Theoretical construction and application path of cultural tourism metaverse empowering rural revitalization

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Abstract

Empowering thinking with art, theatrical colony groups, and promoting rural revitalization and development. Tapping into the new opportunities of intangible cultural heritage in meta-universe application scenarios to build an immersive rural tourism complex. Environmental theatre produced in the context of intangible cultural heritage provides a concrete implementation path for the revitalization and development of rural cultural tourism industry. Rural environmental theater is a new type of cultural consumption product under the theater space. Using environmental theater as a means of expression, it brings an immersive theater experience to the audience with a flowing and free tour. This study takes Lacan's three worlds theory as the theoretical research basis to explore the theoretical construction of the meta-universe of cultural tourism. And based on the three-whole education system in the context of university industry, academia and research, and based on the educational characteristics of universities, it integrates industry, academia and research with the development of rural culture and tourism in depth, so as to realize the purpose of promoting the new development of rural culture and tourism industry, and boosting the development of rural revitalization in the new era.

Full Text Article

Keywords: Metaverse, intangible cultural heritage, environmental drama, industry-education integration, rural revitalization

Research Background of Cultural Tourism Metaverse

The Metaverse is a virtual world created by integrating a series of current digital technologies. It integrates technologies such as the Internet of Things, cloud computing, blockchain, artificial intelligence, big data, and brain-computer interfaces. It enables virtual platforms to map and interact with the real world, and is a digital living space for a new social system. The Metaverse is based on

the immersive experience provided by XR technology and digital twin technology to form a virtual world that maps and interacts with the real world. （Jian, P,2017） The Metaverse is a highly immersive and sustainable three-dimensional space-time Internet, including digital twins, virtual natives, and virtual-real symbiosis. The Metaverse is closely integrated in the economic system, social system, and identity system, allowing users to produce and edit content in the virtual world.

The Cultural and Tourism Metaverse is the product of the combination of the cultural and tourism industry and digital technology. The rise of the Metaverse and related digital technologies is an opportunity for the cultural and tourism industry to undergo digital transformation and further development. The Metaverse can help people break through the limitations of time and space and gain a more diverse cultural and tourism experience. At the same time, the metaverse also has social attributes and economic systems. Integrating the metaverse into the cultural tourism industry can not only achieve higher social and economic benefits, but also optimize the ecology of the cultural tourism industry, extend the value chain, industrial chain, and resource chain of the cultural tourism industry, and make the development of the cultural tourism industry present information and digital characteristics.

Metaverse technology helps to build a path for the systematic protection of rural intangible cultural heritage. On the one hand, in the multi-dimensional space of the cultural tourism metaverse, the process of cross-temporal and spatial performances is continued, and space is exchanged for time, and the protection of static and passive sealed intangible cultural heritage is transformed into a dynamic and living protection method, thereby enhancing the recognition of the intangible cultural heritage subject to the metaverse technology and avoiding the weakening and alienation of intangible cultural heritage in commercial development.(Yu, C., Ding, K., & Luo, S,2019)

This article attempts to systematically explore these issues. What is the theoretical logic of the metaverse empowering the cultural tourism industry? In what aspects can the metaverse drive the innovation of the cultural tourism industry? Therefore, this article proposes environmental drama as an application path for rural revitalization. Environmental drama is based on China's excellent traditional culture and intangible cultural heritage, based on the characteristic villages at the junction of urban and rural areas, and closely linked to customs and natural scenery. In the era of digital economy, consumers' demand for personalization and customization is becoming more and more obvious. The rural cultural tourism industry needs to understand tourists' needs more finely and provide personalized services and experiences. Immersive environmental drama is emotionally oriented to inspire tourists to pay for the rural cultural tourism economy.

The development of the cultural tourism metaverse presents the intersection of multidisciplinary content, and needs to absorb knowledge from disciplines such as tourism, culture, history, archaeology, anthropology, computer science and media. In order to create new and unique cultural tourism experience methods, it promotes tourists' new understanding of cultural tourism content in the past, present and future.

