

Research on the impact of digital media art on tourism cultural communication

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Abstract

Culture is the soul of tourism, and communication is the key to the inheritance and development of tourism culture. Therefore, culture and communication are essential for the development of tourism. Digital media art is a new form of art that combines technical, artistic, and media-oriented elements. Its artistic expression and crossover communication capabilities drive its usage in cultural tourism communication. This paper examines the influence of digital media art on tourism culture communication and development by elucidating the concept and characteristics of tourism culture communication and digital media art, applying the theoretical knowledge of communication, and deriving the specific characteristics of digital media art on tourism culture in terms of the transmission-reception relationship, content, medium, and effect. The role and value of digital media art in disseminating and developing tourism culture are discussed. We aim to provide valuable insights for the dissemination of tourism culture.

Keywords: *digital media art, tourism culture, communication, media convergence*

1. Introduction

The American futurist Negroponte points out, "When industries ask themselves 'what is my future in the digital world,' the answer lies in whether their products or services can be transformed into digital form"[1]. This paper first studies the concept and new features of tourism culture propagation in the current stage. Then, combined with the virtuality, interactivity, spectacle, and integrative characteristics of digital art design, the paper analyzes Laswell's famous "5W communication model" as a case analysis method. Finally, it compares successful cases of digital tourism culture propagation. At present, the tourism industry should take advantage of the diversified expression forms and transmission paths of digital media art to provide novel and efficient transmission strategies and methods for tourism culture, explore and highlight the cultural connotations of tourism destinations, expand the range and depth of tourism culture, and protect the culture and promote the inheritance of tourism destinations while improving the economic and cultural benefits of tourism culture.

2. The concept and characteristics of tourism culture communication

2.1 The concept of tourism culture communication

Dissemination refers to the purposeful information transfer between two mutually independent systems using certain media and channels [2]. Tourism culture is a kind of culture formed in communication and dialogue, and the formation and development of this culture cannot be separated from communication. The dissemination of tourism culture is accompanied by the whole process of tourism activities and does not even end with the termination of tourism activities. The dissemination of tourism culture includes the dissemination of tourism natural landscape culture, the dissemination of tourism human landscape culture, the dissemination of tourism social landscape culture, and the dissemination of tourism enterprise culture. Among them, tourism social landscape culture is the essence of the tourism culture system, including religious, folk, and food culture.

Understanding tourism culture includes multiple perspectives. This article leans towards the narrow definition of the "tourism + culture" viewpoint, which understands the culture of a tourism destination as a tourism resource of the region. According to Yan Yaxian's article "Views on Tourism Culture," "tourism culture is a particular comprehensive undertaking for tourists based on the planning of development projects and the construction of tourism bases, relying on natural landscapes and cultural facilities, and using literary, artistic, recreational, exhibition and scientific research activities as means." Tourism promotion is an industry highly dependent on mass media in modern tourism activities. More audiences can only know the natural and human resources of the tourist destination with the help of mass media. "No dissemination means no existence; tourism culture must have value through dissemination, and the effect of tourism dissemination is ultimately the result of cultural effect"[3]. With the rapid development of the tourism industry, cultural communication has become a critical point of tourism development. Further development of the tourism industry needs to rely on the efficient and extensive communication of tourism culture by media to not only gain economic benefits but also to inherit, protect and develop the culture of the tourist destination.

2.2 Period characteristics of tourism culture communication

Visualization of communication characteristics. Visual communication scholar Lester described the current visual communication as follows: "The reality today is that our world around us is mainly mediated through visuals, and our understanding of visuals is not through textual information but more through visual information"[4]. Therefore, visibility and visual interpretation have become essential to contemporary cultural production, communication, and reception activities. As a mass culture of society, tourism culture is also inevitably affected by visual communication. Visualizing tourism culture aims to make tangible and intangible tourism culture visible. With the help of digital technology, media content centered on words is shifting towards images, videos, and interactive experiences in the digital information society. According to Michelle of the University of Chicago, "Visual culture refers to the transformation and formation of a cultural form that is increasingly turning away from the rationalism centered on language to an image-centered, especially video-centered, sensualism. Visual culture marks the transition and formation of a cultural form and a transformation of human thinking paradigm"[5]. Therefore, providing abundant and vivid visual tourism culture information content for tourism audiences has become the main feature of current tourism culture promotion.

