

An Analysis of Generative Artificial Intelligence Aiding the Dissemination of Fine Traditional Chinese Culture

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Keywords: Generative Artificial Intelligence; Fine Traditional Chinese Culture; Cultural Dissemination

Abstract: Fine traditional Chinese culture carries the memory and emotions of the nation and is of great significance for continuing the Chinese civilization. Generative artificial intelligence provides an opportunity for the dissemination of fine traditional Chinese culture. The characteristics of generative artificial intelligence, such as "innovation", "precision" and "emotionality", help to enhance the productivity, appeal and influence of cultural content. However, it also brings problems such as distorting the value connotation of fine traditional Chinese culture, weakening the literacy of disseminators, and restricting the dissemination scope of fine traditional Chinese culture. Therefore, on the basis of clarifying the basic relationship that "humans are users of generative artificial intelligence, and generative artificial intelligence is a tool of humans", efforts should be made from the value dimension, subject dimension and normative dimension to promote the dissemination of fine traditional Chinese culture.

1. Introduction

Fine traditional Chinese culture is the root and soul of the Chinese nation, as well as the cultural foundation and spiritual source for contemporary China to stand tall on the world stage. Its development and dissemination are conducive to shaping the national image and promoting mainstream values. Therefore, using modern technological means to enhance the dissemination power of fine traditional Chinese culture is one of the important research topics at present. Since November 2022, ChatGPT, a chatbot developed by OpenAI, has quickly become the fastest-growing consumer application in history, attracting widespread attention. Its emergence has become a "tipping point" in the development of artificial intelligence, pushing countries' technological innovation competition into a new track. Currently, generative artificial intelligence technology has been widely applied in various fields such as cultural communication, economic development, and social stability. In terms of cultural communication, generative artificial intelligence has demonstrated a series of advantages. Relying on powerful algorithms, it features innovation, precision, and emotionality, enabling more effective dissemination of fine traditional Chinese culture.

2. Value Manifestations of Generative Artificial Intelligence Aiding the Dissemination of Fine Traditional Chinese Culture

With the continuous innovation and evolution of algorithm technology, the application fields of generative artificial intelligence have been continuously expanding. Its characteristics of innovation, precision, and emotionality have played an important role in enhancing the productivity, communication influence, and content appeal of fine traditional Chinese culture, injecting new vitality into cultural communication.

2.1 Innovation: Unleashing the Productivity of Fine Traditional Chinese Culture Content

Compared with the previous "analytical artificial intelligence", the most prominent feature of generative artificial intelligence lies in its strong analytical and judgment capabilities. Relying on obvious algorithmic advantages, generative artificial intelligence provides solid technical support for the production of fine traditional Chinese culture content. At the same time, in the field of education, generative artificial intelligence can promote innovative development of education with its communication advantages, cultivate high-quality talents, and promote the widespread dissemination of fine traditional Chinese culture.

Generative artificial intelligence helps cultural producers improve production efficiency through cross-modal precise analysis. On the one hand, generative artificial intelligence can capture the internal connections between different modal data, realize the complementarity and enhancement of information, thereby improving the accuracy of analysis. In the process of cultural production, GPT-4 technology can process data such as voice, images, and text, and can also integrate and transcribe different data, effectively promoting the optimal allocation and utilization of fine traditional Chinese culture resources, and helping cultural creators accurately grasp the overall creative direction of excellent traditional cultural works. For example, in the process of protecting and restoring traditional cultural heritage, ChatGPT's advanced technologies such as image recognition, data analysis, and simulation play a crucial role. Specifically, it can realize digital scanning and 3D modeling of cultural heritage such as ancient books and cultural relics, creating detailed digital archives and databases, which provides solid technical support for long-term preservation and inheritance. In addition, it can simulate the workflow and restoration techniques of professional cultural relic restorers to conduct virtual restoration and digital display of damaged cultural relics. This not only helps experts analyze and evaluate the damage status of cultural relics more accurately, but also allows the public to understand and appreciate the precious heritage of traditional culture more intuitively and deeply through virtual exhibitions and other means. On the other hand, generative artificial intelligence represented by ChatGPT empowers and enhances the diversity of cultural communication subjects with its natural language processing capabilities. "Carrying forward fine traditional culture is the common responsibility of all Chinese people. Only by guiding all forces in society to engage in cultural communication can we gather a strong force for high-quality communication." [1] Compared with other digital technologies with high usage thresholds and high operational requirements, generative artificial intelligence represented by ChatGPT is mainly presented in the form of software, which reduces the usage threshold to a certain extent and promotes the diversity of cultural communication subjects. With the assistance of generative artificial intelligence, people are no longer limited by the professional level of cultural expression forms such as traditional craftsmanship and traditional calligraphy and painting. Everyone can use this tool to ask various questions, obtain relevant knowledge of fine traditional Chinese culture, and truly make excellent traditional culture enter ordinary people's homes. Even more and more "grassroots" people can combine their own experiences and local excellent traditional cultural resources to create more down-to-earth cultural works, enhancing the