The cultural tourism metaverse breaks through the geographical and temporal limitations of cultural tourism scenes and connects cultural tourism resources and cultural content across time and space. It allows tourists to visit rural sites that are geographically or physically inaccessible. Tourists can also connect socially through the cultural tourism metaverse, whether in the virtual world or in the real world, to share experiences, knowledge or establish cultural tourism interest communities.

Rural environmental drama equipped with the cultural tourism metaverse presents the following characteristics. (Wang, Y,2018) First, it has cultural and educational significance. The cultural tourism metaverse provides tourists with cross-temporal and spatial content behind the real scene. It allows tourists to experience cultural stories in an immersive and highly interactive way, witness rural intangible cultural events and customs, and participate in them through scene-based methods. Tourists experience through interactive activities, virtual simulations or games, and this participation is more attractive. Personalized cultural tourism narratives can give tourists a deeper understanding of rural cultural tourism.

Secondly, in the cultural tourism metaverse, tourists can customize personalized experiences and services according to their preferences. For example, tourists can customize the appearance and behavior of their characters, choose the cultural and historical places they want to visit, choose virtual travel partners and virtual tour guides, customize the language and text used in scene travel, and personalized cultural story narrative experience.

Finally, immersion and interactivity are the core features of the cultural tourism metaverse. Through the construction of highly realistic virtual cultural tourism scenes, sophisticated cultural tourism story narratives, multi-sensory interactive feedback, and seamless switching of virtual and real cultural tourism scenes, tourists can experience immersively and explore tourist destinations and cultural tourism service projects. Unlike the passive cultural tourism experience in the real world, tourists in the cultural tourism metaverse can actively participate in and explore the virtual world. Interact with the cultural tourism scenes, characters and cultural storylines in the virtual world in an interactive way, and create and record your own experience in the process.

Lacan's Three Realms Theory and the Theoretical Construction of Cultural Tourism Metaverse

This paper innovatively uses Lacan's three-realm theory to analyze metaverse tourism. The three-realm theory refers to the real world, the imaginary world, and the symbolic world. It covers multi-level discussions from individuals to groups, from technical details to social culture. The three-realm theory reveals how humans construct themselves and the world through imagination, language, and symbols, and how these construction processes affect human cognition and behavior. The three-realm theory helps to fully understand the structure of the metaverse and explore how metaverse tourism affects the cultural communication, values, and establishment of social order in the metaverse space.

The imaginary world, the real world, and the symbolic world represent different cognitive levels and states of existence. (Wan, M., Zhang, F., & Wang, L,2023)The imaginary world is the subject's initial cognition and imagination of the self and the external world; the real world represents an existence that transcends language and symbols and cannot be fully grasped; the symbolic world is the process of constructing and maintaining social order and interpersonal relationships through language, symbols, and cultural systems.

From the perspective of the tourism metaverse, first of all, the imaginary world focuses on user experience, the real world focuses on technical implementation, and the symbolic world focuses on social norms. Specifically, the imaginary world can interpret tourists' free creation and fantasy experience in metaverse tourism. Visitors get rid of the physical limitations of reality and freely

explore unknown scenes and experience fantasy adventures in the virtual world. (He, J., & Zhang, Y,2023)For example, in the metaverse space with the theme of intangible cultural heritage stories, visitors can interact with characters and participate in the storyline. This experience fits the subject's pursuit of ideal images and situations in the imaginary world.

Secondly, the symbolic world helps to analyze the cultural symbols, rules and language systems in the metaverse cultural tourism. The metaverse cultural tourism is constructed through specific visual symbols, interaction rules and narrative language. These symbolic elements convey cultural significance and shape tourists' cognition. For example, symbolic symbols such as the architectural style and costumes and props of the metaverse scenic spot will convey cultural information of a specific era. The process of tourists interpreting these symbols is to participate in the construction of cultural significance in the symbolic world and understand the cultural connotations carried by the metaverse cultural tourism. These factors jointly shape the collective behavior patterns and social interaction methods of users.

Finally, the real world helps to reveal the deep connection between the metaverse cultural tourism and the real world. Although the metaverse is a virtual space, the technical foundation, user behavior and social impact of the metaverse are rooted in reality. The experience in metaverse tourism will also react to the real tourism industry, prompting it to change and innovate, which reflects the potential constraints and support of the real world on metaverse tourism.