Digitization of communication media. Digitalization of communication media refers to broadcasting tourism culture through digital media. Digital communication, also known as digital media communication, refers to the new media communication methods with the computer as the main body and multimedia as the auxiliary. In terms of the content and form of communication, it has the characteristics of digitalization, globalization, rich and diverse information, infinite potential, storage, easy reproduction, and easy retrieval; in terms of the way of digital media communication, information publishers and receivers can have timely discussion,

exchange, and communication, with features such as speed, multimedia, and interactivity. Regarding the relationship between digital media and communication, the status of receivers has improved, and they have the right to choose and the autonomy of information content, communication methods, and communication time. The digitalization of communication media provides tourists with timely and abundant tourism culture consultation, vivid image presentation of tourism culture, and humanized tourism culture services, which meet the needs of tourists for diversified information acquisition and interactive communication. It is the new characteristic of tourism culture communication nowadays.

3. Concept definition and characteristics of the digital art design

3.1 Definition of the concept of digital art

Digital art and design are an interdisciplinary field that combines visual arts, design, digital interaction, and computer graphics. It is a course of artistic design that utilizes digital information elements such as digital graphics, sound, and images through artistic design methods such as deconstruction, reconstruction, and collage [6]. The development of digital technology and network technology has driven design innovation and provided new paths for expressing various designs. Digital media art is closely related to industrial design and information design. It is integrated with media communication technology in terms of expression form, content, and communication form and relies on the development of digital media technology. As a cross-media and unique form and language art category, digital media art has the technical characteristics of digitalization and the communication characteristics of interactivity, which change the communication environment of information and makes information communication more efficient, convenient, and humanized. In addition, the artistic characteristics make the presentation of information richer, more colorful, and closer to the audience's aesthetic needs. Therefore, digital media art can achieve effective and positive information communication and become an important medium and tool for modern social information communication.

3.2 Design characteristics of digital art

Digital media art, as an independent art form, has its unique artistic expression as traditional art. However, compared with traditional art, digital media art belongs to the category of visual art and audio-visual art. It has a higher performance ability than painting, photography, dance, drama, and other forms of expression. In addition, it has the following characteristics.

Virtuality. The most apparent characteristic of digital art is its virtuality. Robert Hiltz, the Chief Professor at the University of Alberta, defined virtuality as a virtual situation where things do not or may not conform to reality [7]. Nero Claudius Caesar once said, "Virtual reality can make things as realistic as real things, even more, realistic than real things"[8]. Digital art designs many realistic and unreal scenes in internet entertainment, film and television art, computer games, etc. For example, the scene layout and character design in computer games. Through virtual digital images with virtual network technology, another kind of "reality" is achieved.

Interactivity. Artists selectively recreate things to express their concepts of the world, creating art that can be shared with others [9]. The audience sharing of artworks is also a process of re-creation of artworks. Therefore, participants' experience in art is an essential link in the design of art creation. For example, in the traditional media period, people will immerse themselves in the world described by the film with the director's behind-the-scenes arrangements when watching the film. This is also the artist's way of communicating with the audience by organizing his thoughts into artworks. Nowadays, digital technology is more advanced, and more digital artworks will continue to design content according to the audience's interactive choices, and some will even produce different artistic effects due to different choices of the audience. Therefore, digital art design

has interactivity.

Spectacle. Through digital technology, digital art and design restore and re-creates scenes that have already been extinct or never existed in the real world through imagination so that the audience can get new senses and experiences. At the same time, digital art uses scientific and technological means to set up wonderful and spectacular scenes. It's shocking artistic effects also bring fantastic visual feasts to the audience.

