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Analysis on the Transformation of Cultural Communication Paradigms in the Field of Generative Artificial Intelligence

Yuyang Feng, Tao Zhang

Xi'an Polytechnic University, Xi'an, Shaanxi, China

Abstract: ***The rapid development of generative AI is reshaping the cultural communication ecosystem. With its powerful content generation capabilities, generative AI comprehensively empowers cultural communication, revolutionizing the cultural communication paradigm by expanding its scope, reconstructing its forms, and strengthening its identity. However, this technological empowerment faces three challenges: technological dependency, information cocoons, and decentralization. Therefore, by proposing a strategic coupling of enhancing digital literacy, deepening content creation, and building communication platforms, we can provide theoretical insights for advancing digital cultural communication and offer decision-making support for the implementation of the national cultural digitalization strategy.***

Keywords: Generative Artificial Intelligence, Cultural Communication Methods, Technology Empowerment**.**

1. Introduction

In the digital age, intelligence and technology are developing rapidly. We are currently in an intelligent era characterized by digital transformation and technological integration. Generative AI, a cutting-edge technology in the current field of artificial intelligence, refers to brain-inspired intelligence that can generate a series of original text, images, videos, and other content based on existing databases by learning and analyzing large-scale data. Currently, generative AI has been applied in various fields, including healthcare, energy, and finance. Amidst the new wave of technological revolution, cultural communication needs to rely on the achievements of scientific and technological innovation to promote its own inheritance and development in the new era. Today, human society is at a critical juncture of technological innovation and cultural paradigm shift. Standing at a crossroads, we face unprecedented opportunities for development, but also numerous risks and challenges. We must fully leverage existing cultural resources, deeply explore the logical implications of generative AI empowering cultural communication, build a symbiotic bridge between the two, further explore the paths of generative AI communication, and fully tap into the advantages of AIGC in cultural dissemination, so that culture can take root in people's hearts in a more vivid and diverse way in the new era. Therefore, how to use generative AI to promote the dissemination of traditional culture is particularly important.

2. Generative AI Empowers Paradigm Shift in Cultural Communication

From the perspective of historical materialism, productivity is the decisive factor in social development. Culture, as an important component of the political superstructure, has a strong driving force for social development. As a product of human social practice, generative artificial intelligence has long transcended its own tool attributes and is intertwined with political, economic, and cultural elements in society [1]. Following this line of thought, based on an in-depth analysis of the characteristics of generative artificial intelligence technology, we focus on the development of traditional culture and rationally examine the important opportunities it brings to the development of traditional culture.

2.1 Expansion of Entities: Building a Diversified Co-creation Ecosystem

As the main force of innovation, people play an important role in cultural content innovation. In the era of professional-generated content, cultural production mainly relies on a top-down communication model. Content is generated by professionals, which places high demands on the subject. It is disseminated through traditional media platforms and has high authority and influence. The audience is a passive recipient of cultural communication. In the era of user-generated content, the general public has become an important subject of cultural communication. Everyone can publish content through the Internet. The creative subjects are diverse and the audience is no longer just a simple information receiver. However, the difference in professional knowledge and ability has caused an imbalance in the communication effect, forming a "capability gap". [2] Entering the era of generative artificial intelligence (AI-generated content), the subject of cultural content innovation has been expanded. In the field of cultural creation, artificial intelligence has gradually become a powerful assistant to human intelligence, forming an innovative creation model of human-computer collaboration. In the process of human-computer interaction, people can be free from the restrictions of language and knowledge. As a new generation of information technology, natural language processing technology (NLP) can provide cultural creators without professional ability with a low-threshold cultural creation experience, enhance the subject's cultural creation ability, and expand the subject of cultural creation. At the same time, generative AI can also provide inspiration and enlightenment to humans by learning from a large number of cultural works and exploring the patterns and styles therein.

Take DeepSeek, for example. Natural language processing technology strives to accurately understand and generate

human language, bridging the gap between human and machine communication. Deep Thinking (R1) demonstrates a detailed and transparent logical reasoning process, enabling not only an understanding of knowledge but also the ability to trace the AI's thought process. Connected to the internet, it can integrate existing resources and rapidly generate logically rigorous content systems. As a technology native to China, DeepSeek is more adaptable to local needs and language habits, more closely aligned with Chinese users.

