Innovative Development Strategies for "Immersive" Cultural and Tourism Night Tours from a Metaverse Perspective

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Abstract: The "immersive" cultural and tourism night tour relies on the metaverse, combining science and technology with night tourism to create an "immersive" experience that allows participants to interact with artistic works, historical and cultural works, and even participate in the shaping of works. It not only allows the eyes to see it, but also allows them to immerse themselves in it truly and experience the charm of culture. This paper analyses the current situation of the development of urban night tourism, summarizes the problems in the development of China's cultural tourism night tourism, and at the same time combines the relevant policies of China's cultural tourism night tourism, integrates metaverse with cultural tourism night tourism, relies on metaverse technology to create immersive night tourism venues, and finally proposes innovative development strategies for cultural tourism night tourism based on the characteristics of "immersion". Finally, we propose an innovative development strategy for cultural tourism night tours.

Keywords: metaverse; cultural tourism night tour; immersive experience

1. Introduction

As the demand for deeper experiences continues to rise, the demand for experiential products such as life, entertainment, travel, and work is growing, and traditional superficial experiential products are no longer sufficient to meet the needs of experiential consumption. The metaverse exploded in 2021 when the market value of a game company Roblox skyrocketed, followed by a significant increase in the search rate of Meta Universe on Google, which led to a surge of interest in the metaverse from all walks of life and became the focus of global attention, a wave of research into the metaverse [1].

In recent years, night tourism has gradually developed and shown good momentum. The General Office of the State Council, in its Opinions on Further Stimulating the Potential of Culture and Tourism Consumers proposed the development of holiday and night-time economies, and the launch of night-time service activities, such as dining, shopping, and performances, while ensuring safety and not disturbing nearby residents and the development has gained momentum, with the scale of night-time consumption showing a trend of continued expansion; in the Opinions on Accelerating the Development of Circulation and Promoting Commercial Consumption, it proposed the activation of night-time businesses and markets, and the use of improved facilities such as night-time traffic, safety and environmental to increase the participation, activity, and satisfaction of night-time consumption[2]. The night-time business and market will be revitalized with improved transport, safety, and environmental facilities to increase participation, activity, and satisfaction. In the Tourism Night Economy Report for the first half of 2021, data shows that sales of night-time attractions and fun tickets grew 469% year-on-year in the first half of 2021, up 106% compared to the same period in 2019, with night-time consumption in China accounting for approximately 60% of overall retail sales and continuing to grow at a rate of approximately 70%. And a large group of office workers, who are busy during the day and whose needs cannot be met, are looking for suitable ways to release their fatigue and stress during the day when they arrive at night, which can also stimulate consumption, expand domestic demand, revitalize business districts, increase the visibility of tourist cities and create a branding effect.

2. Overview of the study

A review of the literature on the subject of cultural and night tourism reveals that there are significant differences between domestic and international developments, with foreign research focusing on the night-time economy and the term 'night-time economy' being used abroad[3]. This is an economic concept developed in the United Kingdom to improve the empty nesting phenomenon in urban centers at night, and there are currently few articles on cultural and night tourism. Although the research on night tourism in China started late, night trade activities have been carried out in China since ancient times. The night market was opened and took shape in the Song Dynasty, when people came and went, buying and selling flourished, and there were nine restaurants, teahouses, theatres, etc. After 2019, research on cultural tourism night tours has shown an explosive growth trend.

2.1. Overview of overseas research on "immersive" cultural and tourism night tours

Marion Roberts examines the transformation of many British town centers from relatively empty places at night to drunken young people gathering on the streets until the early hours of the morning, including its origins, processes, impacts, policy responses, and possible lessons to be learned from it[4]. The paper notes the considerable expansion of the 'night-time economy' in the UK's major cities, secondary towns, and sub-centers, and that structural changes in the entertainment industry, coupled with the relaxation of alcohol licensing laws regarding the number of premises and special licensing for opening after 11 pm, led to a dramatic increase in night-time entertainment. The Sony City Council has implemented the Open Sydney: Sydney's Future Directions for the Night strategy to establish Sydney as a place of origin for the emerging night-time trade culture. Duff and Moore suggest that the UK's night-time economy may be one of the more vivid images created by drinking alcohol[5]. Adam Eldridge examines the impact of the arrival of various tourists on local night markets. The study finds that the night-time economy plays an important role in advancing a city's development and suggests that the city's night-time activities need to be diversified[6].

