visitors in studied heritage areas in a given period in time. For the purpose of visualization, the ArcGIS® geographic information system software developed by Esri is used. It helps to create maps, perform spatial analysis and manage data by transferring data previously collected into the supported file. It uses contextual tools to visualize and analyse data and helps to spot spatial patterns in data for a better decision-making process (Esri, n.d.).

Case Studies: Swiss World Heritage Sites and Regional Nature Parks

In total, 13 Swiss sites have been designated a UNESCO status, becoming WHSs, while the Swiss Parks Network included 18 Parks and two BRs in 2021. The study by Ruoss and Sormaz (2022b, 2022c) focuses on seven WHSs, 13 Regional Nature Parks, and two BRs that cover a territory relevant for tourism development and conservation and are examined along timeframes presented in Table 1. For the present paper, ten Swiss WHSs, Regional Nature Parks, and BRs have been selected to present and discuss the role of social media in visitor flow management.

For the analysis of WHSs (with an exception of the Castles of Bellinzona), perimeters as well as entire WH regions including the municipalities are considered. The tourist spots within perimeters are often photographed from the outside or mentioned in the hashtag without visiting. By including the surrounding touristic areas, insights into the potential impact of visitors on the perimeter is also collected. In the case of WH regions of Monte San Giorgio and Swiss Tectonic Arena Sardona, the spots inside and outside WH perimeters were recorded separately.

Selected World Heritage Sites

Rhaetian Railway in the Albula/Bernina Landscapes (RhB). Situated in the Canton of Graubünden (eastern Switzerland) and in the Province of Sondrio (northern Italy), the railway line – the Rhaetian Railway – runs from Thusis through the Albula and Bernina landscapes to Tirano with a total length of around 130 km. It was given cultural UNESCO World Heritage status in 2008 as an impressive example of engineering achievements intertwined with history, culture and nature, and a harmonious relationship between human action and a natural Alpine environment of great beauty and human development.

It encompasses 19 Swiss and one Italian municipality. The Albula and Bernina railway lines with its structures, installations and systems are defined as the core zone of the WHS while the buffer zone is comprised of the surrounding landscape.

Tourism started to develop within the area of Engadin in the early 19th century and was 'limited to the summer months until 1864, when St. Moritz invited some regular summer guests for a winter stay' (World Tourism Organization, 2018). The construction of the railway provided a better access and interconnectedness among the Alpine localities and greater development of the mountain area (International Council on Monuments and Sites, 2008; Sormaz, 2020).

Swiss Tectonic Arena Sardona. In July 2008, UNESCO listed the Swiss Tectonic Arena Sardona as a natural

Table 1 List of studied Swiss UNESCO WHSs, Regional Nature Parks, and BRs

UNESCO WHSs	Benedictine Convent of St. John at Müstair	8.–10.6.2021
	Three Castles, Defensive Wall and Ramparts of the Market Town of Bellinzona	8.–11.5.2021
	Swiss Alps Jungfrau-Aletsch	19.3.–4.4.2019
	Monte San Giorgio*	15.–20.4.2021
	Lavaux Vineyard Terraces*	16.–18.7.2021
	Rhaetian Railway in the Albula/Bernina Landscapes*	23.–30.1.2020
	Swiss Tectonic Arena Sardona*	23.–30.9.2021
Swiss Parks	Naturpark Beverin	3.–8.6.2021
	Landschaftspark Binntal	8.–11.8.2021
	Park régional Chasseral	10.–13.9.2021
	Naturpark Diemtigtal	15.–17.7.2021
	Parc du Doubs*	5.–11.10.2021
	Parc Ela	12.–20.6.2021
	Naturpark Gantrisch	11.–18.8.2021
	Parc naturel régional Gruyère Pays-d'Enhaut*	28.9.–3.10.2021
	Jurapark Aargau*	23.9.2021–15.1.2022
	Parc Jura vaudois	22.–25.10.2021
	Naturpark Pfyn-Finges*	25.–30.6.2021
	Swiss National Park	30.9.2021
	Parco Val Calanca	8.–11.5.2021
Biosphere Reserves	UNESCO Biosphäre Entlebuch*	3.–9.9.2021
	UNESCO Biosfera Engiadina Val Müstair*	8.–10.6.2021

Notes * Areas emphasized in this paper.

WHS for its 'worldwide unique visibility of mountain building, the exemplary scientific history and the ongoing importance for geological research' (UNESCO Sardona, n.d.).

Thirteen municipalities of the cantons Glarus, St. Gallen, and Grisons share the area of the almost uninhabited WH perimeter. At the periphery of the property, popular touristic destinations such as Heidiland, Elm Sernftal, and Flims – Laax – Falera are part of the WH region, encompassing popular winter resorts such as Elm, Pizol – Bad Ragaz, Flims, and Laax (International Union for Conservation of Nature, 2008).

Lavaux Vineyard Terraces. The WHS Lavaux Vineyard Terraces was listed as a cultural landscape in 2007, covering the territory of ten municipalities, demonstrating evolution and development over almost a millennium, and a continuation and evolution of longstanding cultural traditions specific to its locality (Region du Leman, n.d.).

The core zone is home to nearly 180 families that still grow its native grape variety, the 'Chasselas,' make some of the best wines in Switzerland, and conserve 450 km of heritage walls and more than 10,000 terraces. The buffer zone surrounds and protects the core zone and is home to vineyards, woodlands and pastures.

Numerous initiatives aim to increase sustainable tourism related to local products within the perimeter of the WHS. The Winegrowers' Festival in Vevey – inscribed on the Representative List of the Intangible Cultural Heritage of Humanity in 2016 – has addition-

Table 2 Selected Swiss Regional Nature Parks

Park	(1)	(2)	(3)	(4)	(5)
Engiadina Val Müstair | Nationalpark	1914	170	1,380–3,174	0	4
Engiadina Val Müstair | BR Engiadina	2017	88	1,500–3,166	*	1
Engiadina Val Müstair | Regionaler Naturpark BR Val Müstair	2011	199	1,246–3,180	1,400	1
UNESCO Biosphäre Entlebuch	2001/2008**	394	600–2,348	17,600	7
Parc naturel régional Gruyère Pays d'Enhaut	2012	632	375–2,042	18,300	17
Naturpark Pfyn-Finges	2012	277	533–3,697	11,300	12
Jurapark Aargau	2012	299	320–866	55,200	32
Parc du Doubs	2013	294	435–982	14,300	15

Notes * No permanent. ** BR since 2001 Park since 2008. Column headings are as follows: (1) since, (2) surface (km²), (3) altitude (m.a.s.l.), (4) population, (5) municipalities.

ally been an important step to give even more visibility to the protected vineyard landscape (International Council on Monuments and Sites, 2007; Lavaux UNESCO, n.d.; UNESCO, n.d.).

Monte San Giorgio. The pyramid-shaped mountain of Monte San Giorgio is surrounded by Lake Lugano in Canton Ticino (Switzerland) and in the Province of Varese (Italy). The mountain is the single best-known fossil deposit of marine life in the world from the middle Triassic period – a geological period which took place between 247 and 237 millions of years ago.

The mountain is almost completely wooded and thus difficult to access. The core zone is protected, without significant tourism or other anthropogenic impact. Around Monte San Giorgio, important settlements are Riva San Vitale with the oldest Swiss baptistery, the centre of the Mendrisiotto destination – Mendrisio – with its Holy Week Procession inscribed in the Representative List of the Intangible Cultural Heritage of Humanity, and also, Arsizio-Brusino, Porto Ceresio and Besano with its Museum of Fossils from Monte San Giorgio. Across the lake are the historic centre of Morcote and other touristic areas (International Council on Monuments and Sites, 2010; Monte San Giorgio, n.d.; UNESCO, n.d.).

Selected Swiss Regional Nature Parks

Swiss National Park Biosphere Reserve Engiadina Val Müstair. The Swiss National Park forms, together with Val Müstair and parts of the municipality of Scuol, the UNESCO Biosphere Reserve Engiadina Val Müstair. The Swiss National Park received the BR label in 1979, and Val Müstair was added in 2010 and extended in 2017. Scuol and Val Müstair encompass the buffer and transition zones, while the Swiss National Park forms the core zone.

The Monastery St. John in Müstair is listed as a WHS and therefore analysed separately. The Regional Nature Park Biosphere Reserve Val Müstair is located mainly within the buffer zone and thus inhabited, with agriculture and tourism as the main economic activities. The Swiss National Park and the Engiadina (Scuol) part of the Biosphere Reserve are not, or not permanently, inhabited. The major tourism destinations Scuol and Zernez are situated at the border of the perimeter, and St. Maria and the winter resort Minschuns Tschierv in the Val Müstair (Nationalpark, n.d.).