people-oriented nature of cultural communication.

Generative artificial intelligence helps the innovative development of education and cultivates high-quality promoters of fine traditional culture. The "Development Plan for the New Generation of Artificial Intelligence" issued by the State Council and the "Education Informatization 2.0 Action Plan" issued by the Ministry of Education propose that "we should improve the artificial intelligence education system and build a networked, digital, intelligent, personalized, and lifelong education system." [2] There is a close connection between cultural communication and education, and since teenagers are important builders of the future society and promoters of fine traditional culture, we should attach importance to and promote the in-depth application of generative artificial intelligence in the education industry. Generative artificial intelligence has played an important role in classroom education of fine traditional Chinese culture, enriching teaching resources and content, and promoting in-depth changes in the teaching environment and learning methods. For example, in Dazu District, Chongqing, the local government launched the "Dazu Stone Carving Culture Entering Campus" project, using intelligent technology to build a Dazu Stone Carving education model, innovating the "ideological and political theory course" teaching model, solving the problem of "cultural disconnection", and promoting the infiltration of fine traditional Chinese culture into the campus. It can be seen that generative artificial intelligence provides a new path to solve the problem of integrating culture and education.

2.2 Precision: Enhancing the Communication Influence of Fine Traditional Chinese Culture

In today's data-driven era, relying on large data training sets, advanced natural language processing technology, and excellent content generation capabilities, generative artificial intelligence algorithms have shown significant advantages in efficient information retrieval and personalized push, optimizing user experience and enhancing the communication influence of fine traditional Chinese culture.

Efficient retrieval enables accurate acquisition of effective information. Compared with the past "needle in a haystack" way of information screening, now users can accurately obtain the required cultural information by simply having a brief conversation with generative artificial intelligence such as ChatGPT. In this mode, the cultural content received by users is more in line with their personal interests, greatly improving users' acceptance of information. This mode can more effectively promote the transmission of excellent traditional cultural content, stimulate users to more actively draw nutrients from fine traditional Chinese culture, and truly make fine traditional Chinese culture enter the mind and heart. For example, with its excellent natural language processing capabilities, ChatGPT can help users obtain ancient documents that are difficult to find, and can conduct semantic analysis on them to reveal implicit information such as cultural background and historical context, improving the efficiency of information retrieval.

Personalized generation and push enhance user stickiness. In the process of disseminating fine traditional Chinese culture, generative artificial intelligence forms a "one thousand people, one thousand faces" personalized service by "precisely feeding" cultural content that users like according to "user portraits". At the same time, through clustering algorithm technology, user experience is optimized, user loyalty is deepened, and the formation of "circled" social effects is promoted. This algorithm can closely connect user groups with similar interests and goals, strengthen the internal connections of user groups, and also enhance the interaction between "in-group" users, which is conducive to more efficient and targeted dissemination of fine traditional Chinese culture among user groups with common interests and goals.

In addition, in the process of international communication of fine traditional Chinese culture, generative artificial intelligence also shows its unique advantages. It can deeply understand the

psychological needs of different audiences, flexibly switch between different cultural contexts, and effectively eliminate language and writing barriers, thereby realizing cross-cultural communication of fine traditional Chinese culture and enhancing its global influence.

