The Aesthetics in the Age of Artificial Intelligence

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Abstract: This article mainly discusses the current development situation of the intelligent era, and the comparison between the beauty of the intelligent era and the beauty at the traditional degree. It discusses whether the beauty created by artificial intelligence and other high-tech means is meaningful in the intelligent era. It will be discussed from three aspects: first, the development of intelligent robots and their relationship with aesthetics; second, taking 4D holographic projection as an example, this section will introduce the better display aesthetics of modern high-tech skills, as well as the advantages and disadvantages of this product; third, it will introduce virtual digital people, especially virtual idols, taking Luo Tianyi and Liu Yexi as examples.

Keywords: artificial intelligence, aesthetics, holographic projection

1. Introduction

In today's world, the 21st century is undoubtedly in the era of intelligence, with the emergence of artificial intelligence in many intelligent machines and even in various industries.

In addition to replace manual labor, there are also artificial intelligent robots that can write poetry, draw pictures, and other artistic creations and various virtual idols and virtual anchors that are popular all over the world. In addition, modern high technologies and products such as 3D and 4D projection technology have also produced many stunning stage effects to the audience.

2. Artificial Intelligent Robots and Beauty

2.1. The Development of Artificial Intelligent

Speaking of the age of the artificial intelligence, the most obvious feeling is that thoes productions of this era can bring lots of coveniences to human life. People can do things that were impossible in the past such as the Internet and the development of artificial intelligence. More and more intelligent robots are invented to replace human labour. At the fifth World Internet Conference in 2018, Xinhua News Agency and Sogou jointly released the "AI news anchor", which can ensure the natural consistency of facial expressions and lip movements and show the same information transmission effect as real anchors, and the AI news anchor can work for 24 hours one day, so it can improve the production efficiency of TV news, and reduce the production costs, and even improve the timeliness and quality of emergency reporting. It can be said to be a very important scientific

research achievement. However, there are lots of questions about it, such as concerns about whether the broadcasting industry will be replaced by robots in the future.

Before that, people already have many sweeping robots and robots waiters and online customer service robots to replace human labour. Except for labour, robots can even play chess and other brain exercises. For example, in the past few years, AlphaGo robots even defeat world champions in the Weiqi games. They can also play the piano and write poems and draw pictures and so on, doing things that only artists could do in the past. Some people argue that robots are developing step by step and can replace people from blue-collar workers to white-collar workers and finally they can even replace human artists. So, do these so-called artificial intelligent robots can imitate or create the same 'beauty' as human artists?

2.2. Artificial Intelligence and Beauty

Most of people still prefer to cost a fortune to enjoy a concert of famous human pianist rather than listen to a free Mozart's piano music played by a artificial intelligent robot. Even though the performances of intelligent robots can make 'zero mistake' and they never feel tired so they can play all the time. But thoes are not arts, it means that they are just well-written programs. Robots' performances are just a kind of mechanized expression instead of the beauty and aesthetics that arts should possess. People will praise Li Bai's 'The talent born with me must be useful, I can earn back all the wealth even after I spend it all.' as a timeless masterpiece, but people will not regard the poetry written by the artificial intelligent robots as a classic. That is not because their poems do not have literary talent and grace, but because it lacks rich artistic conception and inner emotions. Such poems are just put words together simply and lose the original value, so people unable to feel the most important artistic beauty in thoes poetry. But, can people use the artificial intelligence to show the beauty better? The answer is 'yes'.

Wen Xin thinks that 'The rapid development of artificial intelligence has created the virtual reality technology (VR). It uses computer simulation to create a virtual world in three-dimensional space, providing users with simulations of visual and other senses, making them feel as if they have experienced their surroundings and can observe things in three-dimensional space in real-time and without restrictions. The application of virtual reality technology in the field of art has made the rich imagination in the human mind a reality, revolutionizing people's aesthetic methods and experiences [1].'

Blaise Agüera y Arcas said that' we believe machine intelligence is an innovation that will profoundly affect art. As with these earlier innovations, it will ultimately transform society in ways that are hard to imagine from today's vantage point.' and 'We have become creatures that construct tools, artefacts and machines. We've always been augmented by our instruments, our technologies. Technology is what constructs our humanity; the trajectory of technology is what has propelled human developments [2].' It means that using modern high-tech as a tool can help people better display and appreciate the beauty.