UNESCO Biosphere Reserve Entlebuch. The Entlebuch Biosphere Reserve is a pre-alpine moorland landscape where the core and buffer zones are composed predominantly of peat bogs and wetlands of national importance and cover around 50% of the whole territory. With sustainable use of local resources and a sustainable tourism strategy, managing authorities aim at balancing the number of visitors within the perimeter. Nevertheless, the main summer and winter destination is Sörenberg/Brienzer Rothorn, where the striking karst landscape is a major attraction for visitors (UNESCO Biosphäre Entlebuch, n.d.).

Jurapark Aargau. Jurapark Aargau, a recreational area close to Basel and Zurich, situated in the cantons of Aargau and Solothurn, is a hilly landscape of the folded Jura and the tabular Jura between Aarau, Brugg, Laufenburg and Rheinfelden. The Jurapark is dominated by agriculture. The residents are predominantly commuting to the adjacent urban areas. Tourism services and infrastructure are less common due to the dominating day tourism (Jurapark Aargau, n.d.).

Naturpark Pfyn-Finges. The Naturpark Pfyn-Finges in Valais is characterized by rocky steppes and biotopes, idyllic mountain villages, and charming small towns, hillside vineyards and one of the largest Scotch pine forests in the Alps. The major tourist place within the park is Leukerbad. The municipality of Crans-Montana, a popular tourism destination and ski resort, shares the territory with the park (*Pfyn-Finges,* n.d.).

Gruyère Pays-d'Enhaut Regional Nature Park. In the Gruyère Pays-d'Enhaut Regional Nature Park situated in the cantons of Friburg, Vaud, and Bern, nature and culture form a combination of centuries-old culture, lush mountain meadows with wood shingle alpine huts, historical villages and old bridges over the river Saane, and the nature reserves Pierreuse and Vanil Noir that are part of a pre-Alpine landscape. Small tourism destinations – Chateau-d'Oex or Gruyère – and day-tourism spots are distributed all over the territory with well-known destinations such as Saanen/Gstaad, Les Diablerets, Aigle, and Bulle. Towards Lake Geneva, the park perimeter reaches Montreux and Vevey, with its intangible cultural heritage Winegrowers' Festival, and edges to the WHS Lavaux Vineyard Terasses (Gruyère Pays-d'Enhaut Regional Nature Park, n.d.).

Parc du Doubs. Parc du Doubs, characterized by extensive pastured woodlands and forests, is the typical regional cultural landscape situated in the cantons of Jura, Neuchatel, and Bern. The landscape has been formed over the centuries through cattle farming and horse breeding. Le Locle and La Chaux-de-Fonds are major centres of watch production and situated at the border of the park. They form the core of the WHS La Chaux-de-Fonds/Le Locle, Watchmaking Town Planning and are therefore attractive to visitors (International Council on Monuments and Sites, 2009; *Parc du Doubs,* n.d.; Swiss Parks, n.d.).

Results

The results – especially those of the analysis of Instagram – support the statement made in previous studies by Sormaz and Ruoss (2020) that social media can be used as a tool to assess, analyse, manage, and monitor visitor flows in heritage destinations.

The results show that posts generated from tourism organizations and managing authorities, whose overall commitment is to communicate importance, distinctiveness, and values of a heritage destination, have been modest when it comes to social media (Ruoss & Sormaz, 2022a, 2022b).

World Heritage Sites

The results of the WHSS analysis are visualized comparatively in Figure 1. The dataset includes in total 679 hashtags with over 3,278,402 posts on Instagram, 982 listings (254 attractions and 728 businesses) with 141,401 reviews on TripAdvisor, and 3,446 lodging rentals with 80,392 reviews on Airbnb (Table 3).

In addition to heritage properties, the whole WH regions, including the involved municipalities, are considered in the analysis. This gives not only a broader picture of parts of a site that are more or less visited but also shows potential for tourism clusters that can support sustainable tourism development and better-balanced visitor flows in studied heritage destinations. The results show where anthropogenic impact and possible pressure from the developed surroundings is higher or lower.

On Instagram, the WHS with the highest presence (i.e. highest number of posts) is the SAJA (1,208,616 posts; Table 3). The posts related to the area of the SAJA make around 1/3 of all generated posts for the analysed WHSS. The presence of the SAJA on Instagram is almost two times higher than that of the Rhaetian Railway in the Albula/Bernina Landscapes (668,847 posts). Around 68% of the total number of

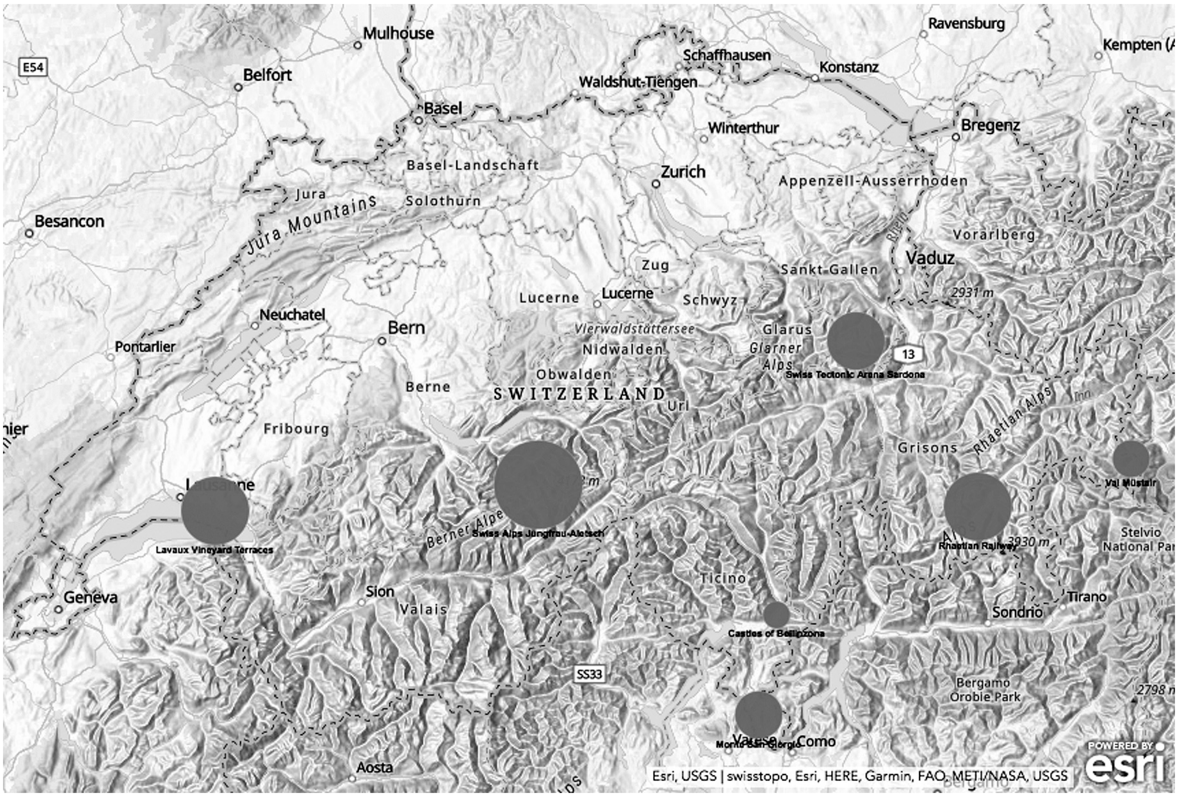

Figure 1 Presence of Analysed WHSs on Instagram

Table 3 Presence of WHSs on Instagram, TripAdvisor, and Airbnb

World Heritage Site	Instagram		TripAdvisor			Airbnb		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Lavaux Vineyard Terraces	79	628,564	64	167	25,980	240	4,433	18
Swiss Alps Jungfrau-Aletsch	148	1,208,616	*	*	20,662	1,682	54,102	32
Monte San Giorgio	91	237,553	108	176	11,822	166	2,640	16
Castles of Bellinzona	3	10,226	3	*	807	*	*	*
RhB in the Albula/Bernina Landscapes	93	668,847	*	*	63,354	688	7,407	11
Swiss Tectonic Arena Sardona	253	521,227	78	377	18,413	650	11,635	18
Benedictine Convent of St. John at Müstair**	12	3,369	1	8	363	20	175	9
Total	679	3,278,402	254	728	141,401	3,446	80,392	17

Notes * Data are not available. ** Data taken from the analysis of Müstair since visitors to the Convent visit other attractions and businesses in Müstair. Column headings are as follows: (1) analysed hashtags, (2) posts, (3) attraction, (4) business, (5) reviews, (6) lodging rentals, (7) reviews, (8) reviews per lodging.

posts related to the SAJA, relate to the North of the region (i.e. Jungfrau, Lauterbrunnen and Grindelwald).