Integration. Digital art is an interdisciplinary field that combines various contents. Through digital technology, various expression methods can be created to blend different art forms in one design work. Different communication methods and digital media blend to create different art effects. The integrative nature of digital art design creates various expression forms, providing more possibilities for the diversity of modern technological works.

4. The influence of digital media art on tourism culture communication

The rise and development of digital media art have penetrated various media and information service fields. The propagation of tourism culture is inevitably affected. From the perspective of communication, communication is the flow of information and cultural information in tourism culture. With Laswell's famous "5W communication model", namely Who → Says what in → which channel to whom With what effects, this paper will analyze the influence of digital media art on the propagation of tourism culture to have a clearer understanding of the propagation of tourism culture in the digital age

4.1 Communication subject and object: from one-way passive to two-way interactive communication

Traditional media communication is mostly passive communication, such as television and radio. The audience only passively receives information, and the relationship between information works, and the audience is a give-and-take relationship in which the audience is only a passive recipient. Modern tourism culture communication activities have begun to pay attention to the interactive participation of the audience, and the interface of tourism information websites is equipped with communication areas and extraordinary forum communities for travel enthusiasts to communicate and interact. In addition, social network marketing communication has received attention from the tourism industry and has become an essential cultural communication in tourist places. Digital media art provides a friendly human-computer interaction environment for tourism culture communication, improving the audience's initiative and interaction in tourism culture communication activities. The communicator and the audience are no longer in a one-way transmission process. However, with two-way communication, cooperative interaction, and a positive feedback process, the audience can actively transform from the receiver of tourism culture to the communicator of tourism culture. The figure below shows the social media platform in Venice (Figure 1), from which it can be found that a total of 110,000 tourists have actively shared tourism content on the platform's Venice Club so far. Visitors are actively sharing their travel experiences and spreading the culture of Venice at the same time.

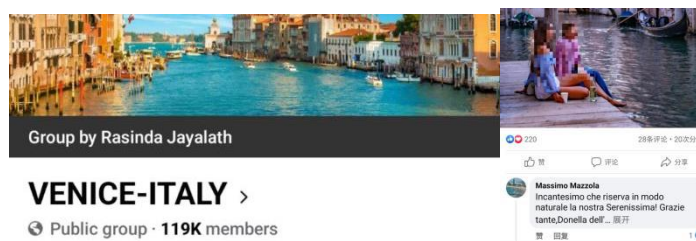


Figure 1. Venice Social Media Account

(Photo credits: <https://www.instagram.com/venice/>)

According to the analysis of the marketing effect of the SNS accounts of provincial tourism management departments in China conducted by a research institution (Figure 2), the Shandong Provincial Tourism Management Department has the highest activity, with more than 8000 published articles. In contrast, the SNS followers of the National Tourism Administration have exceeded 700,000, ranking first in coverage. It can be concluded that tourism departments attach great importance to using emerging digital media to strengthen information communication and interaction with audiences, to enhance the dissemination of tourism culture.

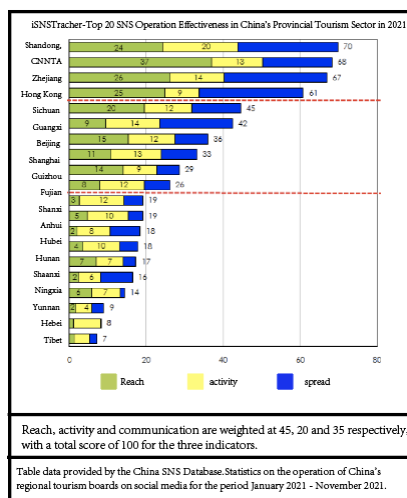


Figure 2. Top 20 SNS Operation Effectiveness in China's Provincial Tourism Sector in 2021

