

The Study of Chinese Style Virtual Digital Human in the Dissemination of Traditional Culture

Jiyang Gao^{*}, Yafei Wang

College of Art and Design, Qilu University of Technology, Shandong Province, China

Abstract. As a bridge character between the metaverse and the real world, the Chinese style virtual digital human has become the key to spreading traditional culture in the metaverse. By discussing the necessity of Chinese style virtual digital human to spread traditional culture, analyzing the current drawbacks, and proposing optimized development strategies to move toward youth, toward internationalization, toward sustainable development, and to cultivate innovative development awareness.

Keywords: Chinese style virtual digital human, traditional culture, cultural communication.

1. Introduction

With the continuous increase in people's attention to the "metaverse", its commercial value has also grown at an astonishing speed. Behind this, there are more spiritual values and cultural connotations worthy of exploration. As an emerging concept, the metaverse can essentially be regarded as a virtualized and digitized world, a complex formed by various high and new technologies, which is parallel to and reacts on the real world. The virtual digital human acts as a bridge between the metaverse and the real world, virtual digital humans carry people's expectations for the future virtual world, and try to serve the real world and promote the symbiotic development of virtual and real. In this track of the metaverse with unlimited prospects, traditional Chinese culture has ushered in new opportunities with the help of virtual digital humans, endowing virtual digital humans with the characteristics of traditional culture, such as "Ling", "Jia Yao", and "Xiaoyu Gu". They have injected a fresh force into traditional culture, which is powerful and full of vitality. It can be said that Chinese style virtual digital people are the key to spreading traditional culture in the metaverse.

2. The Necessity of Chinese Style Virtual Digital Human to Spread Traditional Culture

The media field is an industry that emphasizes information transmission and sensory experience. The emergence of virtual digital human has just strengthened these two aspects [1]. With the continuous advancement of human production practice and technological level, technology will gradually transform human living environment into a virtual living environment, and virtual digital humans, as original inhabitants of the metaverse, will inevitably undertake the mission of spreading civilization and culture. Spreading traditional culture, seizing the metaverse track, and enhancing the country's cultural soft power are these social needs that have become overwhelming. It is necessary for virtual digital people to realize the dissemination of traditional culture and apply it to the real society by virtue of their own AI emotion algorithm, multi-modal human-computer interaction, brain-like science and other technological advantages.

2.1. The Current Shortcomings of Chinese Style Virtual Digital Human

The Chinese style virtual digital human is undoubtedly a masterpiece that combines science and tradition, and is a brilliant exploration of traditional Chinese culture into the metaverse. With the rapid promotion of social virtualization by the COVID-19 epidemic, Chinese style virtual digital humans had come into public view in recent years, but their development has not yet become systematic. The ancient book Lao Tzu wrote: " The tree that needs many people to hug, grows in a small bud."

Development issues and security issues often form a contradiction, and problems behind the rapid development of Chinese style virtual digital humans are also exposed.

2.2. The Immersive Experience is Unsatisfactory

This question was raised in the the "2020-2021 Metaverse Development Research Report" released by the New Media Research Center of the School of Journalism and Communication at Tsinghua University. Online life has changed from a short-term exception to the norm, and has changed from a supplement to the real world to one that is consistent with reality. In the parallel world of the world, human real life has begun to migrate to the virtual world on a large scale, and human beings have become an "amphibious species" between reality and digital [2]. Virtual digital humans, as virtual humans endowed with personalized characteristics, are also "amphibious species" that wander between reality and digital. Immersive experience is an important way for virtual digital humans to achieve amphibiousization, and it is also an important channel to expand the spread of traditional culture. Immersive experience refers to the way in which users can have an immersive experience in a virtual world through corresponding devices and systems. At present, virtual digital humans in various subdivisions are faced with the shortcomings of pseudo-immersive experience. Chinese style virtual digital humans spread Chinese traditional culture and need supporting environments to create immersive scenes. This problem is particularly prominent for them. Currently, virtual digital humans in the Metaverse are often labeled with the word "immersive experience" as soon as they appear, but they are criticized for being unable to provide corresponding high-quality immersive behavioral output. People hope to use Chinese style virtual digital humans to carry out cultural communication activities and immersive effects in the real world, which not only require multimedia interaction technology to create an immersive experience space that combines reality and reality, but also cannot be separated from the development of VR, AR, XR, and MR multi-technical routes. The torrent of the metaverse is coming, and it is still in the stage of exploration and construction. The amphibious behavior of Chinese style virtual digital humans immersing themselves in spreading traditional culture requires the help of technology to advance bravely.

2.3. Too Much Attention to the Popularity of the Moment, The Content is Difficult to Continue to Output

At present, the virtual digital human track is developing and prospering. When a form of virtual digital human becomes popular, it often attracts more production teams to imitate and reproduce it. As a result, the virtual digital human image falls into a whirlpool of homogeneity and lacks characteristics. Zheng Yicheng of Tianyu Digits also said about the output of virtual digital human content, "Some are very popular right now, or it can be said that 'debut is the peak', but it is difficult to continue to output [3]." The number of Chinese style virtual digital humans are no less than that of other tracks, but they are very similar. They wear similar oriental makeup and traditional clothing styles, and are labeled with a certain intangible cultural heritage or national-style regional characteristics. They have transformed into the next experiment of capital. The excessive design of appearance and image, excessive flaunting of cultural characters, and even the degenerate pursuit of "achievements" by capitalists and "politicians" have all become the culprits of the short-lived appearance of some Chinese style virtual digital humans. Taking the China Qinqiang Opera Art Festival virtual recommendation officer "Qin Xiaoya" as an example [4], after her debut in June 2022, there has been no follow-up content output and marketing follow-up, and her online social account has not been updated for two years, which is regrettable. In addition, the current immaturity of production technology, high production prices and long production periods are also key difficulties that make it difficult for Chinese style virtual digital humans to continue to output. Chen Yan, the founder of Next Generation Culture behind the virtual human "Ling", once told the media that the cost per second of a hyper-realistic virtual human video ranges from 8,000 yuan to 15,000 yuan, and a picture costs several thousand yuan.