For example, in one episode of CCTV's program *The Nation's Greatest Treasures*, they introduced the picture of Copy of Gu Kaizhi's Work "*The Nymph of the Luo River from Song Dynasty*"from the Liaoning Provincial Museum. And in the program, modern intelligent technology was used to enable the characters such as Luo Shen (the godness of Luo river) and Cao Zijian in the picture, and some animals and plants, to move, providing audiences with excellent visual enjoyment. It made the modern audiences, even the people who do not understand the art of pictures can also feel the magnificent imagination of Gu Kaizhi who known as the genius of the painting and 'elegant as a startled swan goose and supple as a swimming dragon', the poetic and romance love image. Nowadays, lots of museums especially historical museums use intelligent technology to recreate historical scenes, the Nymph of the Luo River is only one of the representative in it. They make

history no longer just boring words, allowing people to experience the beauty brought by history better. The modern intelligent technology brought the history and ancient historical treasures to life and showed the art in front of people directly.

3. 4D Holographic Projection and Beauty

3.1. The Definition of the Holographic Projection

There was a trending topic on Weibo, '4D projection of Leslie Cheung and Anita Mui'. They are both late well-known singer in Hongkong. This topic means that At the birthday party of Charles Heung, a famous Hong Kong filmmaker, his wife send him a gift, that is, using holographic projection technology to make the two late superstars 'appear' again on the stage to sing. Among them, Anita Mui's projection even interacted with Andy Lau.

Front-projected holographic display technology also known as virtual imaging technology which utilizes the principles of interference and diffraction to record and reproduce the true three-dimensional image of an object. The front-projected holographic display technology can not only generate three-dimensional aerial illusions but also make the illusion interact with the performer to complete the performance together and produce a stunning performance effect. As soon as this news is released, people are filled with mixed emotions. Many people believe that the development of modern technology can achieve this level is awesome, allowing them to see their deceased friends again and helping fans to see their idols in reality.

But there are also many people who argue that the projection does not look like a real person. Even if it can imitate their movements and voices, they can not imitate their souls and truly reproduce their elegant demeanour. Although there are many question and challenge, the artificial intelligence offers the hope that makes us believe that as the development of science and projection technology is getting better and better, their classical works and beauty can be better come down and show by the holographic display technology.

3.2. The Application of Holographic Projection Technology

In fact, it is not a recent thing to recall the past superstar's elegant demeanour on the stage by means of holographic projection, and one of the most famous one is Teresa Teng's holographic concert. Holographic technology has been in China for more than 30 years, initially used in industrial production. Until nearly 10 years ago, the concept of holography was introduced into the performance industry. However, due to technological limitations, the chaos of 'concept outweighs actual effect' often flooded the market. Teresa Teng's holographic concert used the top visual special effects technology, namely 'virtual digital modeling and real-time motion capture and immersive stage experience'. The so-called holography is to provide the audience with a 360 degree panoramic immersive viewing experience. And unlike small stages, holographic theater stages are 17 meters long. For the performance industry, the current holographic projection technology can bring new changes to performances and new shocks to the audience. This is the development of technology that brings more possibilities to the performance industry.

3.3. The Advantages and Disadvantages of Holographic Projection Technology

Cao Liyan and his colleagues think that 'Today, with the rapid development of the digital economy, digital cultural and creative products are finding a new way of communication and design that combines online and offline, showcasing cultural and creative appreciation more personalized, ornamental, innovative, and interactive. Holographic projection and virtual cultural creation become an important impetus for accelerating the transformation and upgrading of the cultural industry and

achieving high-quality development with its wide range of application conditions. The development of this technology is also an inevitable trend in the background of continuous economic globalization and modernization process [3].' But many experts also point out that if these so-called "black technologies" are blindly added to the stage, it may have an adverse impact on the performance. The most obvious influence is that the audience may overlook the performance of the actors and singers on the stage and other core things because they pay too much attention on fancy stage special effects. Moreover, will this technology be seen as a consumption and disrespect of deceased superstars? After all，what is projected using modern technology is not the real one, so it involves some matters of ethical issues in it.