4.2 Communication content: diversified content design

Digital media art humanized technology and multi-dimensional design language, with "media integration" characteristics, integrating visual, auditory, and tactile functions as one, can provide tourists with diversified, multi-sensory, all-round, educational, and entertaining tourism culture content services, create an immersive environment atmosphere, stimulate the participation of tourism audience enthusiasm, to better understand the tourism culture information. Many exhibition halls, museums, and other places are committed to interactive multimedia displays, including interactive games, recognition interaction, image interaction, and other games with high-tech experience. The original bland graphics combined with creative interactive game forms are displayed so that the display content dissolves in it and achieves perfect integration, which helps tourism audiences understand the information in the process of participating in interactive games better to achieve the effective dissemination of tourism culture information. The Cognitive Psychology Perception Co-regulation Law shows that cooperative activities of multiple senses can improve the perception effect. That is, the more senses that participate in collecting information, the richer the information obtained and the better the perceived effect of the information. Psychological research has also found that the memory effect of knowledge gained from different sensory organs differs. Generally, people can remember 15% of the knowledge gained through auditory and 25% of the knowledge gained through visual. However, if auditory and visual are combined, the obtained knowledge can reach up to 65% (Figure 3) [10].

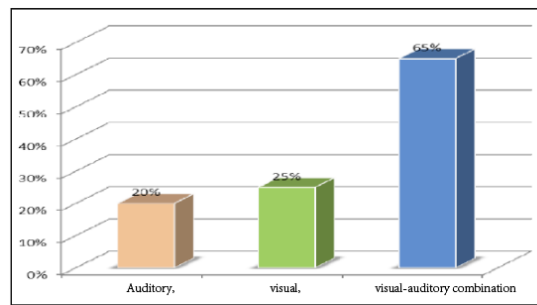


Figure 3. Different sensory memory contrasts

As in Figure 4, the picture below demonstrates the famous ancient Chinese painting "Qingming Shanghai Tu." Traditionally, Qingming Sangeeta is a Chinese painting and calligraphy work. Visitors can only imagine the social scene at that time through the framed picture. However, through digital media technology, the designer combines documentary materials to give the painting and calligraphy work a dynamic presentation effect. Visitors can see the specific activity trajectory of each character in the picture and hear the content of the character's speech by getting close to the character in the picture. This new content presented by combining documentation and visual works is a creative expression of the content of tourism culture communication given by digital media art.



Figure 4. Dynamic presentation of Qingming Shanghetu

(Photo credits: https://www.bilibili.com/video/BV1564y1f7BW/?p=1&vd_source)

4.3 Communication media: a more complimentary medium of communication

"The impact of digital media on media ecology, one of the main manifestations is to break the traditional media barriers, through the computer virtual to achieve the integration of platform and resources"[11]; digital media as an integrated, diversified media, is a product of the combination of information technology and multimedia technology, compared with the traditional mass communication media has apparent advantages, both the choice of communication media and the choice of reception media are more accessible and play a significant role in tourism culture communication. Digital media integrates the functions of traditional media such as newspapers, radio, and television for information dissemination, forming a highly time-efficient, high-capacity, and diversified communication method, breaking the boundaries of time and space, and giving tourists complete selectivity and autonomy. Taking the tourism and cultural communication of the Louvre in France as an example, the Louvre has built an official website and developed cell phone software for tourists. According to the content of the Louvre's tourist culture information and the characteristics of the tourist audience, the advantages of different media are integrated and optimally combined to achieve the best dissemination of tourist culture. For example, for visitors to the Louvre, the software is designed to follow the explanations in real time. To promote the culture of tourism, an online museum is also being created for visitors who cannot come to the site so that visitors can learn about and experience the content of the Louvre's culture of tourism without leaving home (Figure 5).

