



New Quality Productive Forces: The Empowerment of the Metaverse on the International Dissemination of Chinese Local Traditional Culture

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Abstract

Every disruptive technological breakthrough brings new momentum to human civilization. In the 21st century, the emergence of the metaverse has introduced a novel form of communication for international social interactions through virtual reality technology. In the increasingly interconnected realm of cross-cultural communication, the diverse landscape of communication methods—including integrated reporting, self-media dissemination, and virtual anchors—has undergone numerous transformations. The cultural market now imposes new demands on international communication, necessitating innovation, storytelling, and technological expertise. This article, beginning with the Chinese media industry, focuses on the international dissemination of traditional Chinese culture. By employing theories related to the metaverse and media literacy, and drawing on exemplary international communication cases, it explores how, amidst the rapid advancement of artificial intelligence and internet media platforms, to align with the trend of “global localization”. The limitations of local cultural dissemination enhance the effectiveness of local cultural communication and generate new, high-quality productive forces for international communication, thereby establishing a novel paradigm for cross-cultural communication.

Keywords

Metaverse; Chinese local traditional culture; international communication; new quality productive forces

Introduction

At the end of the 20th century, Chinese scientist Qian Xuesen first translated the term "virtual reality" into "lingjing," meaning an artificially created scenic environment in the Chinese context. "Without creating artificial scenery, one can still create a Suzhou Garden"—this aptly explained the technology of virtual reality, which was considered an advanced productive force for people at that time. In today's 21st century, the "metaverse" has ushered in the era of digital intelligence, where virtual reality technology integrates humanities, arts, education, film, and television, allowing multimodal communication and cross-platform interaction that transcends time and space. Undoubtedly, the "metaverse" has brought groundbreaking technological empowerment to the international dissemination of culture. This article focuses on the crucial aspect of Chinese cultural dissemination—the international dissemination of

Chinese local traditional culture, discussing how to generate new quality productive forces for international communication amidst the rapid development of technology, and how to form a brand-new paradigm for cross-cultural communication through diverse modes of "digital intelligence combined with human-machine interaction".

1. The Metaverse and New Quality Productive Forces

1.1 The Metaverse—A Technological Weapon for Virtual Reality

The metaverse is a comprehensive digital ecosystem that combines virtual and real elements, also referred to as the "shared virtual reality internet" and "fully immersive internet" (Yu Guoming & Geng Xiaomeng, 2022). It integrates various new technologies such as VR, blockchain, NFT, etc., subverting traditional forms of communication and extending the audience's sensory experiences limitlessly, often described as "immersive experiences" in contemporary terms. Simple graphic and text-based communication, as well as video dissemination, are no longer sufficient to meet audience demands. Communication forms with AI elements, such as 5D surround scenes, have become the new favorite in the media industry. The communication system has transcended from interpersonal communication to the era of mediated communication, undoubtedly providing new possibilities for human social interaction.

1.2 Technological Empowerment—A New Mode of Cultural Media Communication

Every productive revolution brings new momentum to the cultural media industry, and the integration of "media plus metaverse" will provide users with more delicate, authentic communication, breaking the limitations of news practice fields. Virtual reality digital technology can be applied to the restoration of cultural historical scenes, holographic projections in museums, etc. Interactive cultural displays can attract a larger audience to cultural sites, expanding the scope of dissemination. Diversified communication methods combined with culturally rich storytelling content can effectively enhance communication effects, leading to a new mode of communication.

1.3 New Quality Productive Forces—Innovation, Efficiency, and Revolutionary Technological Breakthroughs

In September 2023, Chinese President Xi Jinping first proposed the concept of "new quality productive forces," which are the contemporary advanced productivity generated by revolutionary technological breakthroughs, innovative configuration of production factors, and deep industrial transformation and upgrading (Hang Min, 2024). This concept is mainly based on the leap of laborers, labor materials, labor objects, and their optimized combinations, forming a new energy-level productivity with "intergenerational" leap characteristics. Its features include innovation, emphasizing high quality, and fundamentally representing advanced productivity (Cao Xiaoyang, 2024).

"New quality productive forces" are a tool that propels social development in the tide of the times. This article explores the use of the "metaverse" to generate a communication mode with "international perspective," "Chinese voice," and "local characteristics," empowering the development of new quality productive forces in international communication, and driving Chinese stories to the world and into people's hearts.