In summary, the use of the three-realm theory to analyze the phenomenon of metaverse tourism can trigger reflection and transcendence of the real world. Through the cultural symbols and rules of the symbolic world, we can understand how metaverse tourism inherits, transforms and creates cultural value; (You, X,2023))with the help of the interaction between the imaginary world and the symbolic world, we can analyze the shaping of tourists' values   and social cognition by metaverse tourism; from the perspective of the real world, we can explore the changes caused by metaverse tourism in social and economic structure, interpersonal relationships and cultural ecology, and provide a theoretical framework for a comprehensive assessment of the social and cultural significance of metaverse tourism.

The application path of cultural tourism metaverse empowering rural revitalization

The cultural tourism industry integrates virtual reality and augmented reality technologies to create a rich and immersive cultural tourism experience. Cultural tourism scenic spots are built into new cultural spaces in the digital age to provide tourists with experiences beyond reality. For example, through virtual tours, digital exhibitions, real-time interactions, etc., to enhance visitor participation and satisfaction. For example, Tokyo Disneyland in Japan introduced augmented reality technology and launched a metaverse project called "Disney Creation Kingdom". Visitors can use AR glasses to see virtual Disney characters interacting with real scenic spots, and experience a wonderful experience that combines virtuality and reality, which also attracts a large number of tourists. The Louvre in France has launched the Louvre Meditation application in cooperation with a virtual reality company. Users can use VR devices to walk through the Louvre in a virtual space and interact with artworks, creating a deep experience that integrates culture and emotion.

Due to the objective environment of the countryside, it is difficult to build a museum. However, the dissemination of intangible cultural heritage requires museums as an important carrier. Therefore, the Metaverse Intangible Cultural Heritage Museum will become a powerful way to promote rural intangible cultural heritage. Unlike traditional virtual exhibitions that simply restore offline exhibition spaces, the Metaverse Museum has new features such as digital avatar experience, immersive interpretation, strong interactive tours, and virtual social interaction. It is not just an online exhibition, but a digital parallel world that extends from the "online" of the cloud exhibition to the "present". It has the new characteristics of the integration of reality and non-reality, and extends its functions to build a new dimension of "virtual human role", "narrative space", "emotional experience" and "interactive game" experience.

The cultural and tourism metaverse reconstructs the time and space experience for tourists, and also brings breakthroughs in different dimensions to the traditional tourism industry. For example, through digital equipment and digital technology, colorful real scenes, dreamy virtuality, and cross-border interactions are created. The metaverse of offline scenes integrates the digitalization and intelligence of the cultural and tourism industry to achieve the unity of digital economy and metaverse.

The cultural and tourism metaverse is a new cultural product that can fundamentally enhance the soft power of rural culture and promote the prosperity and development of rural cultural and tourism industries. Environmental drama is a cultural and creative industry based on immersive experience. It creates an industry chain of drama clusters and cultivates a new industry of "local culture + drama". Highlight local characteristics, promote the excellent traditional Chinese culture, let traditional villages and new theaters complement each other, and let more people feel the charm of drama culture.

After the epidemic, people's enthusiasm for traveling is high, and their tourism mentality is constantly changing. Tourist destinations have gradually shifted from big cities to villages with cultural and tourism characteristics. It can be seen that the countryside is becoming an important choice to meet people's tourism needs. Compared with the previous tourism needs of "I have seen it, I have been here", tourists now care more about "I experience it, I like it". The Chinese Academy of Social Sciences pointed out in the "Tourism Green Book: Analysis and Forecast of China's Tourism Development from 2022 to 2023" that in the future, third- and fourth-tier cities and rural areas will become the key areas for the strategic transformation of the tourism industry. This is inseparable from the country's vigorous support for rural revitalization and rural tourism industries. In the future, rural tourism will develop unprecedentedly. This also shows that the research on "intangible cultural heritage environmental drama" is resonating with the national rural revitalization strategy. At present, the leisure and entertainment formats of rural cultural tourism are single. Milking, barbecue, picking eggs, picking, etc. in the countryside are authentic and full of childlike rural experiences, but it is difficult for tourists to consume multiple times. When the tourism industry encounters the countryside, it urgently needs to be innovatively reconstructed to enable rural cultural tourism to develop sustainably. In addition, intangible cultural heritage urgently needs more people to participate in the process of social inheritance, especially to get widespread attention from young groups and Generation Z. How to solve the pain points of intangible cultural heritage is also an urgent development issue. The rural cultural tourism industry is facing challenges in a new stage.