2.2 Form Reconstruction: Creating an Immersive Communication Scenario

Generative AI is embedded in related technologies such as virtual reality (VR), augmented reality (AR), and mixed reality (MR) to build a bridge connecting the real and virtual worlds. This not only breaks the limitations of physical space, but also enables cross-temporal communication and mutual learning. This technology relies on multi-dimensional perceptual experiences such as vision, hearing, and touch to enable the audience to deeply perceive the value and meaning of cultural symbols. In this process, the educational intelligent body of generative AI, especially the combination of realistic virtual images, makes the educational experience more humane by integrating emotional computing and deep learning technology [3]. In this mechanism, the system can monitor audience feedback in real time and adjust data in time to achieve the best immersive experience. For example, the VR experience project launched by the Qin Shi Huang Terracotta Warriors and Horses Museum allows visitors to observe the details of the terracotta warriors up close in a virtual environment, as if they were in the terracotta warriors, and further understand their historical background and production process, gaining a richer and deeper experience than traditional visiting methods. In the field of performing arts, AR technology is used to combine virtual elements with real stage performances to create fantastic visual effects, enhancing the viewing and interactivity of the performances. In addition, smart interactive devices also add new fun to the cultural experience. Audiences can interact with cultural display content through touch, gestures, voice, etc., to achieve a more personalized cultural experience.

Different from personalized recommendations, immersive experience enhances the audience's independent experience of culture through a subjective perspective, internalizes cultural values into deep emotional resonance in immersive perception, and provides a new development paradigm for cultural communication.

2.3 Identity Reinforcement: Personalized Recommendations and Emotional Computing

Artificial intelligence (AI) can personalize the dissemination of traditional culture. By analyzing user browsing history, search keywords, likes, comments, and other behavioral data, AI can accurately identify users' interests and needs and deliver personalized traditional cultural content. Furthermore, generative AI, based on big data analysis and deep learning, customizes a personalized "interest graph." This not only reflects users' superficial interests but also taps into their underlying cultural preferences and values, providing a highly adaptive underlying logic for content recommendations. This personalized push fosters a stronger cultural connection between users and allows them to more easily resonate with cultural content of their interest, fostering a stronger emotional connection with the culture.

Take DeepSeek, for example. Born from a native Chinese language environment, DeepSeek is trained on a vast library of Chinese language data, creating a certain cultural divide from ChatGPT. DeepSeek's generative AI, trained on Chinese language data, embodies the values of Chinese culture in language processing, giving it a natural advantage in promoting traditional Chinese culture. While it lacks emotional awareness, it can mimic human emotions and language, establishing human-like social connections and emotional connections during user interactions, creating space for building consensus and fostering shared understanding. DeepSeek-like generative AI can present traditional culture in a vivid and engaging way. During interactions with humans, it can discern the Chinese language conventions and cultural background embedded in users' speech, thereby uncovering shared topics.

3. Hidden Concerns about the Cultural Communication Paradigm Empowered by Generative AI

"While bringing benefits to mankind, it also brings harm. This is a paradox inherent in any technology." [4] Generative artificial intelligence has played a huge role in the process of spreading traditional culture, but the development of technology will also cause many risks and problems.

3.1 Technological Dependence: A Potential Hindering Effect on Innovation in Cultural Communication

The "pseudo-comprehensiveness" constructed by generative artificial intelligence through full data sample collection and exhaustive parameter training is contrary to the creativity required for the evolution of human civilization, causing the subject of cultural innovation to become dependent on technology and deviating from the concept of "the all-round development of human beings."

From the perspective of the subject of cultural creation, while current generative AI has achieved superficial imitation of human governance in the cognitive realm, it still cannot fully mimic human consciousness, such as inspiration and intuition. This technological limitation manifests itself in two practical aspects: first, cognitive alienation, manifested in the fact that humans, driven by technological dependence, cede the power of interpretation, planning, and decision-making over cultural production to AI; second, the degradation of practical ability, manifesting itself in risks such as fragmented knowledge acquisition and a dulled awareness of problems.