On TripAdvisor, the Rhaetian Railway has the highest presence on TripAdvisor with 63,354 reviews, 42% of which relate to the area of St. Moritz. The second WHS with the highest presence is Lavaux Vine-

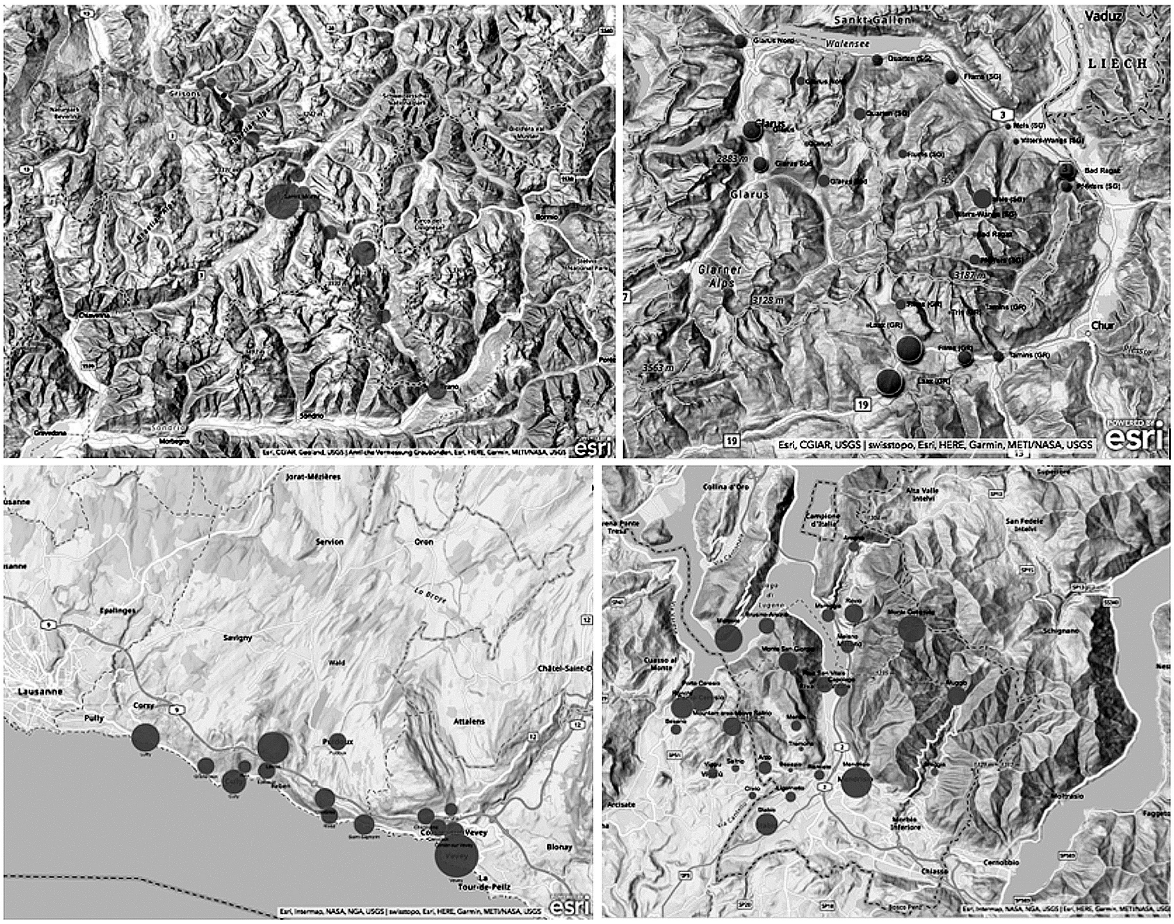

Figure 2 Presence of Localities of WHSS Rhaetian Railway, Swiss Tectonic Arena Sardona, Lavaux Vineyard Terraces, and Monte San Giorgio on Instagram

yard Terraces (25,980). On the other hand, the Swiss Tectonic Arena Sardona contains the highest number of listings on TripAdvisor (377 business- and 78 attraction-related) and is among the four most reviewed WHSS considered in the study.

On Airbnb, the SAJA has the highest presence with 54,102 reviews for 1,682 lodging rentals, followed by the Swiss Tectonic Arena Sardona with 11,635 reviews. The SAJA also contains the highest number of reviews per lodging. Reviews per lodging show the frequency of rentals.

Cultural landscape WHSS (e.g. Lavaux Vineyard Terraces, Monte San Giorgio) are inhabited and characterized by a specific land use and thus tourism spots are distributed all over the perimeter.

The area within the Rhaetian Railway with the highest presence across the three analysed social media platforms is the Upper Engadin – in particular, St. Moritz (Figure 2). It is followed by the Bernina area on Instagram and Pontresina and Tirano across all three platforms. The least present are Thusis, Alvaschein and Stuls located in the northern part of the heritage site. Visitors experience the cultural heritage mainly while on the train, which therefore increases the presence of certain spots along the railway on social media and potentially provides unrealistic insight into the distribution of visitors across the area.

Laax and Flims, localities and popular tourism resorts, are the most present localities of the Swiss Tectonic Arena Sardona on Instagram with more than

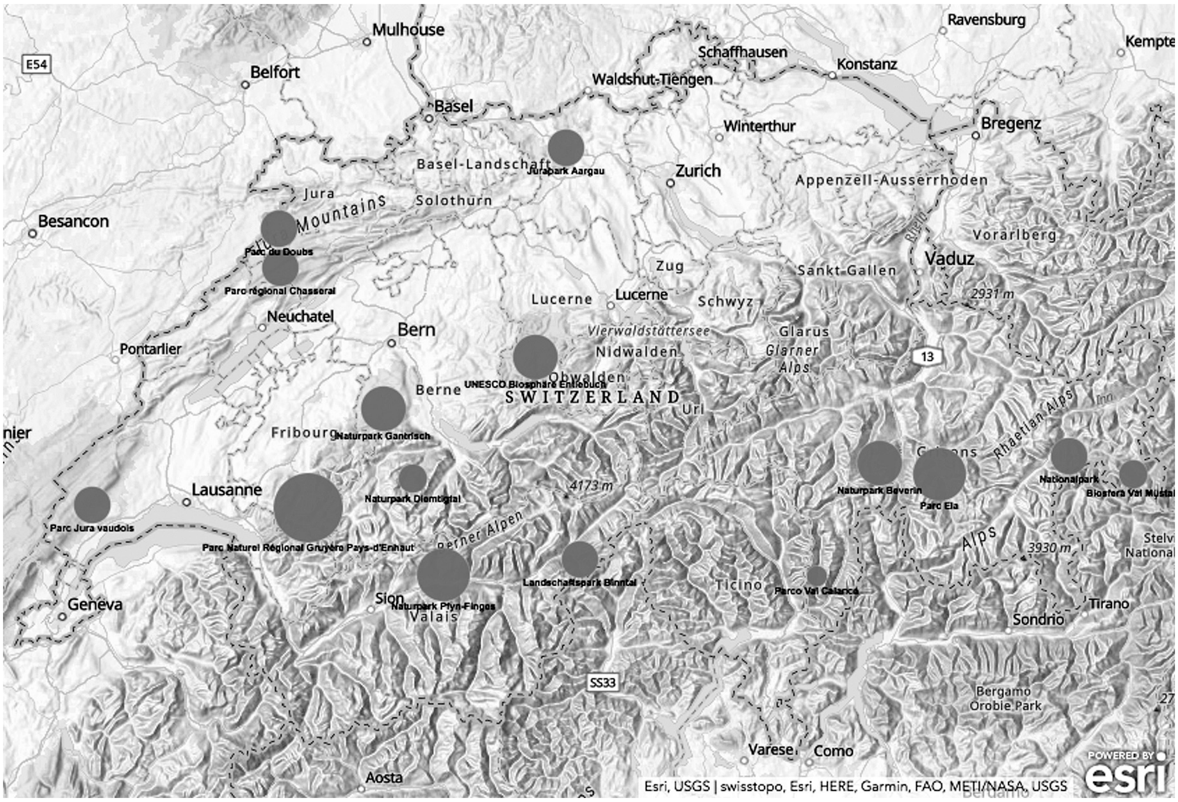

Figure 3 Presence of Analysed Parks on Instagram

twice as many posts as Glarus and Mels. The core area of the WHS is significantly less present on the three social media platforms – e.g. Pfäfers, Tamins, and Vilters-Wangs.

The municipality of Vevey along the shore of Lake Geneva is at the triangle of three designations and has approximately 2.5 times more posts than the hashtag of the Lavaux region on Instagram. Vevey is the most popular tourism destination in the region and therefore results in the highest presence of all municipalities within the WH Lavaux Vineyard Terraces. The least present are Riex, Jongny, and Villette.

The results of the analysis of Monte San Giorgio include its core and buffer zones and the surrounding area of Mendrisiotto – Monte Generoso and Morcote. The most present locality is Mendrisio (a tourism destination and commercial centre), followed by Morcote (a historic centre of national importance), while the least present are Tremona and Bresazio.