2.3 Emotionality: Strengthening the Appeal of Fine Traditional Chinese Culture Content

Generative artificial intelligence technology plays a significant role in enhancing the appeal of fine traditional Chinese culture content. In the process of human-computer interaction, with its highly simulated and anthropomorphic communication characteristics, it gives users real-time emotional feedback, realizing a "sense of dialogue and communication". In terms of the output mode of excellent traditional cultural content, generative artificial intelligence can display the core elements of traditional culture in a more vivid and concrete form through text, images, videos, etc., thereby helping the audience to more deeply understand and experience the profound charm of fine traditional Chinese culture.

The diversified display of culture helps enhance users' emotional identification with fine traditional Chinese culture content. A single form of communication often makes users feel boring and weakens the charm of culture. However, ChatGPT can create a perceptual foundation for fine traditional Chinese culture through various forms such as images, audio, and videos. This way can stimulate the audience's interest in fine traditional Chinese culture, thereby generating emotional identification and ultimately achieving behavioral identification. For example, "Ode to Poems Through the Ages", China's first 200-episode AI animation series produced by China Central Television, uses the latest technological achievements such as controllable image generation, character dynamic generation, and text-to-video to transform well-known Tang poems such as "Ode to the Goose", "Visiting an Old Friend's Cottage", and "Seeing Meng Haoran Off at Yellow Crane Tower" into beautiful Chinese-style animations.

Human-like interaction technology can enhance the appeal of fine traditional Chinese culture content. Through "deep learning algorithm" technology, generative artificial intelligence can communicate with users like humans. This is completely different from the information exchange method of traditional AI robots. In its interaction with users, ChatGPT not only achieves smooth dialogue communication, but also makes significant breakthroughs in thinking mode, expression logic, and language use. It even has the ability to care, understand, empathize, and make value judgments. This interactive experience makes users feel that it is no longer a simple machine, but a nearly real existence that can establish emotional connections and dependencies, thus enabling "fine traditional Chinese culture to achieve 'daily life' infiltration and improve the audience's recognition and acceptance of fine traditional Chinese culture." [3]

3. Practical Dilemmas in Generative Artificial Intelligence Aiding the Dissemination of Fine Traditional Chinese Culture

As a new technology in the field of cultural communication, generative artificial intelligence, while promoting the dissemination of fine traditional Chinese culture, has also brought negative impacts such as distorting the connotation of fine traditional Chinese culture, weakening the literacy of the main disseminators of fine traditional Chinese culture, and restricting the dissemination scope of fine traditional Chinese culture, thus bringing about dilemmas for the dissemination of fine traditional Chinese culture.

3.1 Technical Anomie Distorts the Value Connotation of Fine Traditional Chinese Culture

Some users will tamper with and distort the content of fine traditional Chinese culture, which

subtly exerts a negative impact on the dissemination of fine traditional Chinese culture.

First, algorithmic hegemony gives rise to ideological risks. Some Western countries, relying on their technological advantages, misinterpret or rewrite the fine culture of the Chinese nation through algorithms, and even implant erroneous values such as historical nihilism and national nihilism. At the same time, China's algorithm technology is not yet mature at this stage. Strong generative artificial intelligence represented by ChatGPT has not yet achieved localized development in China. The development of various products still relies heavily on Western frameworks to a large extent, and even the adjusted algorithm models can hardly avoid having a Western cultural background. This will subtly endanger the country's ideology and bring negative impacts on the dissemination of fine traditional Chinese culture. Take ChatGPT as an example. Originating in the United States, it is mostly "fed" with Western datasets, so it naturally cannot deeply understand the content of fine traditional Chinese culture.

Second, malicious use of software disrupts the cultural atmosphere. To a certain extent, the openness of generative artificial intelligence also brings uncontrollability in its use. As an emerging technology, while generative artificial intelligence disseminates fine traditional Chinese culture, it can also be maliciously exploited. Some social capital packages itself as a "cultural envoy" and, under the pretext of "promoting fine traditional culture", uses generative artificial intelligence technology to spoof and maliciously misinterpret fine traditional Chinese culture, depriving it of its original solemnity and profoundness, in order to seek economic benefits. In the context of fierce market competition, the phenomenon of over-pursuing economic benefits while neglecting social benefits has become increasingly prominent. The concepts such as entertainment supremacy and money worship caused by this tendency are gradually eroding the profound connotation of fine traditional culture, causing an undeniable negative impact on it.