2. International Dissemination of Chinese Local Traditional Culture

2.1 Current Status of the Dissemination of Chinese Local Traditional Culture

Currently, the "global localization" trend is impacting the cultural market. Countries are transitioning from macro-level promotion of national culture to focusing on creating local characteristic intellectual properties (IP) and combining culture with tourism to create a new form of cultural industry. They are also adjusting their communication methods according to the market characteristics and cultural differences in different regions (Liu Ying, 2020). Additionally, the era of mainstream media dominating communication has passed, giving way to a combination of mainstream media, social groups, and self-media for communication.

From the globally popular Chinese rural lifestyle video blogger "Li Ziqi" to the widely discussed *Escape from the British Museum* series depicting Chinese artifacts, commercialization and uniqueness have become new symbols of cultural dissemination. In the fast-paced world of internet social interaction, people receive a large amount of fragmented information, leading to a spiritual emptiness, which instinctively attracts them to stories rich in "truth, goodness, and beauty." This presents a new requirement for the media industry: to produce cultural products with local

humanistic attributes. "Telling good local stories" is an important step in international communication.

2.2 Analysis of the Cross-cultural Dissemination Dilemma of Chinese Local Traditional Culture

Internally, local traditional Chinese culture is diverse and regionally strong, mostly relying on local dialects and folk customs for survival and development. The Guangdong and Guangxi regions, where Cantonese is prevalent, boast Cantonese opera, lion dances, and the festival of the Dragon Mother, while ethnic minority areas integrate dialects and vernacular into their operatic culture, such as the Guangxi Zhuang Autonomous Region's mountain songs and Tibetan opera. Sharing the same ethnic group or language family acts as a bond to create culturally cohesive clusters with strong regional characteristics, which is a distinct feature of local traditional Chinese culture. This state of "concentric circles" effectively preserves local characteristics but also creates barriers to cultural dissemination. The public cannot understand folk customs through unfamiliar dialects and vernacular, making it difficult for local culture to merge with mainstream culture. Furthermore, as times change, many traditional cultures with high costs and low returns, such as "guqin skills" and "copper craftsmanship," are at risk of extinction. This is partly due to a lack of inheritors—low income makes it difficult to attract young people, and also due to aging and outdated communication methods—primitive oral transmission lacks an audience and cannot tap into the market.

In terms of the market environment, simply promoting local characteristics cannot retain audiences in the long term; there is also a need to innovate in line with the pulse of the times. Some bloggers and cross-border e-commerce platforms have keenly observed this: for example, incorporating elements of the Ming and Qing dynasties into the production of armor for sale overseas has attracted many fans interested in Chinese culture. At the same time, we need to explore the perspective of cultural dissemination. "Seeing China with Foreign Eyes and Speaking About China with Foreign Tongues" is a new perspective on communication. At the debut of *Riding the Wind 2024*, French singer Joyce Jonathan performed a segment of Yue opera *From Heaven Fell an Angel Sister Lin*, receiving high praise internationally for her fluent Chinese pronunciation and melodious operatic singing style. The then French Prime Minister Gabriel Attal also sent a video blessing to Joyce. This example perfectly demonstrates the perfect integration of local characteristic operatic culture in China with a foreign vocalist. It also adapts the challenging Chinese operatic singing style into a rhythmic and melodious pop singing style, to some extent breaking through the dilemma of operatic dissemination. Coinciding with the 60th anniversary of diplomatic relations between China and France, Joyce was involved in various cultural exchange activities, visiting the Beijing French Cultural Center and singing traditional Chinese operas. Xinhua News Agency, CGTN French Channel, and Global Times and other media outlets from various countries conducted interviews and reports on this. From the perspective of international communication, this cross-border exchange was undoubtedly a great success, and subsequent activities further increased the international visibility of Yue opera culture. Using individual narratives and personalized audio-visual performances to achieve empathy with overseas audiences, it is more authentic and achieves the goal of conveying the core values of local culture based on innovative communication methods (Zhou Yan, 2023).

3. The Metaverse Gives Birth to New Quality Productive Forces for the International Communication of Chinese Local Traditional Culture

3.1 Case Analysis of Chinese Local Media Using "Metaverse" Series Technologies for Communication

3.1.1 Gusu Suoji—Interpreting the Scenery of the Song Dynasty with AI Dual Technologies

On August 4, 2022, the public welfare short film "Gusu Suoji: The Fairy" produced by iFLYTEK Input, iFLYTEK Suzhou Research Institute, and Studio Shenlouzhi as part of a dialect protection program, was officially released.