Swiss Regional Nature Parks and Biosphere Reserves

The results of the parks and BRS are visualized comparatively in Figure 3. The dataset includes in total 1,833 hashtags with 2,446,798 posts on Instagram, 2,108 listings (366 attractions and 1,742 businesses) with 127,985 reviews on TripAdvisor, and 3,100 lodging rentals with 55,087 reviews on Airbnb (Table 4).

Despite the fact that the number of analysed park-related hashtags is more than double that of the WHSS, the analysis shows that WHSS have a higher presence across the three social media platforms (i.e. up to 1.3 times higher).

For the interpretation of the results, it is important to distinguish whether a park is primarily oriented towards tourism (e.g. Parc Naturel Régional Gruyère Pays-d'Enhaut and Naturpark Pfyn-Finges) or whether it is an agricultural region and local recreation area visited by day tourists (e.g. Jurapark Aargau). Parc Naturel Régional Gruyère Pays-d'Enhaut,

Table 4 Presence of the Parks and Biosphere Reserves on Instagram, TripAdvisor, and Airbnb

Park	Instagram		TripAdvisor			Airbnb		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Naturpark Beverin	130	101,638	16	67	2,341	64	2,194	34
Landschaftspark Binntal	74	52,329	7	29	991	83	1,012	12
Parc régional Chasseral	79	93,174	32	101	3,908	62	2,064	33
Naturpark Diemtigtal	41	33,117	9	25	1,005	75	2,431	32
Parc du Doubs	108	80,987	73	205	9,211	143	2,719	19
Parc Ela	208	282,189	31	199	10,815	476	4,712	10
UNESCO Biosphäre Entlebuch	269	112,894	3	47	875	53	1,662	31
Naturpark Gantrisch	136	144,279	21	77	1,777	73	3,227	44
Parc naturel régional Gruyère Pays-d'Enhaut	120	922,161	13	356	58,141	869	14,880	17
Jurapark Aargau	52	65,662	19	80	987	60	1,180	20
Parc Jura vaudois	79	79,775	33	128	5,687	99	2,735	28
Naturpark Pfyn-Finges	254	367,643	66	277	24,920	647	8,940	14
Nationalpark	107	62,064	22	97	5,776	313	5,769	18
Parco Val Calanca	71	9,389	11	23	493	28	467	17
Biosfera Val Müstair	105	39,497	10	31	1,058	55	1,095	20
Total	1,833	2,446,798	366	1,742	127,985	3,100	55,087	18

Notes Column headings are as follows: (1) analysed hashtags, (2) posts, (3) attraction, (4) business, (5) reviews, (6) lodging rentals, (7) reviews, (8) reviews per lodging.

Pfyn-Finges Nature Park and Parc Ela are the most present parks on the three platforms compared to other analysed parks (Table 4). Pays-d'Enhaut has over two times more Instagram posts (922,161) than Pfyn-Finges (367,643). Other parks count fewer than 150,000 posts for each.

Val Calanca, Diemtigtal, Val Müstair and Binntal have the lowest presence on Instagram and TripAdvisor, while the Jurapark Aargau has the lowest presence only on TripAdvisor. Pays-d'Enhaut counts the highest number of reviews (14,880) and lodging rentals (869) on Airbnb. At the same time, it is one of the parks with the lowest number of reviews per lodging (17). Diemtigtal – with two municipalities – has a low presence on the three platforms compared to other parks.

Compared to Val Müstair, Entlebuch has more than a twice-higher presence on Instagram (Table 4). Also, it has a higher number of listings but lower number of reviews on TripAdvisor. Flühli-Sörenberg (tourism destination) and Entlebuch (name of the locality, municipality, and region) are the localities of the BR Entlebuch that are the most present on Instagram while Hasle and Doppleschwand are the least present (Figure 4). The localities of Biosphere Val Müstair that are the most present on Instagram are Tschierv and Santa Maria Val Müstair while the least present are Valchava, Fuldera, and Lü.

The results of the Pays d'Enhaut analysis show that Montreux, a famous festival and tourism destination at Lake Geneva, is the most present locality on Instagram with over ten times more posts compared to Veytaux. Localities such as Châtel-sur-Montsalvens, Crésuz, Bas-Intyamon, and Rougemont are among the least present on the three platforms (Figure 5). The tourism resort and municipality Mollens/Crans Montana is the most present of all municipalities of Naturpark Pfyn-Finges on Instagram with more than twice as many posts as the destination Leukerbad and the urban area outside the park of Sierre. The mountainside and areas under higher protection (e.g. Varen, Guttet-

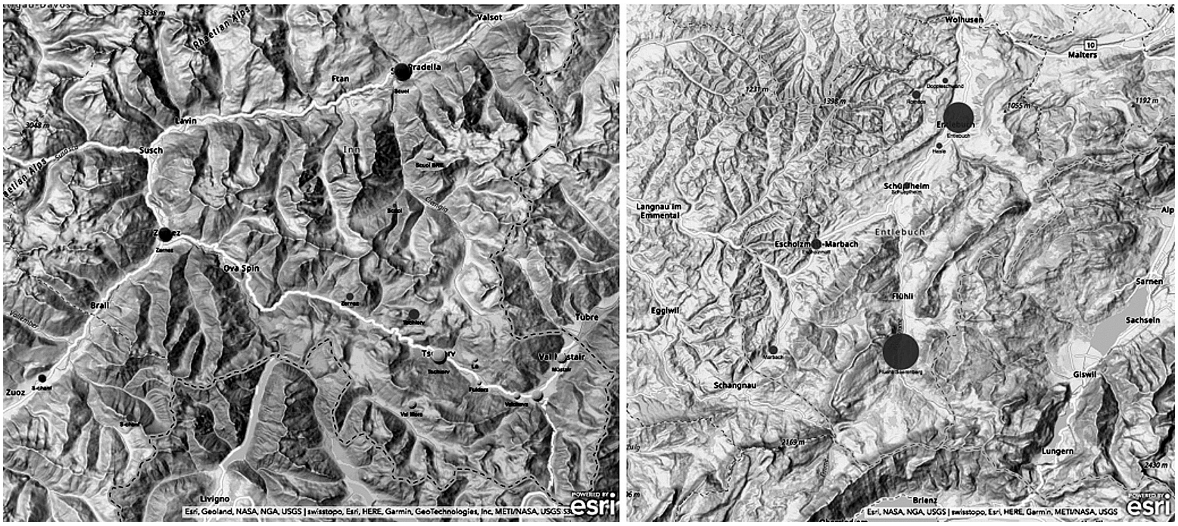

Figure 4 Presence of Localities within the Area of Biosphere Reserves – National Park Biosphere Reserve Engiadina Val Müstair (Left) and Entlebuch (right) on Instagram

Feschel, and Unterems) are significantly less present on the three platforms since they are less visited compared to other areas within the heritage destination.

As for the municipalities of Parc du Doubs, the municipalities of the WHS 'Watchmaking Town' have the highest social media presence – Le Locle with almost twice as many Instagram posts as La Chaux-de-Fonds. La Chaux-de-Fonds generates the highest number of TripAdvisor reviews mainly related to business. On the other hand, La Chaux-des-Breuleux and La Ferrière are little- or not present on Airbnb.

Municipalities within the Jurapark Aargau with the highest presence are Laufenburg and Schinznach, the most popular tourism places in the region, while the least present are the predominantly agricultural municipalities – Oberhof and Ueken. Tourist spots within the area of Jurapark Aargau attract day visitors and therefore the park's presence on the three platforms is homogeneous.

Discussion

The study shows that the three social media platforms are suitable monitoring and management tools for tourism development in heritage destinations such as WHSS and parks. Even though social media – in heritage and other tourism destinations – have been mainly focused on tourism marketing and communication activities, their role as a managing instrument has been largely underestimated. Due to the peculiarities of heritage destinations, their strategies and plans regarding social media need to consider the local evidence.

Differences of the results among WHSS and parks are manifold. Possible reasons are related to:

- tourism history (i.e. some areas have longer tourism history than others),
- access and seasonality,
- vicinity of larger places and urban areas,
- attractiveness of natural and cultural assets and heritage clusters,
- marketing and communication activities of tourism organizations and other tourism stakeholders,
- media presence (especially new media – e.g. social media),
- demographic, psychographic and behavioural characteristics of visitors, etc.