Wei Yang thinks that: 'It has long been believed that science and technology are progressive in nature and beneficial to all mankind influenced by the theory of value neutrality of science. Science and technology have no value preference. Science explores the factual knowledge of the universe, and ethics explores the value of human society. Therefore, technology itself has nothing to do with ethics and technology is neutral. With the combination of modern science and technology, tremendous changes have taken place. Especially the development of modern high technology has posed a severe challenge to human ethics. The negative effects of science and technology have been revealed constantly, triggering a series of ethical problems. The relationship between ethics and technology has drawn much attention. In this regard, mankind should re-examine the relationship between technology and ethics, go beyond theories of value neutrality of science, making science and technology contribute to the well-being of mankind [4].' That is to say, Taking advantage of the achievements brought about by technological development, it is also important to pay attention to potential issues that may arise.

4. Digital Human and the Aesthetics

4.1. The Definition of Virtual Idols and the Development

Digital Human is the digital character which similar to real people's image and created by digital technology. The virtual idols are a kind of idealized image created on the basis of digital human. Luo Tianyi is one of the famous virtual singers in the Anime Culture which admired by young people today. She is the first Chinese sound library and virtual image based on the speech synthesis engine in the world. And she appeared on the stage as a 15-year-old girl, has ever participated in the New Year's Concert and other parties and sang with Chinese well-known singer Yang Yuying. Her voice and image are widely welcomed by the audience, thus increasing the richness of China's mainstream TV media on the stage. In recent years, in China, there are more and more virtual anchors to live commerce and make short videos and other functions in short video platforms such as 'Tiktok' and 'Kwai'. For example, virtual beauty blogger 'Liu Yexi' became popular on the Tiktok platform whose videos are full of suspense and other inviting elements in the year of 2021.

4.2. Virtual Idols

Hong Changhui and Wang Kejia argue that 'As a unique cultural phenomenon in the digital age, virtual idols can become popular for a while due to powerful reasons behind them. On the one hand, it is driven by the youth subculture, especially the anime culture. Virtual idols have reached a high level of agreement with traditional subculture resistance and stylized characteristics. The virtual idols can not only cater to the mentality of young subcultural groups pursuing trendy entertainment lifestyles but also offer them a type of more 'imaginary' ways of identity construction [5].'

The name of Luo Tianyi is full of the longing and yarning for happy life in Chinese traditional culture. Her image and voice are both sweet and gentle 15-year-old girl and bring audience the

feeling of fresh and young and energetic, so her deeply loved by youth and fans of anime culture. However, Liu Yexi appears as a bright and brave ancient Chinese heroine who can hunt monsters. Her videos combine classical characters in Chinese traditional culture such as Chinese cloths and ancient architechtures with high technology characters such as the Computer Generated Special Effects Animation which give viewer the new visual and auditory experience and can publicize the beauty of traditional Chinese culture better.

Huiying Mai and Xinyu Peng and Geyi Zhao argue that 'Compared with real-world idols, Luo Tianyi, as a "carrier," adds to fans' sense of participation and cannot see her perfect reputation "collapse"— no "collapse" of importance is an advantage of virtual idols over real-world idols. Her songs also demonstrate fans' active involvement.' and 'An example is the Light song Chaser (Zhui Guang Shi Zhe), which Kevin Yi wrote, a top-ranking lyricist, and composed by Michael Lin, a designated arranger of great singer Jay Chou. However, most songs of Luo Tianyi's are fan-fiction works (The English translation of the Japanese phrase refers to a derivative work developed through secondary creation based on original ACGNs, containing animations, comics, games, or novels.) created by internet users featuring more accessible styles. This is also why a constant stream of songs has been produced for her. The core content and development potential of Luo Tianyi lie in fans' co-creation effort. And, fans' support for the virtual idol is converted into non-virtual commercial value. Luo Tianyi has attracted the attention of capitalists as she breaks the dimension wall by performing with real-world stars, holding vocal concerts, and attending enterprise-sponsored shows [6].'

Therefore, as a special cultural phenomenon in the era of intelligence, virtual idols can provide audiences with innovative and colorful aesthetic experiences in both auditory and visual aspects.

5.   Conclusions

To summarize, as an old saying in ancient China goes: 'The emotion and mood are always can not be drawn'. Thoes products that manufactured by high technology can never own the soul and inner meaning which created by human. In my point of view, from the aspect of aesthetics, the artificial intelligent robots and other high-tech products can not replace the human in any time. But people still need to look forward the development of the science technology that being able to 'reappear' the beauty rather than solely 'reproduce' it. People can not consider the current intelligent technology as the endpoint of pursuing, but see it as a sort of tool to remain and reappear the beauty created by human more efficiently and to make the aesthetics experiences better.

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