The protagonist, "the Fairy - Yusheng," demonstrates natural and fluent transitions between different costumes and facial expressions in various scenes throughout the play, appearing lifelike. In fact, this is the first release of the high-fidelity digital twin virtual character "Yusheng" by the iFLYTEK Suzhou Research Institute (close-up of the virtual character's face in Figure 1). The creation of this virtual character image does not excessively pursue beauty, but rather aims for authenticity, providing audiences with a sense of familiarity and creating a realistic communication effect—making people feel as though this is a Suzhou woman from the real world sharing touching cultural stories with us.

The film also features another astonishing AI technology - artificial intelligence synthesis of Suzhou dialect. It is already challenging for AI voice to speak Mandarin, not to mention the Suzhou dialect, which has 28 initials, 49 finals, and 8 tones. In 2018, iFLYTEK Input initiated the "Artificial Intelligence Suzhou Dialect Protection Plan".

Currently, 22,000 volunteers have participated, collecting a total of 57,000 pieces of Suzhou dialect data. The technical team spent three years accumulating over a thousand hours of real data, and through iterative algorithm training, successfully constructed the Suzhou dialect model. From the perspective of this cross-border integration practice of AI technology and local culture, the evolving metaverse provides a "digital world" for local cultures, and these digital human images serve as the second self of local culture, making culture more enduring and vividly preserved.



Figure 1. Close-up of the digital virtual character "Yusheng".

It is worth mentioning that this technology is gradually being applied by the industry to protect historical dialects. The Chinese local chronicles office has been committed to collecting dialect data. The multimodal corpus spawned by metaverse technology provides digital guarantees for the preservation of dialects. After the integration and modeling of the local dialects through the corpus, they are being applied to life scenarios such as car navigation and voice assistants.

3.1.2 Shenzhen Satellite TV—AIGC Examples and New Media Matrix

Shenzhen Media Group, together with technology companies such as Huawei and Tencent, has established the "AI Joint Laboratory". Over the past 20 years, the group's subsidiary, "Tianqing Digital", has been committed to investing in digital technology innovation and development, serving large-scale digital applications for governments and enterprises. It has gradually formed a virtual digital human full-chain ecological map composed of "upstream production rendering plus midstream driving operation plus downstream scene application and commercialization" (see Figure 2).

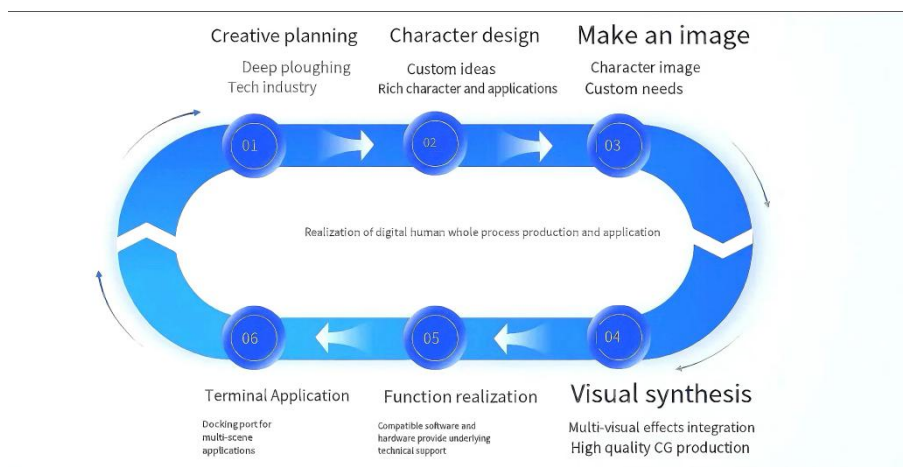


Figure 2. Full Chain of Virtual Digital Humans.

Tianqing Digital relies on a complete set of virtual integrated systems (see system chain in Figure 3) based on key technologies such as AR, glasses-free 3D, holographic imaging, and digital interaction to continuously push the boundaries of virtual digital human effects, allowing enterprises to achieve broadcast-grade large-scale virtual production effects with low-cost software and hardware expenditures.

At the same time, Tianqing Digital, in collaboration with the program "Zhengwu Kantianxia," has created a new media brand image—the virtual digital persona "Shen Ai." They have launched "Shenzhen Media Group IP" AI live streaming for sales throughout the day, further promoting the group's technological upgrade and brand rejuvenation.

The virtual digital persona will also utilize the laboratory database to select trending internet phrases such as "new quality productive forces" and "beautiful countryside," and use self-developed laboratory technology to create text-based images and video-based content, envisioning future aspirations.