The results provide the WHSS and Swiss Regional Nature Parks insight into the distribution of visitors within a larger heritage area by identifying patterns in flows of visitors. This helps managing authorities to create strategies and plans to monitor and manage vis-

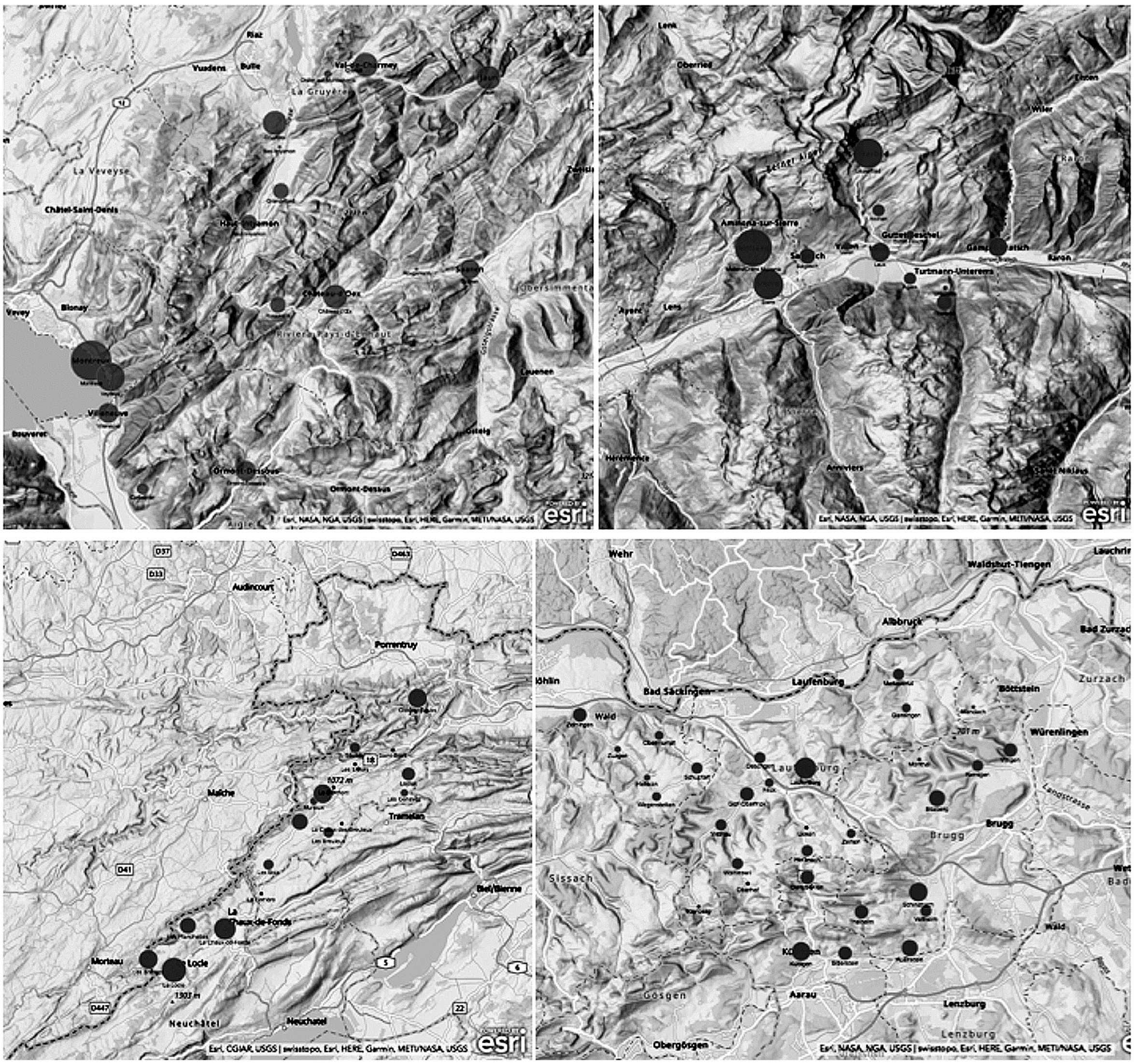

Figure 5 Presence of Localities within the Areas of Pays d'Enhaut, Pfyn-Finges, Parc du Doubs, and Jurapark Aargau

itor flows (e.g. to create a narrative of a heritage destination that will lead visitors to a less visited area), and achieve a better-balanced share of benefits as well as a more effective use of local resources.

The example of the Swiss National Park emphasizes that the differences of the social media presence are more significant outside than inside the perimeter. Possible reasons for the low presence of the Swiss National Park in comparison to other parks is that it offers alternative spots (e.g. wildlife observation points), as well as spots within the perimeter that are difficult to access – e.g. only by walking (apart from the Pass dal Fuorn) – or the visitor segment is not particularly active on social media platforms considered in the study.

Therefore, the use of social media for visitor flow management within the perimeter is less suitable in such cases. These observations correspond to natural WHSS with little inhabited perimeter areas (e.g. SAJA, Swiss Tectonic Arena Sardona). However, as soon as the surrounding areas or regions (e.g. in the buffer zone) are included in the study, the observations differ significantly. Since the perimeters of the natural WHSS are largely uninhabited, views from the outside (e.g. to Aletsch Glacier in case of the SAJA, Martinsloch in the case of the Tectonic Arena, or Monte San Giorgio) dominate.

An example of a natural WHS where significant differences between social media presence in the northern and the southern part are observed and therefore highlight a disbalance in flows of visitors, is SAJA (Sormaz & Ruoss, 2020; Sormaz, 2020). The area with the highest presence is Jungfrau in the northern part while the least present is Raron-Niedergesteln in the southern part of the WH region. The northern area, especially the area of Jungfrau, is historically well-known for its tourism offerings. It is somewhat inhabited and is home to the High Alpine observatory – Jungfraujoch. Due to the easy access, international visitors are more present in the North compared to the other parts of the WH region. In the southern part, the presence of the spots overlooking the Aletsch Glacier and those around Bettmeralp overshadow other spots.

In contrast, cultural WHSs (the Castles of Bellinzona, RhB or Benedictine Convent at Müstair) are tourist spots themselves, which may have an impact on their social media presence. The visitors as well as the local population use the cultural heritage during their visit (core zone) or living in the area (mainly in the buffer zone). They are equally ambassadors and communicators of their activities, experiences, and perceptions towards heritage through social media. These can be insights into the outside or inside views of heritage (e.g. museum, interior of a castle, wine cellar, train, landscape).

As for the WH Three Castles, Defensive Wall and Ramparts of the Market-Town of Bellinzona, only the three castles were analysed in order to collect reference values for observation of the tourism development and visitor flows. Castelgrande is the most present on Instagram and TripAdvisor. However, the two upper castles, Montebello and Sasso Corbaro, are located outside the city centre and are more difficult to access, are less communicated and less present on social media compared to Castelgrande (Sasso Corbaro is not listed on TripAdvisor; Table 3; Ruoss & Sormaz, 2022b).

The Benedictine Convent of St. John at Müstair is a small WHS with one analysed hashtag on Instagram. However, visitors to the Convent visit other spots in Müstair and for the purpose of the analysis, the Convent is included in the Biosphere Reserve Engiadina Val Müstair (Table 3; Ruoss & Sormaz, 2022b).

In the WHS Lavaux Vineyard Terraces and Monte San Giorgio, the high number of posts is also due to the intangible cultural heritage – the Winegrowers' Festival in Vevey and, respectively, Holy Week Processions in Mendrisio.

The results thus show that social media support taking preventive measures on potential negative impacts on the Outstanding Universal Value of the WH properties from outside the perimeter. The overlapping of tangible and intangible heritage can significantly improve the presence on social media. Social media are also a suitable monitoring tool for tourism development in parks.

Similarities among studied heritage destinations allow for a comparison, while the differences (e.g. type of heritage site, its tourism, offerings, and visitors' segment) outline the particularity of transfering the methods to various contexts and opportunities to study other heritage areas.

Tourism Management and Monitoring Opportunities with Social Media

As previously stated in the study, social media can be used as a tool for strategic management and monitoring in all studied WHSs and parks. Management strategies and action plans must consider the differences and specificities of the individual heritage destination.

Less inhabited perimeters of the WHSs have consequently few posts from the local population, but are particularly noticed by visitors and communicated through social media. Since the perimeters are frequently photographed from outside, social media can provide insights on tourism trends, patterns, and potential impacts from the outside. In the tourist areas surrounding the protected areas, the role of social media can be to balance over- and undertourism or to promote less-known areas. The imbalance, with high differences in the visitors' distribution, is most obvious in the SAJA WHS where a high potential for over- and undertourism can be observed. In cultural landscapes or WHSS that are attractive to tourists (e.g. Lavaux Vineyard Terraces), social media are particularly suitable as interactive visitor management tools.

Lavaux Vineyard Terraces and the Rhaetian Railway in the Albula/Bernina Landscapes are cultural WHSS founded on territorial land use. Interactions of the local population with the heritage is an essential part of their life. The results of the analysis of these sites are comparable to the results of the parks and their visitor flow management with social media can be applied to the whole perimeter.