From the perspective of technological philosophy, the current application of generative AI in cultural production presents a profound contradiction: on the one hand, AI can be a powerful aid to content producers in areas such as cultural topic selection and content optimization; on the other hand, the tendency towards technological worship is gradually undermining human innovative thinking. Generative AI lacks true thinking ability and is essentially a reorganization and

arrangement of symbols. This averaging production model not only makes it difficult to achieve cultural innovation, but also deprives cultural innovators of the ability to break through existing models.

3.2 Information Cocoon: Potential Solidification of Cultural Content

From a communication perspective, cultural content recommended by intelligent algorithms, through user profiling and behavior tracking, is targeted based on user preferences and interests, leading to a deeper crisis of cultural cognition. First, users are exposed only to cultural content that interests them over time, becoming trapped in information cocoons and forming information barriers, leading to a rigid cycle of "preference-recommendation-reinforcement." Second, prolonged exposure to information cocoons can lead to imbalanced information access and ultimately impoverishment of cultural cognition. Third, personalized recommendations are a variation of Marcuse's "one-dimensional culture." Under the influence of algorithms, humans become deeply dependent on technology, resulting in a decline in their understanding of culture.

Technological surveillance traps individuals in a "cultural information cocoon," hindering the dissemination of diverse cultures. In the process of human-machine coupling, users are digitized and technology is embodied, forming a two-way, open interaction between humans and machines, with digital surveillance mediated by data encoding. During this interaction, individuals actively expose their values and preferences to generative AI in the form of data in order to obtain customized cultural services. This collected data is then used to adaptively promote cultural content, continuously outputting highly convergent cultural content to the audience, further reinforcing the state of the information cocoon.

3.3 Decentralization: Potential Risks of a Centripetal Pattern of Cultural Communication

Traditional culture is the overall expression of various ideological cultures and concept forms in the history of various ethnic groups. Its content should be the various material, institutional and spiritual cultural entities and cultural consciousness that have existed throughout the ages [5]. In the era of artificial intelligence, traditional media have encountered a huge impact. They have shifted from the traditional "top-down" communication model to a distributed communication network. The leadership of mainstream media in the ideological field has been weakened, and the trend of decentralization is obvious.

Chinese culture, a diverse and integrated culture that embraces and integrates the eclecticism of various ethnic groups, is built on a shared cultural foundation and shared values. Generative AI exhibits a high degree of autonomy in the production of culture, allowing it to create content independently of mainstream media. This "decentralized" trend has led to the fragmentation of cultural expression. The flood of information can lead to cultural cognitive dissonance, making it difficult for individuals to form stable value judgments amidst the complexities of cultural information. When algorithmic cultural content is recommended, the "filter bubble" effect of cultural dissemination is exacerbated, making it difficult for different groups to form cultural consensus and weakening social cohesion.

4. Responses to Generative AI-Enabled Cultural Communication Paradigms

4.1 Improve the Digital Literacy of All Citizens and Build a New Ecosystem of Intelligent Civilization

The core of cultural dissemination in the digital age is the process of empowering people through digital technology to achieve modern development. Only by possessing the corresponding digital literacy can we harness the development and application of artificial intelligence and achieve a leap into the digital age.

As the leader of digital technology standards, technology regulators shoulder the leading responsibility for managing and building technology. The development of technology should be constrained by cultural norms and value systems. Any technological innovation should be carried out on the basis of respecting cultural sovereignty and intellectual property rights to avoid erosion or alienation of cultural essence [6]. Therefore, it is necessary to strengthen the ethics and review capabilities of generative artificial intelligence in mining the treasure house of traditional culture so that its content can move forward in a direction that conforms to cultural values. As the leader of digital technology development, technology developers should give it correct values at the beginning of technology construction, and should establish a correct cultural and development perspective to avoid cultural bias and the risk of value dissolution. As co-builders and sharers of digital technology, the quality of digital citizens determines the height of cultural development. Therefore, it is necessary to cultivate cultural awareness and cultural confidence, always establish innovative thinking and initiative, avoid over-reliance on technology, and consciously play the main role of cultural innovation.