How to achieve high-quality development of the tourism industry and demonstrate new concepts and new missions is an important issue.

In view of the current development status of the rural cultural tourism industry, the construction of a drama complex of the intangible cultural heritage metaverse can well meet the whole process and highly realize the demands of design, interaction, and communication. The complex of the intangible cultural heritage metaverse environmental drama includes intangible cultural heritage script killing, intangible cultural heritage camping, intangible cultural heritage amusement park, immersive experience of environmental drama, etc., which can meet the social needs of all age groups. This form of micro-vacation will become a new trend and new development in the quality of rural tourism. Empower with art and use immersive experience as a way to break the circle. Applying immersive experience to different scenes according to local conditions and realizing real experience upgrades is the direction of exploration of art empowering the rural cultural tourism industry. The specific countermeasures and suggestions are as follows.

In the metaverse, we create an immersive theater for intangible cultural heritage. Different from traditional stage shooting technology, we explore the integration of intangible cultural heritage stage play forms and panoramic VR. The performance is centered on the audience, and the characters appear in sequence using sound guidance, so that the performance content is integrated into the space, and the audience can also have an immersive viewing experience. At the same time, we integrate virtual stars, cloud boxes, multi-view and multi-screen viewing and other scientific and technological technologies to help the digital upgrade of intangible cultural heritage stage plays. Empowered by 5G, we enhance the communication effect and help the dissemination of intangible cultural heritage.

Environmental drama takes "culture + technology" as its development strategy, immersive drama art as its method, and the unique concept of environmental drama as its carrier, combining intangible cultural heritage with the concept of "metaverse" to achieve interaction between reality and virtuality. It helps to activate rural resources and promote the high-quality development of rural cultural tourism industry. We combine the supporting technology of the metaverse with the strategy of rural revitalization and promoting intangible cultural heritage to create rural environmental drama with Chinese characteristics. Environmental drama aims to protect and inherit the intangible cultural heritage context and inherit and develop the excellent traditional Chinese culture. The meaning of immersive drama is to organically integrate people and rural culture and create real and meaningful connections.

Environmental drama is rooted in the rich soil of traditional culture, innovates in inheritance, and creates new landmarks for rural cultural tourism. Create a group of drama groups with historical roots, cultural veins, commercial souls, management methods, and famous brands, with the theme of "micro-tourism, slow life", and cultivate a group of good places at the doorstep for the people. It can be seen that environmental drama will collide with urban culture in a stronger spark in the context of cultural confidence given by the era. Cultural confidence is the confidence of a nation in its own culture. Cultural consumption is a kind of consumption based on cultural confidence, using cultural products or services to meet the spiritual needs of the people. Environmental drama will break through the traditional drama creation model, build a new and sustainable ecological industry mechanism, and transform the cultural confidence of intangible cultural heritage into cultural consumption. The consumption mode of the millennial generation has transformed from

commodities to experiences, which caters to the characteristics of the Z generation's pursuit of self-expression and self-realization, and has received widespread attention and dissemination in a short period of time. The rise of the experience economy and the development of science and technology have changed the traditional marketing model, and niche entertainment has gradually been accepted by mainstream consumers. From small script games and escape rooms to large immersive dramas and exhibitions, commercial real estate and cultural tourism destinations have also brought unprecedented attention to the immersive experience entertainment industry.

Environmental drama is based on the script industry that young people love. Through the means of selective cultural tourism experience, immersive drama and rural cultural stories can be cross-border cooperation, which can not only preserve and promote China's excellent traditional culture, but also attract the aesthetic vision of modern people. The script game, with its immersive drama experience, has achieved a dialogue between young people and history. When the audience is interested and reads it, they will further pay attention to and understand the historical and cultural elements contained in the work, the work will have vitality, and the rural culture will be spread. Business is the body and culture is the soul. Environmental drama will use immersive drama to tell the traditional stories of Chinese intangible cultural heritage and show the cultural confidence of the Chinese people.