Little-inhabited parks are of major interest to visitors communicating, taking pictures and sharing them on social media. Because of the low social media presence, visitor flow management with social media is less suitable in these parks. However, social media can provide information about tourism trends and can therefore be important as a management tool.

The study strengthens the statement made in the previous studies (Sormaz & Ruoss, 2020; Ruoss & Sormaz 2022a) that social media are a tool for the whole tourism management cycle. In other words, for a successful visitor flow management, it is crucial to have integrated communication and management strategies that will use social media as an intermediator. Through social media, the meaning and values of heritage destinations and tourist areas and spots within them will be communicated, while the same means – i.e. social media – will also serve to direct flows of visitors and adapt them to local circumstances.

By sharing their experiences, the visitors become multipliers or marketers of heritage destinations and reviewers of the quality of the services within them. Further, social media are an added value for all WHSS and parks as a tool for interacting, information-exchange, and communication inside the locals-visitors-tourism stakeholders' chain, as well as in participatory decision-making processes.

Conclusions and the Way Forward

Social media analysis of large protected areas opens the field for other applications mainly with regard to adopting new site governance and management systems and visitor flow concepts. The social media data provide sites and parks management with meaningful insights into mobility and distribution of visitors and support application of more specific action planning with social media in heritage destinations and their use for visitor management.

This study presents the current situation (zero monitoring). Further analysis (e.g. every 2–3 years) supports observing, planning, and controlling the development of tourism. Social media analysis also serves as a permanent monitoring tool. The so-called Social Media Action Planning (SMAP) (Sormaz, 2020) helps to observe and monitor development in a tourist destination and to understand the distribution of visitors. Between evaluation and monitoring, the SMAP comprises eight stages (Figure 6). Its strategies and planning combine online and offline solutions, and enable success to be monitored during the observation period. The implementation of a SMAP allows for balanced visitor flows as well as other components of the tourism management cycle, two-way communication between local people and businesses and visitors, and a well-informed decision-making process.

The added value of social media data was summarized by Sormaz (2020). Methodology used to analyse social media supports managing authorities of natural and cultural heritage destinations in:

- understanding distribution of visitors within an area and distinguishing between overcrowded and less-visited areas or spots,
- understanding management and marketing activities in the area,
- analysing, controlling and directing visitor flows,
- understanding the processes of impact and change (e.g. retreating glaciers, decay and rebuilding of ruins, changes in the quality of hospitality services), since the user-generated content is witness to a development.

According to these, social media strategies and action plans are established which then support:

- enabling interactions and deepening relationships between the local population, visitors, management and other stakeholders,
- communicating values of a heritage destination,
- communicating alternative spots in periods of high pressure of visitors,

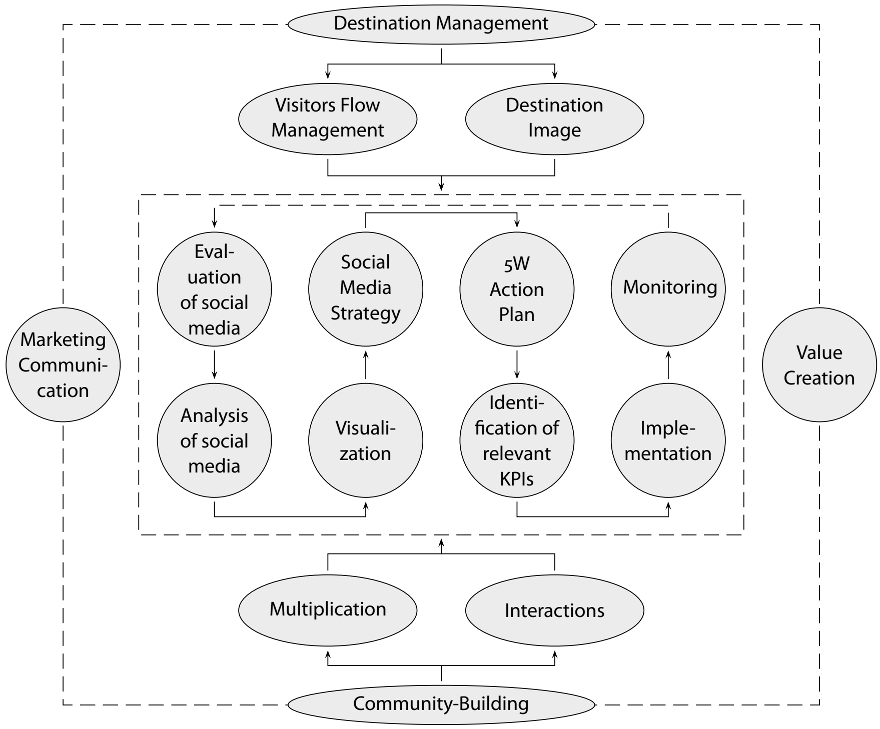

Figure 6
Social Media as Management Tool in Heritage Destinations and the Social Media Action Planning (SMAP)

- raising awareness and respect for heritage values and local communities,
- accompanying visitors in all phases of their journey.

Social media supports communication, sensitization and mediation as well as the active participation of actors in a heritage destination. With the SMAP, new opportunities for strategic orientation in tourism management as well as communication – which is one of the strategic goals of managing authorities – are opened. The strategic orientation is also necessary for the future use of other information and communication technologies in destination development and the concept of *heritage stewardship destinations.* For these reasons, there is a need for heritage destinations to anchor social media in the communication strategy and define a binding SMAP.

Further studies on visitors' perception would help in understanding the elements of travel experience and destination itself that drive the motivation and visit decisions. These can be evaluated through a qualitative content analysis. Data collected will enrich the existing dataset of the quantitative analysis and support better-informed decision-making processes.

Acknowledgments

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Predlog za kategorizacijo elementov kulturne trajnosti za upravljanje območij svetovne kulturne dediščine

Rafael Almeida de Oliveira, Silvia De Ascaniis, Renata Maria Abrantes Baracho, Hebert Canela Salgado in Lorenzo Cantoni

Predlagamo različne interpretacije o tem, kako je kultura povezana s konceptom trajnosti. Kultura je bila skupaj z ekonomsko, okoljsko in s socialno razsežnostjo opisana kot četrta dimenzija trajnosti; velja za posrednika, ki omogoča ravnovesje med ostalimi tremi dimenzijami; velja tudi za temelj pri doseganju ciljev trajnosti. Vendar pa sestavni deli, zaradi katerih je kultura temeljni del trajnostnih posegov, še niso niti jasno definirani niti enakomerno implementirani. V turizmu je treba, ko gre za območja svetovne kulturne dediščine (OSKD), vprašanje kulturne trajnosti obravnavati tako s strani upravljavcev kot s strani obiskovalcev: ali upravljavci OSKD upoštevajo razsežnosti kulturne trajnosti, ko razvijajo trajnostne strategije za svoje območje? Ali na izkušnje obiskovalcev in podobe območja vplivajo elementi, povezani s kulturno trajnostjo? Raziskava želi odgovoriti na ti vprašanji in analizirati oba vidika. V namen razlage razmerja med kulturo in trajnostjo najprej obravnavamo različne interpretacije, da bi identificirali ključne deskriptivne sestavne dele. Nato analiziramo vzorec spletnih ocen potovanj o izkušnjah obiskovalcev OSKD UNESCO, da bi ugotovili, ali so bili ti ključni elementi del zgodb in ocen obiskovalcev. Nazadnje so bili intervjuvani vodje in strokovnjaki OSKD v Švici, da bi ugotovili, ali se strinjajo glede ključnih deskriptivnih elementov, ki smo jih opredelili. Rezultati so omogočili kategorizacijo 24 elementov, povezanih s kulturno trajnostjo, njihovo združitev v pet dimenzij in njihovo končno organizacijo v konceptualni okvir.

Ključne besede: kulturna trajnost, svetovna dediščina, kategorizacija, turisti, upravitelji območij, spletne ocene potovanj
Academica Turistica, 16(1), 9–22

Kulturna dediščina UNESCA v pandemskem obdobju covida-19

Zuzana Kvítková in Zdenka Petrů

Biti na UNESCOVEM seznamu je privilegij ter znak ekskluzivnosti in edinstvenosti. Organizacije destinacijskega managementa (ODM) pogosto izkoriščajo mednarodno prepoznavnost vpisa na UNESCOV seznam. Da je vpisanost na ta seznam prednost, so potrdili že številni raziskovalci, obstajajo pa tudi nasprotni dokazi. Na število obiskovalcev UNESCOVEGA območja vpliva več dejavnikov: struktura obiskovalcev (mednarodnih in domačih), lokacija, vključno z dostopnostjo, sezonskost in njen regionalni pomen. Covid-19 je dramatično vplival na svetovni turizem. Namen pričujoče raziskave je bil odgovoriti na vprašanji, ali je bila v času pandemije covida-19 vpisanost na UNESCOV seznam dediščine prednost in kakšno je bila vloga mednarodnega turizma na UNESCOVIH območjih. Avtorji so uporabili metodo primerjalne analize na podlagi razpoložljivih statističnih podatkov, korelacijske analize in *t*-testov. V prispevku primerjajo spremembe v številu obiskov UNESCOVIH znamenitosti in spremembe v obisku podobnih turističnih znamenitosti v času covida-19. Češka ima na UNESCOV seznam vpisanih 16 enot snovne dediščine, od katerih jih je bilo v analizo vključenih 12. Rezultati kažejo, da je bila vpisanost na UNESCOV seznam v prvem letu pandemije (2020) prej pomanjkljivost kot prednost, vendar pa je v letu 2021 omogočila hitrejšo normalizacijo. Sprememba v številu prihodov mednarodnih turistov je pomembno vplivala na nastanitvene obrate na vseh obravnavanih lokacijah, vendar bolj na tiste v bližini UNESCOVIH znamenitosti. Korelacija med spremembami v številu mednarodnih obiskovalcev in spremembami v številu obiskovalcev UNESCOVIH znamenitosti je visoka, vendar ni statistično značilna.