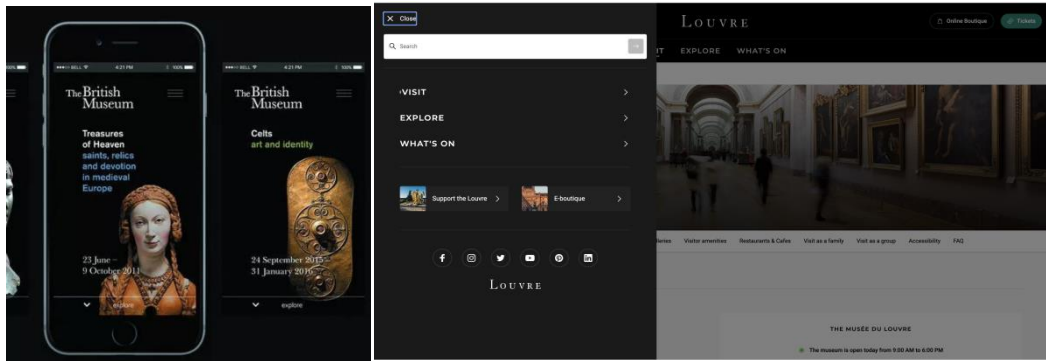


Figure 5. Screenshot of Louvre Travel software

(Photo credits: <https://www.louvre.fr/zh-hans/tansuofaxian>)

Louvre tourism culture skillfully uses a combination of text, sound, pictures, and images to bring people an all-around, three-dimensional audio-visual experience, enhance the audience's sense of being there, and make the content more infectious and influential. Furthermore, the extensive use of multiple communication media helps to impress the recipients and realize the efficient interactive communication of tourism culture.

4.4 Communication effect: helping tourist places to complete cultural regeneration

The virtual and spectacle characteristics possessed by digital art itself are of great significance to the reconstruction of tourism culture or scenes that have been destroyed in the real world. Due to historical wars, natural disasters, and other reasons, many physical or real scenes of tourism culture cannot be preserved to date. Tourists can only understand tourism culture through documentation or effect drawings, which cannot effectively display the natural appearance of the tourism culture and have little effect on the protection and inheritance of culture. However, through a particular imagination, combined with historical documents, digital media art will restore and recreate the disappeared culture and scenes so that the audience can have a more realistic experience. This will not only provide materials for the promotion of tourism culture but also help to complete the "regeneration" of tourism culture, bringing economic benefits to tourist places and, at the same time inheriting and protecting culture. The culture has been preserved. As an important archaeological site in ancient China, the tomb of the Marquis of Haixuan is of great significance, but for historical reasons such as war, only historical sites remain today. The designers used VR technology to show visitors the look of imperial life in China during the Western Han Dynasty by restoring the decorations in the ruins of the time. At the same time, they used digital game technology to create a virtual archaeological game based on the tomb of the Marquis of Haihang.



Figure 6. Haixianhou tomb VR scene demonstration and game demonstration live

(Photo credits: <https://baijiahao.baidu.com/s?id=1673920315038053764&wfr=spider&for=pc>)

This act of recreating a vanished culture has dramatically attracted the interest of tourists. The search index provided by Baidu, China's largest search site, for example, showed that on August 2, 2020, after the "Hou of Haihang VR tourism and game experience" was introduced, the number of searches for content related to the Hou of Haihang was six times higher than the previous day (Figure 7). This fully illustrates that the Marquis of Hai Xuan's tomb, a traditional tourist attraction, has received renewed attention with the support of digital art. Digital media art not only "regenerates" the tourism culture of the Marquis of Haishu in form but also rejuvenates the communication of the tourism culture of the Marquis of Haishu.