Immersive drama, with its strong sense of picture and substitution, has an immersive interactive and entertainment experience, which is closer to the preferences of young tourists. China's immersive drama industry is still in its infancy. At present, immersive performing arts formats at home and abroad are building a composite immersive system. It mainly includes two trends. One is hardcore immersion, which focuses on exploring dynamic scene applications of XR virtual and real. The second is to use stories to create emotional immersion and build an immersive cultural and tourism complex. Judging from the current domestic research situation, most of the industrial thinking of art empowerment uses education and social services. For cultural and tourism development, it is still in its infancy. Therefore, it is possible to combine advanced domestic and foreign experience to build an immersive micro-realistic sensory theater, which is of great theoretical and practical value. Emotional immersion is mainly to create an immersive drama complex to attract young consumers of the 80s, 90s, and 00s and family-based customers. It includes immersive scenic spots, immersive cultural and tourism towns, and environmental dramas. Tourists are more willing to experience traditional cultural and artistic creativity and appreciate local culture in environmental dramas. As a result, the pace of local agricultural modernization can be enhanced and new vitality can be injected into agricultural production. In the past rural development and revitalization, the local intangible cultural heritage was often not given enough attention, so that when promoting its own image to the outside world, its own characteristics were not shown. Therefore, to incorporate art into the revitalization of rural culture, we must first explore the local intangible cultural heritage, combine local culture with art forms to show its characteristics, and rebuild the connection between man and nature, and man and art. In order to incorporate the empowerment of intangible cultural heritage into the construction of rural cultural tourism, we must grasp the current status and future development direction of rural development, grasp the core of rural culture and the core of local culture, and make an overall layout for rural construction and development, and then set the artistic atmosphere and tone, so that art can be integrated into rural revitalization.

Immersive scenic spots are developed from tourism performances, and are a successful example of tourism telling cultural stories and culture using the tourism stage. In recent years, more and more well-known scenic spots have launched performance projects that are almost all labeled "immersive": Ningbo Old Bund Historic District staged an immersive performance, and Zhejiang Jiande launched a large-scale immersive live performance "Jiang Qingyue Near People". It can be seen that "immersion" is becoming a strategy for tourism performance projects to satisfy the audience experience. Many cultural and tourism towns in China have beautiful scenery, but lack cultural core. What cultural and tourism towns need to do is for players and consumers to enter the situation and forget their original identities, so as to achieve true emotional immersion. Therefore, rural cultural and tourism towns should focus on immersive story lines to allow tourists to have a deeper experience. The fundamental reason why central and western cities such as Xi'an, Chengdu, and Guiyang can become Internet celebrity cities and frequently go out of the circle is the innovation of business formats. The rapid improvement of Henan's cultural soft power is also mainly due to the integrated development of culture and tourism, feeling the artistic creativity of traditional culture in drama and appreciating local culture. Henan Environmental Drama is located in Zhengzhou, Henan Province, covering a total area of 622 acres. (Fu, L,2023)Before development, it was a rural area. It will be open to tourists from 2021. Since then, a drama settlement group with the ultimate goal of rural revitalization has been opened, and more people have learned about Henan culture by telling stories about "land, food, and inheritance". Henan insists on shaping tourism with culture and promoting the integrated development of culture and tourism with tourism. From "Tang Palace Night Banquet" to "Paper Fan Scholar" to the dance "Luo Shen Shui Fu", more and more children are playing the word game of Feihualing; the costume photos of traveling back to the Han and Tang Dynasties are all the rage; the restoration of cultural relics in the Forbidden City has also aroused heated discussions. Henan culture has frequently gone viral, allowing audiences across the country to feel the unique cultural charm of Henan. The success of Henan's rural revitalization is not accidental, but is the result of the interweaving and interaction of many factors such as culture, technology, policy, market, and creation. Looking back, people find that it is the cultural spirit of the Chinese nation that can soothe their souls. The genes of intangible cultural heritage may be dormant, but they will not always be awake, which is also the charm of Chinese culture.