Ključne besede: turistične atrakcije, vpisanost na UNESCOV seznam, Češka, pandemija covida-19
Academica Turistica, 16(1), 23–34

Tečaji e-učenja za turizem in dediščino med pandemijo: primer »Turističnega upravljanja na UNESCOVIH območjih svetovne dediščine (3)«

Ilaria Rosani, Maria Gravari-Barbas, Silvia De Ascaniis in Lorenzo Cantoni

Turistična dejavnost je močno povezana s tehnološkim napredkom: z njegovo pomočjo lahko gostinska in storitvena podjetja izvajajo svoje procese, vplivajo na prihodnje trende in zahteve obiskovalcev ter ustvarjajo nove izkušnje slednjih. Turistični sektor se mora zaradi svojih lastnosti – visoke fluktuacije zaposlenih, sezonskosti, krhkega ravnovesja mikro, malih in srednje velikih podjetij ter globalnih poslovnih konglomeratov – za svoje preživetje sprotno prilagajati inovacijam na področju digitalnih tehnologij. V izobraževanju in usposabljanju se digitalni mediji ter informacijsko-komunikacijske tehnologije (IKT) v veliki meri uporabljajo v primerih, ko izvedba tradicionalnega učnega procesa v živo ni mogoča ali ne podpira načel trajnosti. Kadar učne dejavnosti potekajo preko spleta s pomočjo digitalnih orodij, govorimo o »e-učenju«, ki se je izkazalo za koristno z vidika zmanjševanja stroškov, časovne in prostorske prilagodljivosti, v primeru turistične industrije pa za kontinuirano obveščanje, izpopolnjevanje in prilagajanje turističnih delavcev trendom v sektorju ter značilnostim potrošnikov. Z izbruhom covida-19 leta 2020 sta uporabnost in prilagodljivost digitalnih tehnologij za izobraževanje ter usposabljanje postali še samoumevnejši. Delo na daljavo je postalo sestavni del življenja in delovnih mest. V številnih primerih se je e-učenje izkazalo za ključni element za preživetje sektorja in v nekaterih primerih tudi za njegov uspeh. V tem prispevku bomo analizirali posebno vrsto e-učenja: t. i. množične odprte spletne tečaje ali »MOOC«. Na primeru tretje serije tečajev MOOC, posvečenih turizmu in dediščini, »Turistično upravljanje na UNESCOVIH območjih svetovne dediščine (3)«, bomo opisali značilnosti udeležencev ter prikazali pomen in pomembnost e-učenja za sektor turizma ter dediščine.

Ključne besede: e-učenje, turizem, dediščina, MOOC, IKT
Academica Turistica, 16(1), 35–47

Podatkovno rudarjenje vzorcev prostorskega gibanja obiskovalcev s pomočjo geooznačnenih fotografij na Flickr: primer razpršene Plečnikove arhitekturne dediščine v Ljubljani

Gorazd Sedmak, Dejan Paliska in Aleksandra Brezovec

Namen pričujoče raziskave je analizirati vzorce in strukturo prostorskega vedenja obiskovalcev Ljubljane s poudarkom na prostorsko razpršenih znamenitostih arhitekturne dediščine Jožeta Plečnika, ki je bila nedavno uvrščena na UNESCOV seznam svetovne dediščine. Smiselna vključitev arhitekturne dediščine v celovito turistično doživetje mesta DMO-je postavlja pred več izzivov – kako ustrezno komunicirati o vlogi in vrednosti izjemnih arhitekturnih enot, kako uravnavati neenakomeren čas obiska in preveliko koncentracijo obiskovalcev na posameznih točkah, kako obiskovalcem omogočiti bogato in celovito turistično izkušnjo ter nenazadnje oblikovati »kumulativne atrakcije«. V primeru Ljubljane predstavlja dodaten izziv prostorska razpršenost elementov izbrane atrakcije. Cilja naše raziskave sta bila: prikazati prostorske interakcije med znamenitostmi UNESCOVE dediščine v Ljubljani in njihovo interakcijo z drugimi turističnimi znamenitostmi ter raziskati vzorce gibanja obiskovalcev Plečnikovih znamenitosti. V ta namen je bila izvedena analiza podatkov iz baze geografsko označenih fotografij, ki so jih obiskovalci naložili na platformo za izmenjavo fotografij Flickr. V ta namen smo izvedli prostorsko grozdenje in analizo vzorcev gibanja. Rezultati kažejo, da so ljubljanske znamenitosti, ki jih je Plečnik zasnoval v starem mestnem jedru, integrirane v širšo mrežo znamenitosti, medtem ko so oddaljenejše znamenitosti manj obiskane in izolirane. Upravičeno lahko domnevamo, da se enodnevni obiskovalci, ki so obiskali eno ali več znamenitosti v starem mestnem jedru, le redko odpravijo dlje in zato UNESCOVEGA območja svetovne dediščine ne doživijo v celoti. Glavni prispevek te raziskave je boljše razumevanje vedenjskih vzorcev obiskovalcev območja razpršenih UNESCOVIH atrakcij, njihove strukture in vloge teh znamenitosti v destinaciji.

Ključne besede: prostorsko gibanje obiskovalcev, Plečnikova arhitekturna dediščina, analiza velikih podaktov, fotografije z geografskimi oznakami, prostorski vedenjski vzorci
Academica Turistica, 16(1), 50–62

Sistemski pristop k območju svetovne dediščine Bahajski vrtovi

Tadeja Jere Jakulin

Bahajska religija je najmlajša religija na svetu, ki jo je leta 1863 ustanovil perzijski modrec Baha'u'llah. Njeni privrženci, vključno z njenim ustanoviteljem, so bili več kot stoletje preganjani, dokler niso našli miru v 21. stoletju, ko sta leta 2008 njeni dve središči v Hajfi v Izraelu postali UNESCOVI območji svetovne dediščine. Cilj raziskave je uporabiti načela sistemskega razmišljanja v praksi, in sicer na primeru ohranjanja Bahajskih vrtov, ki so na seznamu svetovne dediščine. Podatki za model vzročno-posledične zanke v okviru sistemske dinamike (CLD), ki ga predstavljamo v tem prispevku, so bili pridobljeni s terensko raziskavo med voditelji bahajske religije. Teoretičnemu modelu sledi praktični prikaz delovanja in upravljanja Bahajskih

vrtov v harmoniji z družbenim okoljem, naravnim okoljem, romarji in s s turisti, ki ponazarja prepletanje teorije in praktične uporabe sistemskega razmišljanja za najvišje dobro svetovne dediščine ter turizma. Raziskava gre še dlje, saj preko literature predstavlja možnost povezovanja religije in znanosti, ki ju kot samostojna sistema povezuje sistemski pristop. Bistvo bahajske misli sestavljajo sočutje, enakost ras, soodvisnost, harmonija ter pogled na estetiko in simetrijo Bahajskih vrtov. Vsi ti elementi se ujemajo z načeli sodobnih sistemov, pri čemer sistemi ne morejo delovati, dokler niso uravnoteženi vsi njihovi soodvisni elementi. Povratna zanka in njeno zavedanje v sistem vnašata ravnovesje, kar sistemski pristop izpostavlja kot dragoceno orodje v sodobni znanosti.