2.2. Overview of domestic research on "immersive" cultural and tourism night tours

Cao Xinxiang pointed out that the development of night tourism can promote the development of related industries and improve the experience of tourists, thus increasing the use of various infrastructure within the tourist city, and thus enhancing the overall competitiveness of the tourist city, and also proposed specific measures for the development of urban night tourism[7]. Wang Jinwei thinks that the metaverse conveys a mapping of identities, in which each individual can have and feel a different life and realize identity heterogeneity, while tourism is also a way for each individual to experience a different life in an unfamiliar environment, which is also a kind of identity heterogeneity, so tourism and the metaverse coincide, and through the reconstruction of people, scenes, and objects, it provides new opportunities for the development of tourism in the post-epidemic era. The reconfiguration of people, scenes, and objects provides new opportunities for the development of tourism in the post-epidemic era[8]. Sun Fangfang think that virtual reality technology can provide users with a fully immersive sensory experience and can also shape virtual scenes so that viewers who are not present can experience the atmosphere of the site, and users can choose the route and content of the tour according to their wishes, giving them greater autonomy in their choices[9]. Du Xiu and others propose to develop cultural tourism night tour projects with high quality and provide project stickiness, relying on the unique resources and culture of the region to create night tour projects and not allowing homogenization of night tours[2]. Li Dingke takes Nanjing Confucius Temple as an example, they analyze the shortcomings of night tourism in Fuzi Temple and integrate elements with local characteristics such as history and culture to provide countermeasures for the development of night tourism in Fuzi Temple[10]. Qian Wei based on the impact of COVID-19 on the cultural and tourism industry, it is proposed that the virtual space created by the metaverse provides a backing for the future development of the cultural tourism industry, while the accelerated development of digital cultural tourism can create an immersive tourism experience for the audience. The paper also uses the example of the Guangfu Temple Fair, which uses real scenes as the cornerstone and introduces elements from various parties to create a realistic metaverse world, to illustrate that combining cultural tourism night tours with metaverse can greatly promote the development of a region's tourism industry, thereby increasing its popularity and spreading the culture of local characteristics[11].

2.3. Review of Research Profiles

A review of the literature shows that there is a wealth of literature related to the metaverse and cultural tourism night tours, but there are few studies that combine metaverse with cultural tourism night tours. Therefore, this paper analyses the current situation of the development of "immersive" cultural tourism night tours and the challenges they face, and at the same time combines China's existing policies on cultural tourism night tours to integrate metaverse and cultural tourism night tours, relying on metaverse technology to create an immersive night tour venue.

3. Problems in the development of "immersive" cultural and tourism night tours

3.1. Poorly equipped scenic spots and unreasonable scene arrangements can easily lead to stampede incidents

With the development of cultural and tourism night tourism activities, night tourism is gradually becoming a tourism hotspot, which is particularly evident during holidays. If the tourist places are disorderly and unmanaged, densely staffed coupled with inadequate facilities, there is a high risk of a stampede, the consequences of which will be unthinkable if it happens. According to the Night Tourism Market Data Report 2019, half of the tourists are worried about safety. Li Hua et al. Taking the Big Wild Goose Pagoda scenic spot as an example, a vulnerability analysis was conducted based on a cloud model for trampling events caused by dense crowds of night tourists in the scenic spot. The lack of light at night is highly likely to cause episodic trampling events, and the empirical analysis was used to identify the key reasons affecting the vulnerability of the crowd and to propose corresponding improvement guidelines[12]. 2022 On the night of 29 October, a trampling accident occurred in Itaewon, South Korea, resulting in 156 deaths and 187 injuries. As Halloween was approaching and the epidemic in Seoul was somewhat under control, people began to consume with "vengeance". As a result, Itaewon became overcrowded very quickly, and with the illegal expansion of the park, part of the road was blocked, and the tragedy occurred for several many reasons. The same tragedy happened in our country on the night of 31 December 2014, when a serious stampede occurred in the Bund area of Shanghai, killing thirty-six people and seriously injuring forty-nine others. All these situations show that safety at night is the primary element of a night out and the personal safety of travelers should be fully protected.