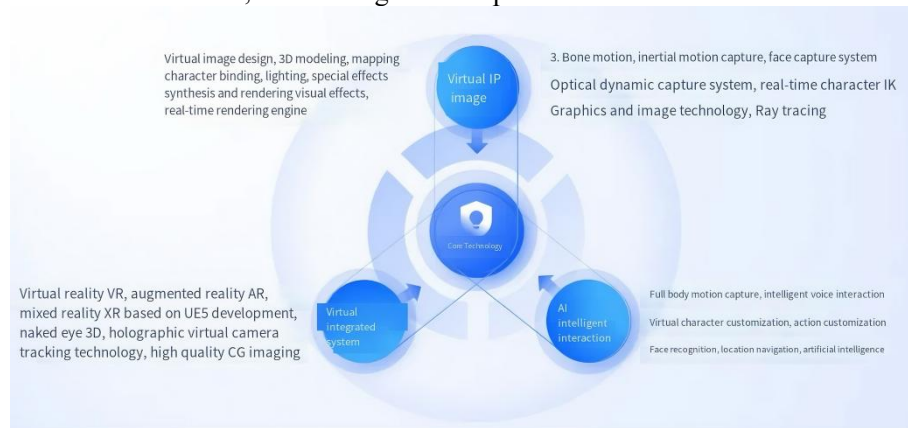


Figure 3. Virtual Integrated System Chain.

The AIGC matrix of Shenzhen Media Group provides a reference path for the transformation and upgrade of local traditional media industries: analyzing hot topics and user behavior through AI algorithms, formulating precise communication strategies, and optimizing content dissemination pathways. They are exploring the combination of the metaverse and media, and pioneering intelligent live broadcasting and other business models. By collaborating with enterprises, they aim to enhance communication efficiency and increase economic benefits.

In conclusion, the metaverse is driving the transformation of traditional media towards digitization and intelligence. The AIGC matrix empowers media platforms with higher quality and more efficient communication patterns.

3.1.3 Water Charm of Jiangsu

In recent years, Jiangsu Province has been committed to creating a cultural emblem known as "Water Charm Jiangsu," unifying the publicity approach for Jiangsu Canal culture and enhancing the international communication power of Jiangsu Canal culture as a whole.

Cities across the province are actively integrating new media technologies, constructing an immersive media matrix for the Grand Canal of Jiangsu, and conducting targeted communication while considering the regional characteristics and local customs of each city. Leveraging platforms such as WeChat, Weibo, and short video platforms like Douyin on mobile phones, they implement a matrix-style dissemination strategy. In terms of virtual reality technology, they are constructing an immersive digital community for the canal culture, presenting the overall landscape of the Grand Canal water transportation system in Jiangsu. They are utilizing 5G technology, virtual reality, and streaming media technology to establish an immersive experience hall for the Grand Canal of China, providing audiences with a communication experience blending reality with the virtual, history with present, and subjectivity with objectivity.

The combination of government-enterprise communication and virtual reality technology has brought a new window for local cultural and tourism communication. Instead of simple storytelling, Jiangsu's outstanding achievement lies in creating the distinctive IP of "Water Charm of Jiangsu." The powerful influence of this cultural and tourism emblem has doubled the effects of cultural dissemination.

4. Summary and Discussion

The metaverse provides new opportunities for the international dissemination of traditional Chinese local culture. Through innovative digital experiences, social interaction, and the digital economy, Chinese traditional culture is revitalized in virtual space as a new productive force. This paradigm shift in cultural communication in the digital age not only injects new vitality into traditional Chinese culture but also expands the possibilities of cultural communication globally. The three excellent cases analyzed in this article, focusing on "AI plus dialects," "AIGC matrix," and "immersive virtual reality cultural tourism experiences," dissect the development path of the metaverse empowering the international dissemination of traditional Chinese local culture. The goal is to explore a cross-cultural

communication paradigm of "metaverse plus media" for the development of the cultural and media industry.

While technological innovation has brought about many conveniences through new quality productive forces, it is essential to pay attention to potential social risks such as artificial intelligence, social ethics, and the proliferation of fake news. While promoting technology and enhancing communication efficiency, it is crucial to ensure communication quality and uphold the ethical standards of the media. It is also important for academia and industry to establish rules and boundaries during the innovation process, regulate the misuse and abuse of technology through platform mechanisms and technical means, and maintain a healthy ecological environment for international communication. The ultimate goal is to create cultural works that satisfy the public and set industry benchmarks, telling the international story of the dissemination of local traditional culture effectively.

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