3.2 Technical Dependence Weakens the Literacy of the Main Disseminators of Fine Traditional Chinese Culture

The application of generative artificial intelligence technology in cultural communication has become increasingly prevalent. In the process of disseminating fine traditional Chinese culture, if the main disseminators overly rely on this new technology, it will weaken their creative capabilities, gradually draining the vitality and vigor of the profound and extensive fine traditional Chinese culture.

Herbert Marcuse, a representative figure of the Frankfurt School, held that, "The rapid advancement of technology has greatly contributed to the establishment of a rational order in modern society and the enrichment of material resources. However, various crises lurking in this society emerge one after another, among which the greatest crisis is the 'one-dimensionalization' of society and all individuals living in it—that is, the loss of all negative, critical, and transcendent dimensions." [4] While generative artificial intelligence empowers individual rights and diversifies the main disseminators, it also runs the risk of eroding individuals' subjective initiative. Compared with previous intelligent language assistant products, generative artificial intelligence boasts excellent communication skills, being able to accurately and dynamically meet users' needs in a short time according to their instructions. "This one-on-one service model is more intrusive and more controlling," [5] and over time, individuals' technical dependence on generative artificial intelligence will inevitably lead to a lack of in-depth exploration and innovation of fine traditional culture.

In the field of cultural communication, the thinking and judgment abilities as well as the innovative thinking level of cultural producers and communicators are core elements for evaluating the quality of cultural communication operations. Their proficiency is directly related to the

inheritance and development of fine traditional Chinese culture, as well as the shaping and enhancement of the international influence of Chinese culture. We should "strive to continue the Chinese cultural context and promote the creative transformation and innovative development of fine traditional Chinese culture,"[6] which serves as the fundamental guideline for inheriting and carrying forward fine traditional Chinese culture. If generative artificial intelligence exerts one-dimensional control over human subjectivity, it will stifle the creativity of the main disseminators of fine traditional Chinese culture and replace humans' substantive dominant position in cultural communication. Thus, we can foresee that in the near future, as generative artificial intelligence shifts from an auxiliary role to a substitute, the cultural content produced may lack profound cultural connotations.

3.3 Information Cocoons Restrict the Dissemination Scope of Fine Traditional Chinese Culture

On the one hand, "information cocoons" prevent audiences from gaining a comprehensive understanding of fine traditional Chinese culture. Algorithmic recommendation refers to "relying on internet technology and big data technology to capture users' reading habits and interest preferences, generate user profiles through computational analysis, and conduct personalized and intelligent content distribution based on user characteristics." [7] In the era of artificial intelligence, to enhance user stickiness, platforms often use algorithms to recommend homogeneous content. When users are long-term immersed in such highly homogeneous "personal daily newspapers," their opportunities to understand diverse cultures are reduced. At the same time, due to the continuous, blind, and one-sided push of fine traditional Chinese culture by algorithms, content that truly highlights the emotional appeal, humanistic warmth, and ideological depth of fine traditional culture struggles to be disseminated, which severely weakens the aesthetic value and artistic charm of fine traditional Chinese culture and affects its dissemination effect.

On the other hand, "information cocoons" result in the ineffective dissemination of fine traditional Chinese culture. With the rapid development of the internet, the traditional centralized communication model has been broken, creating a context of "decentralization and re-centralization," which poses challenges to the dissemination of the discourse power of mainstream ideology. When users are long-term confined within "information cocoons," they will gradually strengthen their blind faith in the culture within the cocoons, further inducing the phenomenon of group polarization. As internal circles continue to converge, the barriers between "information cocoons" will become increasingly solidified, leading to the rejection of dialogue and communication between different groups and hindering the effective dissemination of fine traditional Chinese culture.

4. Governance Approaches for Generative Artificial Intelligence to Facilitate the Dissemination of Fine Traditional Chinese Culture

We should dialectically view the challenges brought by generative artificial intelligence in the process of disseminating fine traditional Chinese culture. Based on the dual nature of generative artificial intelligence, we need to utilize the technology while preventing risks, and explore a harmonious situation of human-machine collaboration.