3.2. Excessive commercialization of scenic spots tends to destroy their prospects

As more and more new technological elements are also added to tourist attractions, their capital investment will gradually increase, so it will be difficult to make back the money in the short term, and if they are rushed, it will further lead to over-commercialization of the operation of the attractions. On 31 July 2019, China's National Ministry of Culture and Tourism released the results of the disposal of seven national 5A tourist attractions that seriously failed to meet quality requirements and had major problems, among which the Qiao Family Courtyard attraction in Jinzhong City, Shanxi Province, was rated as an attraction quality assessment that canceled tourism. The ticket economy was once the "golden rice bowl" of many scenic spots, and many attraction operators were making a fortune. But the new fashion is also changing, people's demand for leisure travel is also increasing, and many of the traditional "play" is also beginning to be unsustainable. And some of the domestic 5A scenic spot management concepts, but also stuck in the past. In the case of Beijing's Qiaojia Courtyard, an authoritative source close to Beijing's Qiaojia Courtyard mentioned in a media report believes that "the strong commercial atmosphere and substandard services and equipment are probably the main reasons for the delisting." And many travelers would also point out that while the price of admission to the attractions in Beijing's Qiaojia Great Courtyard is too high, they are not able to enjoy the associated supporting services and facilities. But it's not that all seven attractions are overly commercialized, but that many of them are also facing these problems. This is not the case with all seven attractions, but with many of them.

3.3. Homogenized night tours tend to make tourists tired

When it comes to night tourism, likely, many people can only think of night markets, light shows, live performances of large-scale events, night cruises, and so on. During the 2019 Spring Festival, nighttime experiences such as the "Datang Nocturnal City" in Xi'an, the Chongqing Second River Night Cruise, and the "Lancang Mekong Night" in Xishuangbanna were a big hit, so various parts of China started to follow suit and have created related night tourism This reflects, on the one hand, the fact that modern people, in general, are not only interested in the nighttime experiences but also in the

nighttime activities. On the one hand, this reflects the widespread demand for night tours to improve one's moral sentiments and thus liberate oneself physically and mentally, but on the other hand, it also reveals that the current night tours are no longer sufficient to meet the needs of modern people. It also shows that the current forms of night activities are still relatively rudimentary and uncreative, with insufficient social interaction and participation, while there is no night-time economic complex that gathers the full range of food, accommodation, transport, tourism, entertainment, and shopping products. Chai Yanyu points out that the immersive experience of domestic night tour projects started late, the scenic spots did not develop night tour programs that meet the actual needs according to the actual local situation, but blindly followed the trend, making the night tour projects appear homogenized[13]. A vibrant night-time economy should be able to meet the diversified consumption needs of both tourists and residents at night, with various types of activities such as night-time sightseeing, shopping, dining, entertainment, cultural and creative activities, film and television, and performing arts. At present, China's night tourism is not well-targeted and the supporting services do not meet the needs of tourists, and the main consumers of night tourism are young people, so if there is a lack of cultural, sports, athletic, and recreational products, it will not attract young people and will not form its unique brand.

4. Innovative development strategies for "immersive" cultural and tourism night tours

Combining metaverse and tourism can, on the one hand, use metaverse and virtual reality technology to promote and market tourism destinations, and enhance the interactivity, immersion, and fun of tourism, thus optimizing the marketing effect of tourism destinations and attracting tourists; on the other hand, through metaverse technology, night-time tourism activities can be enriched, enabling consumers to have preview experiences and stimulating their demand and desire for tourism, thus stimulating their demand and desire for tourism. Thereby enhancing user stickiness and extending the life cycle of tourism products.