Ključne besede: Bahajski vrtovi, sistemski pristop, sistemsko modeliranje, UNESCO, svetovna dediščina, romarski turizem
Academica Turistica, 16(1), 63–71

Vloga visokošolskega izobraževanja pri razvoju trajnostnih družbeno-ekonomskih priložnosti za skupnosti območja svetovne kulturne dediščine Mapungubwe

Lombuso Precious Shabalala

Z uporabo območja svetovne kulturne dediščine Mapungubwe kot študije primera v članku raziskujemo vlogo, ki jo imajo lahko akademiki na visokošolskih ustanovah pri spodbujanju razvoja celostnejšega pristopa k razvoju turizma kulturne dediščine. Turizem, vezan na kulturno dediščino, je predstavljen kot sredstvo, ki ga lahko uporabljajo visokošolske ustanove znotraj zaščitenih območij dediščine za zmanjševanje revščine in spodbujanje družbeno-ekonomskega razvoja, ki prispeva k uresničevanju ciljev trajnostnega razvoja 1, 8 in 11. V raziskavi smo uporabili zaporedno mešano metodo. Fokusne skupine so bile izvedene s 15 udeleženci z uporabo polstrukturiranega vodnika za intervjuje. Prav tako smo opravili anketiranje na vzorcu 100 posameznikov, za analizo podatkov sta bila uporabljena analiza vsebine in SPSS. Ključna ugotovitev raziskave je, da bi imele lahko pobude visokošolskih ustanov za vključevanje skupnosti pomembno vlogo pri družbeno-ekonomskem razvoju. Vendar je ob tem bistveno vključiti različne zainteresirane skupine, da bi učinkovito opredelili družbeno-ekonomske priložnosti, namenjene obravnavanju primarnih potreb skupnosti. Vključevanje zainteresiranih deležnikov v procese odločanja o projektih razvoja skupnosti je bistvenega pomena, saj lahko vsiljevanje razvoja skupnostim povzroči spore in privede do zmanjšanja podpore skupnosti. Na območju Mapungubwe bi lahko visokošolske ustanove z izobraževanjem skupnosti, s sodelovanjem in z vključevanjem v projekte družbeno-ekonomskega razvoja od začetne faze dalje prispevale k doseganju trajnostnih družbeno-ekonomskih priložnosti ter na ta način pospešile izvajanje ciljev trajnostnega razvoja. Pričujoča raziskava poudarja vrednost projektov vključevanja skupnosti, ki jih izvajajo visokošolske ustanove, kot možnih gonil celostnega pristopa k kulturnemu turizmu in prizadevanja za trajnostnejše upravljanje območij kulturne dediščine.

Ključne besede: turizem kulturne dediščine, razvoj in sodelovanje skupnosti,

območje svetovne kulturne dediščine Mapungubwe, visokošolsko izobraževanje, cilji trajnostnega razvoja
Academica Turistica, 16(1), 73–87

Vloga kulture pri privabljanju turistov, potujočih z nizkocenovnimi prevozniki, v Zadar

Božena Krce Miočić, Tomislav Klarin in Gabrijela Vidić

Zadar je turistična destinacija v osrednjem delu hrvaške jadranske obale. Njegove geografski položaj in podnebne razmere v veliki meri določajo njegov razvoj v smeri sončnega, morskega ter prostočasnega turizma. Vendar se Zadar zaradi svoje zelo bogate kulturne in zgodovinske dediščine pozicionira tudi kot destinacija kulturnega turizma. Da bi pritegnili več turistov z oddaljenih trgov, se je destinacija odločila za sofinanciranje in spodbujanje nizkocenovnih prevoznikov za povezavo z letališčem Zadar. Cilj prispevka je ugotoviti, v kolikšni meri se strateška usmeritev Zadra v kulturni turizem odraža v njegovem komuniciranju preko različnih platform, hkrati pa preveriti, v kolikšni meri turiste, ki prihajajo v Zadar z nizkocenovnimi prevozniki, privlači kulturna dediščina. Raziskava je vključevala vsebinsko analizo vsebine družbenih omrežij Turistične organizacije Zadar in Turistične organizacije zadarske regije. Rezultati raziskave so vključevali podatke, zbrane s polstrukturiranim anketnim vprašalnikom na naključnem vzorcu turistov, ki so v Zadar prispeli z nizkocenovnimi prevozniki od julija do novembra 2021. Zbrani podatki so bili obdelani z deskriptivno in inferenčno statistično analizo. Rezultati kažejo na neskladje med strateško usmeritvijo destinacije v kulturni turizem in trženjskimi aktivnostmi v omenjenih medijih, kjer kultura pravzaprav ni v središču pozornosti. Skladno s tem motivacija turistov, ki pridejo na destinacijo z nizkocenovnimi prevozniki, ni bistveno povezana s kulturo. Priporočila so namenjena premagovanju omejitev pa tudi nadaljnjemu preučevanju vedenja kulturnih turistov, ki uporabljajo nizkocenovne prevoznike.

Ključne besede: kultura, dejavnik privlačnosti, destinacijski marketing, nizkocenovni prevozniki, Zadar
Academica Turistica, 16(1), 89–102

Oživljanje starodavnega življenja: segmentacijska analiza turističnih možnosti starodavne življenjske zgodbe

Antonis Theocharous, Petros Kosmas, Maria Panagopoulou, Hristo Andreev, Petros Giannoulis, Katerina Pericleous in Kirsi Lorentz

V pričujočem prispevku je predstavljen nov turistični proizvod nesnovne dediščine, ki naj bi okrepil sektor dediščinskega turizma. Koncept turizma starodavne življenjske zgodbe je nov večdimenzionalni turistični proizvod kulturne dediščine, katerega jedro so fiktivne upodobitve starodavnega življenja, vključuje pa številne povezane fizične in digitalne proizvode ter doživetja. Na podlagi Kotlerjeve teorije STP je bil uporabljen model segmentacije trga za opredelitev potencialnih segmentov uporabnikov novih proizvodov dediščinskega turizma. Uporabljena je bila spletna kvantitativna raziskava, katere cilj je bil ugotoviti demografske, vedenjske in psihografske značilnosti potencialnega obiskovalca. V študiji je bila za analizo 766 tujih turistov uporabljena klasterska analiza, s katero so bili opredeljeni potencialni tržni segmenti turizma starodavnih življenjskih zgodb. Opredeljeni so bili trije potencialni tržni segmenti: (1) generacija Z – digitalni domorodci, ki iščejo pustolovščine, (2) zgodnji milenijci – raziskovalci lokalnih tradicij, (3) pozni milenijci – družinski raziskovalci zgodovine in kulture. Segmenti so bili ocenjeni na podlagi skladnosti njihovega profila z različnimi ravnmi predlaganega proizvoda dediščinskega turizma. Na splošno sta bila segmenta 2 in 3 kot ciljna segmenta ocenjena kot primernejša zaradi večje usklajenosti z jedrnim, s splošnim in pričakovanim proizvodom turizma starodavnih življenjskih zgodb. Na podlagi te raziskave bo turizem starodavnih življenjskih zgodb v bližnji prihodnosti lahko vzpostavil jasno strategijo pozicioniranja in znamčenja v sektorju dediščinskega turizma.

Ključne besede: kulturni turizem, starodavne življenjske zgodbe, segmentacija turističnega trga, ciljni trgi, trženje turističnih proizvodov
Academica Turistica, 16(1), 103–119

Družbeni mediji kot upravljavsko orodje: priložnosti za trajnostne dediščinske destinacije

Anđela Šormaz in Engelbert Ruoss

Priljubljenost turističnih krajev na družbenih omrežjih lahko sproži nepričakovane in netrajnostne trende razvoja turizma, komodifikacijo, kulturno disonanco in druge negativne učinke na realno okolje. Ti učinki se pojavijo predvsem zaradi intenzivnega širjenja podatkov preko družbenih medijev, njihovo obvladovanje pa je še posebej zahtevno na dediščinskih destinacijah, kjer sta narava in kultura osrednjega pomena. V tem prispevku je predstavljena kvantitativna analiza vsebine objav in ocen na platformah Instagram, TripAdvisor in Airbnb za pet območij svetovne dediščine, 13 regionalnih naravnih parkov in dva UNESCOVA biosferna rezervata v Švici. Rezultati analize predstavljajo porazdelitev obiskovalcev preučevanih destinacij dediščinskega turizma znotraj širšega dediščinskega območja med in po pandemiji covida-19. S tem upravljavcem dediščinskih destinacij omogočajo oblikovanje strategij za bolj uravnotežene tokove obiskovalcev znotraj dediščinske destinacije. Ugotovljene podobnosti med preučevanimi destinacijami dediščinskega turizma omogočajo primerjave med njimi, medtem ko ugotovljene razlike predstavljajo priložnost za prenos metodologije v druge kontekste in druge dediščinske destinacije. Analiziranje velikih zavarovanih območij v družbenih medijih odpira polje za druge aplikacije, predvsem v zvezi s sprejemanjem novih sistemov upravljanja območij in njihovih obiskovalcev.

Ključne besede: orodje za upravljanje turizma, družbeni mediji, turistični tokovi, dediščinske destinacije, trajnostni razvoj
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List several authors for the same thought or idea with separation by using a semicolon: (Kalthof et al., 1999; Biegern & Roberts, 2005).

Examples of Reference List

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