Figure 1. Ling Photo

3. National Style Virtual Digital People Spread Traditional Culture Development Strategy

In the future, as a combination of traditional culture and intelligent technology, Chinese style digital human will play an important role in spreading traditional culture. At present, virtual digital people are still in the development stage, and there are infinite potentials waiting for humans to explore. In this process, Chinese style virtual digital people will also create a more open and inclusive stage for spreading Chinese traditional culture and realizing modernization.

3.1. Towards Younger

The other side of ancient culture is youth. In recent years, the consumption of national fashion has continued to heat up, and a large number of brands have won the favor of young consumers due to their national style and cultural heritage. Behind this is the reflection of the contemporary young people's profound cultural identity and continuously improving cultural confidence in Chinese culture. In this context, many virtual digital humans with Chinese style have joined forces with domestic brands one after another, presenting a sumptuous feast of Chinese style aesthetics to the vast number of consumers. For example, Ling×100 years of RT Mart triggered heated discussions in the industry, Tian Yu ×Chow Tai Seng launched the National Treasure Series, the Thousand Miles of Rivers and Mountains theme and the Butterfly Love series, and Hua Xizi launched the same-named Chinese-style virtual digital human "Hua Xizi" to empower the brand. Generation Z has gradually become an important force in leading consumption. Cross-border joint creation of "electronic pickles", creating Chinese-style virtual digital humans image that young people love, and constructing an aesthetic symbol with Chinese cultural characteristics. While inheriting and carrying forward the traditional aesthetic spirit, it enhances its brand value, which is an important path to rejuvenation.



Figure 2. Hua Xizi Photo

3.2. Going International

In the era of intelligent communication, the rise of virtual digital human is of great significance to stimulating the inherent vitality of Chinese classical aesthetics. The transformation of aesthetic forms based on intelligent technology emphasizes the promotion of classical aesthetics through human-computer interaction, so that a wider range of young groups and overseas audiences can truly experience the value and charm of Chinese classical aesthetics. Leading the national trend and promoting cultural inheritance. Tian Yu, the first Chinese style virtual digital human to go overseas, has caused a "Tian Yu imitation makeup" overseas through high-quality short videos. In the form of "science and technology + culture", it insists on spreading Chinese culture and telling Chinese stories to the world. In the field of global communication, innovative expressions play a vital role in how to "tell Chinese stories well and spread Chinese voices well" to the global society. It is a natural part of achieving cultural innovation to convey the abstract and profound Chinese classical aesthetic spirit through vivid and three-dimensional virtual digital people and to convey the charm and demeanor of oriental aesthetics to the world through intelligent technology.



Figure 3. Tian Yu Photo

3.3. Towards Sustainable Development

Professor Shen Yang from the School of Journalism at Tsinghua University once said: "Our good wish is to achieve complementarity between the virtual and the real in the virtual world, rather than completely moving away from the real to the virtual." At present, the Chinese style virtual digital human track is in the growth stage, and there are only a few high-quality competitors. For Chinese style virtual digital humans, continuous high-quality cultural output and applying cultural output to the real world is a feasible and sustainable development path.

3.4. Cultivate Awareness of Innovative Development

Under the tide of history, culture has been formed, developed, and improved, and has been exploring the path of rebirth from contradictions and crises. This is always a dynamic existence. The technological impact of the Chinese style virtual digital human is a crisis for cultural communication, but it is also an important way to innovate and develop. In the future virtual space, we must select the culture that adapts to economic and social development and the needs of the current society for transformation, exchange and absorb foreign culture, and pay attention to the actual development of the economy and society. The virtual world has a strong interactive feature and needs to pay attention to the development of the actual society. Content creation should keep up with social issues and reflect correct values and attitudes, so as to realize the cross-dimensional dissemination of traditional culture [5].

4. Conclusion

Chinese style virtual digital human in the dissemination of traditional culture is necessary, but need to achieve continuous, high-quality content output, and to expand the young market and international market, and constantly cultivate innovation awareness, so as to move towards the real sustainable development, the dissemination of traditional Chinese culture.

References

- [1] H. Li, L. Ding, J. Song, Research on the Application of Virtual Digital Human in Media Field, *Journal of News Research* 13 (2022) 1-3.
- [2] L. Quan, Z. Tang, Challenges and Opportunities:How to Construct Notarization Informatization in the Meta Universe Era?—Discussion on the Dilemma and Outlet of Notarization Information Construction *Digital Law Journal* (2023) 51-81+326-327.
- [3] X.B. Jiang, The virtual man carries Chinese culture in the meta-universe out at sea, *China Youth Daily*, Beijing, (2022-11-28) 004.

- [4] Information on: https://difang.gmw.cn/sn/2022-06/09/content_35799628.htm
- [5] C.Q. Wang, J. Zhang, Research on the Application of Virtual Digital Man in Chinese Traditional Cultural Inheritance, *Journalism Tide* (2022) 27-30.