The industry-education integration model of universities helps rural revitalization

In today's era of great cultural prosperity that advocates intangible cultural heritage and cultural confidence, environmental drama, as an excellent carrier, integrates the innovative development of industry, academia and research with rural revitalization, which is a win-win effect. The rapid development of industry-university-research integration has provided new impetus for the tourism industry. New changes and trends require the tourism industry to continuously increase its efforts in technology and product innovation to meet the public's demand for high-quality and diversified tourism products.

For higher education, in-depth cooperation can be carried out on the integration of industry and education, and scientific research projects can be transformed into teaching practice projects.

Taking the docking villages as the starting point, strengthening the characteristics of school running, based on the needs of economic and social development, promoting the integration of industry and education, implementing school-enterprise cooperation, and creating a path to continuously improve the ability to serve regional economic development. (Shi, P., Wang, Y., & Li, Z,2022)The tourism industry in the new development pattern is an important engine to drive the coordinated development of related industries and promote the growth of the national economy. It is the main force to promote consumption to drive domestic demand, promote the domestic circulation, and drive the domestic and international dual circulation. It is also an important industry to further enrich the spiritual and civilized life of the masses and enhance their sense of happiness and gain.

With the transformation of economic industries, the proportion of the tertiary industry that enhances the soft power of cities has increased year by year. Among them, cultural and creative design services have become a rising star in the tertiary industry. At present, the National Bureau of Statistics has released the operating income data of cultural and related industries above designated size in the first half of 2020. According to a survey of 60,000 cultural and related industries above designated size nationwide, in 2020, the above-mentioned enterprises achieved operating income of 9851.4 billion yuan, of which creative design services were 1564.5 billion yuan, an increase of 11.1%; cultural consumption terminal production was 1880.8 billion yuan, an increase of 5.1%. From the data results, we can intuitively feel the driving effect of cultural creativity on consumer demand.(Zhang, B,2022)

Environmental drama incorporates art into rural construction, helps rural revitalization, and achieves the transformation goal of sustainable development. Immersive drama art is a medium that adjusts the connection between economy, culture and natural ecology. Promoting the development of rural tourism can not only increase the economic income of villagers, but also show the local cultural characteristics of the countryside. This is a sustainable and interactive process.

The purpose of incorporating the production, study and research of higher education into rural construction is to revitalize rural development. At the same time, incorporating the intangible cultural heritage metaverse into rural revitalization is a sustainable and interactive process. Here, art can be used as a medium to adjust the connection between economy, culture and natural ecology and promote the development of rural tourism. By expressing culture through artistic forms, the characteristics of rural culture can be displayed while increasing the economic income of villagers.

The purpose of intangible cultural heritage empowering the integration of rural cultural and tourism industries is to integrate cultural arts and tourism, and produce a strong economic effect under the influence of drama art. It will give new vitality to traditional cultural and tourism products and the tourism industry, which will be conducive to the formation and development of new tourism formats. At the same time, in the process of the formation and development of new formats for rural revitalization, the income problem of rural farmers can also be solved, and then under the development of the overall environment and tourism opportunities, the added value of agriculture can be improved, thereby giving new vitality to agriculture and providing a strong driving force for agricultural development.

Conclusion

Intangible cultural heritage environmental drama tells the excellent traditional Chinese culture, attracts audiences through immersive drama, combines immersive drama with the rural

revitalization strategy, and creates environmental drama with rural characteristics. Incubate environmental drama brands, keep up with the pulse of the times, and achieve cultural innovation. It can not only bring immersive experience to tourists, but also bring sustainable economic benefits to the rural cultural tourism industry. Applying immersive experience to different scenes according to local conditions and realizing real experience upgrades is the direction of exploration of art empowering China's cultural tourism industry. In the future, environmental drama will help strengthen the construction of higher education talent teams. Offline and online two-pronged approach, adhere to creative transformation and innovative development, strengthen intangible cultural confidence, and solidly promote the formation of a system of inheritance and development of excellent traditional Chinese culture. Strive to enhance cultural soft power and influence, and continuously enhance the vitality and influence of rural intangible cultural heritage.

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Conflict of Interest

The authors declare no conflict of interest.

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