4.1 Value Dimension: Strengthen the Value Guidance of Generative Artificial Intelligence

China is a socialist country, which requires that we must always adhere to Marxist theory as the worldview and methodology for generative artificial intelligence to disseminate fine traditional

Chinese culture. We should empower generative artificial intelligence algorithms with core socialist values, and use them to tell Chinese stories well and spread the voice of fine traditional Chinese culture.

Adhere to Marxist worldview and methodology. "On the fundamental issue of upholding the guiding position of Marxism, we must be unwavering and must not waver in the slightest under any circumstances." We should clarify the correct attitude towards disseminating fine traditional culture. In the face of issues such as cultural misinterpretation and ideological infiltration caused by ChatGPT, which is rooted in Western culture, it is necessary to promote the innovative development of technology under the guidance of Marxism. On the one hand, we should identify, screen, and optimize large datasets from Western countries to reduce potential risks in cultural communication brought by new technologies. On the other hand, we should select corpora that highlight positive and virtuous ideas, virtues, and spirits, provide audiences with correct value guidance, and help them deeply understand the connotation and extension of fine traditional Chinese culture.

Adhere to the correct guidance of core socialist values. Comrade Mao Zedong pointed out, "Before the elimination of classes, whether it is news from news agencies or newspapers, they all have class nature. The so-called 'press freedom' advocated by the bourgeoisie is deceptive; there is no completely objective news report." This indicates that cultural communication has obvious value orientation. Behind the mysterious veil of generative artificial intelligence algorithms is human control, and their values are endowed by humans. Therefore, we should regularly carry out in-depth education and training on core socialist values, improve the political stance of algorithm designers, enhance their understanding and attention to the value rationality of algorithms, and make them assume their social responsibilities.

4.2 Subject Dimension: Enhance the Intelligent Media Literacy of the Public

To utilize new technologies to enhance the influence of fine traditional Chinese culture, in addition to adhering to correct value guidance on the technical end, it is also necessary to improve the intelligent media literacy of the public, so that both the production end and the reception end can work together.

One is to "remove the charm of technology" and clarify the auxiliary role of generative artificial intelligence. Strictly speaking, the content generated by generative artificial intelligence is only information rather than knowledge, so it is not necessarily true; in fact, it often "talks nonsense in a serious manner." The underlying logic of content generation by generative artificial intelligence is the condensation or translation of "existing" information. No matter how magical its capabilities appear, it does not possess such precious characteristics as "criticism" and "questioning," let alone be comparable to human creativity. Therefore, on the one hand, in the dissemination of fine traditional Chinese culture, we must clarify the basic relationship that "humans are users of generative artificial intelligence, and generative artificial intelligence is a tool of humans," and define the auxiliary status of generative artificial intelligence in the dissemination of fine traditional Chinese culture. On the other hand, we need to enhance the public's intelligent literacy. Public intelligent literacy mainly includes "the public's ability to distinguish information and media, and their ability to recognize and utilize intelligent technologies." [7] It is necessary to cultivate users' consciousness of self-awareness and self-discipline, so that they can promptly identify and actively filter false and pseudo-cultural content brought by technological penetration, thereby creating a good cultural communication atmosphere.

The second is "human-machine collaboration" to enhance the dissemination effect of fine traditional Chinese culture. In the current communication environment, everyone is both a disseminator and a recipient of fine traditional Chinese culture. Only by strengthening

human-machine collaboration and improving the public's intelligent media literacy can we achieve effective dissemination of fine traditional Chinese culture. Compared with the traditional way of independent creation by humans, generative artificial intelligence assists content producers in creation with faster and more divergent thinking. Taking advantage of this technological edge, producers can analyze and sort out massive traditional cultural resources, dig deep into the value connotations of excellent traditional cultural resources, and thus make those easily overlooked cultural treasures regain vitality under the joint efforts of human-machine collaboration.

4.3 Normative Dimension: Establish a Legal and Regulatory System

With the widespread application of new technologies, their potential negative effects have gradually become prominent. To further enhance the dissemination power of fine traditional Chinese culture, it is necessary to improve the construction of relevant legal and regulatory systems, ensure the accuracy of dissemination content, the scientificity of expressions, and the clarity of value orientation, and promote the creative transformation and innovative development of the dissemination of fine traditional Chinese culture.