4.1. Build well-known night tours based on local characteristics

With the help of traditional culture, creating new landmarks for cultural tourism through digital technology and applying the concept of meta-universe to cultural tourism at night has become a new windfall for the development of the cultural tourism industry nowadays. The culture of a scenic spot is the core element of a night tourism project, and there are still some attractions with gorgeous but unrealistic immersive performances that lack substance. A city's night tourism project should be based on the needs of customers, to create personalized products and services. Each place has its unique cultural attributes and cultural resources, and to create immersive night tourism projects, it is important to adopt a differentiated design based on local realities, rather than trying to pursue cultural perfection. 2021, Chang'an Street takes the historical and cultural background of the Tang Dynasty and combines the Yuan universe with culture to launch the project "Da Tang - Kai Yuan", which uses digital technology to bring the traditional architecture of China restored, in its entirety, and engage visitors from all over the world to get an experience comparable to visiting and shopping in the real world by logging in from the port. The traditional New Year's Eve light show becomes futuristic when the sci-fi lines of light and shadow blend perfectly with the landmarks, with golden waves of wheat swirling upwards, blue whales leaping out from the beams of light in the clouds, brilliant light and shadow cutting through the vastness of the universe to transform into 3D figures made of light particles to start the New Year's countdown and send New Year's wishes in gorgeous fireworks. From the Shenzhou launch to the regional mascot New Year's greeting, the light show New Year's greeting carried out in conjunction with landmark buildings breaks the geographical limits and conveys the urban spirit and urban culture of each city to China and the world. Chang'an Street is constantly pioneering and innovating, looking for multiple possibilities of "meta-universe +", empowering the transformation of the cultural tourism industry with digital technology. The Wuyuan "Fantasy Forest" night tour project is based on the natural landscape of the ancient village of Huangling "Shuikou Forest", and the local culture of customs in the village planning site as the core, combined with holographic technology, sound, light, electric devices, and environmental art, to deeply explore the cultural tourism value behind the ancient Huizhou folk culture. Through the integration of holographic naked eye 3D, multimedia light and shadow, multimedia interaction with the original ecological jungle and terraced scenery of Huangling, and a custom-made fantasy forest visual show, with shocking audio-visual and stunning colors, actively showing to the majority of visitors the attractiveness of Huangling's local folk culture and natural landscape as a source of birthplace. Both the real show and the immersive experience program created by relying on technology are designed to make the tourist focus on the current situation and thus forget about the real world and have a sense of immersion. Each participant is the protagonist of the story, performing a role reversal, fully immersing themselves in their role,

sensing the characters, touching the plot, and realizing various interactive experiences. The development of the night tour project must be reasonably designed according to the actual site, scenery, and equipment of the cultural and tourist attraction, refusing to blindly develop and copy them, giving priority to visitors' preferences, and safety and creating a unique immersive night tour experience for them.

4.2. Relying on policy advantages, building a special night tour base

At present, tourism is an important pillar for expanding domestic demand, and night tourism consumption is an important part of residents' consumption, so vigorously developing night tourism can further stimulate the consumption market, attract more domestic and foreign tourists, achieve the purpose of stimulating tourism consumption and promoting regional economic development[14]. The development of night tourism can further stimulate the consumption market, attract more domestic and foreign tourists, achieve the purpose of stimulating tourism consumption, and promote regional economic development. Beijing, Shanghai, Chongqing, Xi'an, and Henan have issued relevant policies to support and encourage the development of night tourism, while the cultural and tourism sector advocates the development of "night tourism" and "immersive" cosmic tourism consumption. The Henan Provincial Government Office in its Circular on Further Stimulating the Potential of Cultural and Tourism Consumption explicitly advocates the development of cultural night-time consumption, and supports the creation of 24-hour libraries and the largest night-time cultural and tourism consumption gathering area in China. In the special meeting of Henan Province Cultural Tourism Night Tour Cultural Economy in 2020, cultural tourism groups from all over Henan Province also scrambled to participate, observe, exchange, and discuss the construction of the night swimming socialist civilization tour project, and jointly discuss the effective way to build and operate the ecological night swimming scenic spot project. In 2011, Henan strongly released "Only Henan Drama Phantom City", whose content relies on the culture of the Yellow River civilization, with immersive theatre art as the means, and "Phantom City" as the carrier, once launched, quickly spread across the network. From pan-entertainment to pan-culturalism and highly integrated with AR, VR, XR, MR, and other technologies, it digs deep into the culture of the Central Plains in Henan, which is hidden underground and sealed in books, and tells the story of "Yellow River, land, food, and heritage" with a new concept. Visitors walk through endless wheat fields and inside a 15-meter high rammed earth wall, a 21-theatre theatre fantasy city covering 622 acres and divided into 56 compartments, with exquisite sets, unique light and shadow effects, and AR and VR technology empowering visitors with a 700-minute non-repetitive immersive viewing experience. This is a new attempt to empower the cultural tourism industry with "Yuan Universe+", and innovation in a new industry and new field of immersion in cultural tourism at night, highlighting the main trend of cultural tourism to comply with the development of digital industrialization and industry digitalization.