4.2 Deepen the Creation of High-quality Content and Empower the New Prosperity of the Cultural Industry

The report of the 20th CPC National Congress pointed out that "we must prosper cultural undertakings and cultural industries." [7] Content production is at the upstream of the cultural creation industry chain and is of great significance to the dissemination of culture. AIGC technology should adhere to the principle of "empowerment rather than usurpation" and, while upholding the cultural core, activate the vitality of cultural innovation with its advanced data processing capabilities and deep- thinking capabilities.

Technology is not a value-neutral tool, but rather a medium embedded in the fabric of society and culture. Technology and culture are in a formative relationship. Cultural traditions and modern technology exist in a relationship of unity and opposition. On the one hand, technology empowers culture, enabling its development and dissemination in new forms, imbuing it with fresh vitality. For example, the phenomenal success of "Nezha: The Devil Child's Mind" exemplifies the

power of technology to empower China's fine traditional culture. By integrating motion capture and facial recognition technologies to construct algorithmic models for emotional expression, the film achieved the transition from cultural symbols to cognitive resonance. On the other hand, the application of technology is constrained by cultural norms and value systems. The ethics and morals within these value systems constrain its application, necessitating strict legal restrictions and ethical norms.

4.3 Build an Intelligent Communication Platform to Promote a New Landscape of Mutual Learning Among Civilizations

General Secretary Xi Jinping emphasized at the 30th collective study session of the CPC Central Committee: "We must better promote the spread of Chinese culture, use literature to convey ideas, use literature to spread voices, and use culture to educate people, and explain and promote to the world more excellent cultures with Chinese characteristics, embodying the Chinese spirit, and containing Chinese wisdom." [8] Based on digital media platforms, all participating entities can conduct full and equal exchanges and mutual learning among civilizations and negotiate and dialogue, helping to create a new form of human civilization." At the technical level, the intelligent communication platform built by generative artificial intelligence should ensure the authenticity of content, strictly control the source and flow of information, and present a three-dimensional image of China. At the institutional level, artificial intelligence must follow the value implications of cultural development and regulate and punish distorted behaviors. On the one hand, by sorting out new concepts of integration between China and foreign countries, establishing new categories of global cognition, and innovating new trends in international expression, we can deeply explore the "world attributes" of traditional culture and promote the spread of culture; on the other hand, we should adopt a chain-type, two-way communication strategy, differentiate the communication of different cultural backgrounds, and transform Chinese culture into an expression form that suits the international audience on the basis of maintaining the diversity of world culture, break down cultural barriers, and realize the beautiful vision of "each beauty in its own way, and all beauty in common."

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References

[1] Dai Jinping, Qin Yangyang. Ideological risks of generative artificial intelligence such as ChatGPT and their responses[J]. Journal of Chongqing University (Social Science Edition), 2023(5):101-110.
[2] Huang Song, Tan Teng. The direction of the construction of the Chinese national cultural community in the era of generative artificial intelligence: technology-driven and all-round innovation[J]. Academic Exchange, 2023(9):20-42.
[3] Gan Xueyan. Near-term concerns and long-term expectations: emotional education in the era of generative artificial intelligence[J]. Heilongjiang Higher Education Research, 2024, 42(10): 1-6.
[4] Liu Yingjie. Science and Technology as Ideology[M]. Beijing: Commercial Press, 2002: 189.
[5] Han Yufei. Research on the application of digital technology in the inheritance of traditional culture[J]. Oriental Collection, 2020(12):81-83.
[6] Miao Xuehui. "Interactive Technology + AIGC": Reconstruction and Extension of Nordic Animation Films in the New Era from the Perspective of Metaverse [J]. Film Literature, 2024(06):136-142.
[7] Xi Jinping. Hold high the great banner of socialism with Chinese characteristics and strive together for the comprehensive construction of a modern socialist country—Report at the 20th National Congress of the Communist Party of China [N]. People's Daily, 2022-10-26 (Page 01).
[8] Xi Jinping stressed the need to strengthen and improve international communication work and present a true, three-dimensional and comprehensive China during the 30th collective study session of the Political Bureau of the CPC Central Committee [N]. People's Daily, 2021-06-02 (page 01).