One is to actively mobilize the participation and contribution of technology related social organizations in the ethical supervision system. Develop guidelines and standards for ethical supervision of generative artificial intelligence, and establish a risk assessment and value judgment mechanism for the practical application of digital technology by effectively avoiding bias in algorithmic decision-making through ethical supervision, regulating the behavior of technical personnel in digital training, ensuring the moral orientation and value orientation of digital technology, guiding the development of generative artificial intelligence towards goodness, and minimizing potential ideological risks, moral defects, and ethical losses in the dissemination of fine traditional Chinese culture.

Secondly, there is still a need to refine and supplement existing laws and regulations. Although China has issued a series of relevant legal and regulatory systems, in the face of new challenges brought by the vigorous development of generative artificial intelligence, it is still necessary to revise existing laws and regulations in a timely manner. The newly issued "Interim Measures for the Administration of Generative Artificial Intelligence Services" has clear provisions on regulating AIGC supervision, establishing value positions, and defining the scope of application. Enterprises and individuals should take it as a guide for action when using generative artificial intelligence to disseminate fine traditional culture to ensure the correctness and effectiveness of dissemination activities. However, in terms of the protection of privacy rights and personal information rights and interests, it is necessary to further clarify the nature, scope, and protection purposes of these rights, so as to form a comprehensive and three-dimensional legal system and provide a solid legal guarantee for the dissemination of fine traditional Chinese culture under the generative artificial intelligence model.

5. Conclusion

The new round of technological transformation led by generative artificial intelligence technology has provided an opportunity for the dissemination of fine traditional Chinese culture. However, the endeavor of GAI facilitating the dissemination of fine traditional Chinese culture remains a novel undertaking. Currently, the two have not yet reached a stage of mutual integration and symbiosis, and are confronted with issues such as distorting the value connotations of fine traditional Chinese culture, undermining the literacy of communication subjects, and restricting the scope of its dissemination. As technology becomes increasingly sophisticated, and operational mechanisms and governance approaches grow more mature, they will inevitably synchronize with

the process of technological evolution to adapt to the new dynamics of fine traditional Chinese culture dissemination. The obstructive challenges faced at this stage will also be resolved by new technologies. By then, GAI technology will comprehensively empower the dissemination of fine traditional Chinese culture, further enhancing the global influence of Chinese culture.

References

- [1] Yu Junsheng. *High-quality and Efficient Dissemination and Promotion of Fine Traditional Chinese Culture* [N]. *People's Daily*, 2023-11-01(009).
- [2] Meng Da, Zhou Jianxin. *Opportunities and Paths for the Dissemination of China's Fine Traditional Culture by Artificial Intelligence from the Perspective of Social Participation* [J]. *Fujian Forum: Humanities and Social Sciences Edition*, 2019(6):7.
- [3] Wei Xiaoguang, Han Lixin. *Generative Artificial Intelligence and the Inheritance of Chinese Cultural Wisdom: A Discussion Based on ChatGPT* [J]. *China Radio and Television Journal*, 2023(9):13-16.
- [4] Herbert Marcuse. *One-dimensional Human: A Study on the Ideology of Developed Industrial Societies* [M]. Translated by Liu Ji. Shanghai: Shanghai Translation Publishing House, 2008:127.
- [5] Zhou Ting, Pu Cheng. *The International Communication Capacity and Potential Governance Risks of Generative Artificial Intelligence* [J]. *China International Communication*, 2023, (04):14-18.
- [6] Cao Jie, Yang Tao. *Analysis of Digital Empowerment of Publicity, Ideological and Cultural Work in Colleges and Universities* [J]. *Journal of University of Science and Technology Beijing (Social Sciences Edition)*, 2024, 40(02):33-39.
- [7] Dai Siyuan, Li Zhenzhen. *Will the improvement of artificial intelligence literacy increase individuals' concerns about information privacy? Research on the Mediating Effect Based on Protection Awareness and Technological Trust* [J]. *Journal of Guangxi Normal University (Philosophy and Social Sciences Edition)*, 2023, 59(04):46-57.