4.3. Relying on technical support to create intelligent services

The "immersive" cultural and tourism night tours need to consider the upgrading of tourism products from the perspective of tourists, pay attention to the wide application of science and technology in the development of the night economy, integrate technology with historical changes, folk customs, cultural development, human emotions, and other elements. The tourism industry should also create an intelligent service system with the consumer in mind. In addition to the use of internet technology, big data analysis, and other technologies to improve the online marketing model, scenic area safety management methods, interaction with tourists, and other online service functions, to be able to provide tourists with intelligent tourism products, and timely delivery of night cultural tourism information, to strengthen the wisdom of the service. For example, the Taoxichuan Cultural and Creative District in Jingdezhen has full wireless network coverage, introduces intelligent guidance systems, and Skynet monitoring systems, and implements services such as smart parks, e-commerce platforms, financial services, WIFI coverage, and property butlers. Once again, the Zigong Lantern Festival has created 14 distinctly themed panels with unique creativity and interactive immersive presentation, attracting thousands of visitors. The "Salt Charm Spring and Autumn" lantern group at the entrance of the fair draws on the architectural symbols and culture of the classic salt merchant's residence, incorporating naked-eye 3D visual effects, AR virtual reality technology, and other high-tech products, allowing visitors to engage in an interactive dialogue with the mascot on the lantern group. The Shang Yuan Fantasy, on the other hand, uses digital technology to provide visitors with an immersive gaming experience through mobile phones, computers, and VR glasses, allowing them to experience the cultural classics of the Lantern City from all senses, including the visual and auditory senses. The integration of cultural development with science and technology is worth studying and learning from.

"Immersive" travel night tours can use XR information technology to combine real travel resources with virtual environments, creating a truly seamless immersive world for travelers. American artist Bryson Tiller's "TrapsoulSeries" series of live concerts use XR technology to show the audience four different elements of XR virtual worlds: nebulae, galaxies, clock towers, hourglasses, and alien jungles, combining realistic singing environments with these virtual environments to vividly The concert's main theme was expressed vividly.

5. Conclusion and Inspiration

The cultural tourism night tour creates a new visual world through metaverse AR and other technologies, the rise of the metaverse concept has opened up a new direction for the digital transformation of the cultural tourism industry, and for the immersive night tour, the digital technology contained in the metaverse is even more obvious and direct, the use of AR, XR and other core technologies in the light show is a strong visual sensation as well as a strong spiritual feeling for the visitors, and at the same times, it is a brand new visual feast.

The combination of data-enabled cultural tourism will transform tourism into a service economy, capital-driven tourism into technology-driven tourism, and conventional tourism into intelligent tourism, helping the digital cultural tourism industry to grow in a breakthrough manner. The rise of the metaverse will reshape the cultural tourism industry and provide it with more new ways to play. Since then, people's immersion in cultural tourism is not only in the simple sensory experience of the physical level of sound and light but also in the interaction of cultural experiences. In this way, people's immersion in cultural tourism will not only be a simple sensory experience on the physical level of sound and light but also an effective integration between humanities and arts in a customized scene.

Acknowledgements

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