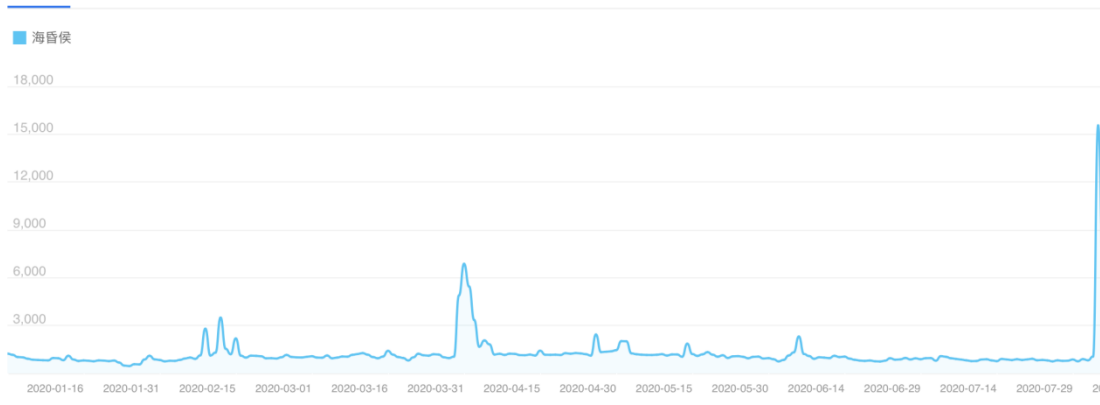


Figure 7. Baidu search index of "Haixuanhou" provided by Baidu

(Photo credits: <https://index.baidu.com/v2/main/index.html#/trend/haihunhou-words=haihunhou>)

In the production of the creative concept promotional video for the Australian Documentary Channel, the creative team extracted natural scene materials and 2D images for image synthesis. To dynamically display the scene from multiple angles, digital image technology was also used to combine two-dimensional and three-dimensional elements to draw multiple large scenes. To ensure the delicacy of each frame and add natural light sources, rainbows, mists, and other special effects to the scene, creative design thinking was used to magically turn the rolling waves into the magnificent scenery of the earth's fracture, forming a waterfall, which brings a solid visual shock effect to the audience and is extremely eye-catching. The creative performance form of the promotional video of the Australian Documentary Channel cleverly reflects the interactivity between man and nature, echoing the theme of "The World in Your Hands" and making the promotional slogan "There is always more to uncover" more visually attractive and persuasive.

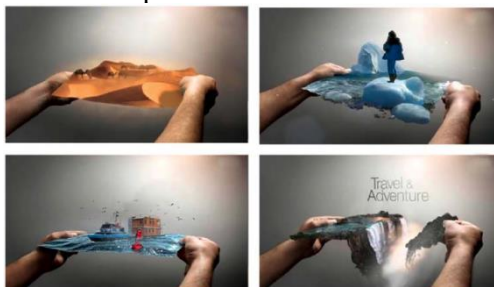


Figure 8. A creative concept film produced by the Australian Documentary Channel

(Photo credits: <https://index.baidu.com/v2/main/index.html#/trend/haihunhou-words=haihunhou>)

5. Conclusion

Digital media art has more excellent value in tourism cultural communication activities and has a broad development space and prospects. On the one hand, tourism culture communication should develop with the needs of The Times; on the other hand, with the evolution of information updates, it constantly changes its form of expression and communication to meet the audience's needs. From the viewpoint of the transmission-reception relationship, from a single passive to active interactive acceptance, which improves the autonomy and participation of tourism audiences in obtaining tourism culture information; from the viewpoint of the communication content, it realizes diversified communication content, which enables tourism audiences to better perceive tourism culture information and connotation, thus enhancing the communication effect of tourism culture; from the viewpoint of the communication media, the integrated communication of multimedia forms a highly time-efficient, high-capacity and diversified communication method. From the viewpoint of communication media, the integrated communication of multimedia forms a high timeliness, high capacity and diversified communication method, which gives the tourism audience sufficient selectivity and autonomy and promotes the scope of tourism culture communication; from the viewpoint of communication effect, the virtual and spectacle characteristics of digital art itself not only help tourism culture to complete "regeneration", but also its diversified design helps the audience to selectively understand and improve the perception ability and In terms of communication effect, digital art itself has virtual and spectacle characteristics, which not only help tourism culture to complete "regeneration", but also its diversified design helps audiences to selectively understand and improve the perception and aesthetic ability of tourism culture, thus realizing the effective communication of tourism culture.

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