Influence and Prospect of Artificial Intelligence on the Development of Cultural Industry

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Abstract: Nowadays, the products carried by artificial intelligence are all over people's life, such as online shopping, intelligent security, remote diagnosis and treatment, life services, driverless, online distance education, and other services. Artificial intelligence not only allows people to enjoy convenient and fast life benefits, but also brings a certain degree of anxiety to the times. In recent years, with the continued popularity of the "artificial intelligence + culture" industry, the integration of cultural industry and artificial intelligence has become an inevitable development trend. The promotion of technology ultimately serves to improve the quality of human life. Artificial intelligence not only brings convenience, but also brings opportunities and challenges to the cultural industry.

1 Introduction

Every scientific and technological leap in the era of mankind has brought about industrial changes and promoted the progress of the times. Today, artificial intelligence has led the world into a new round of industrial change. The social influence of artificial intelligence is increasing day by day. At the same time, it is also accelerating the pace of industrial integration and industrial upgrading. Nowadays, the rapid development of smart home, intelligent transportation and intelligent shopping makes artificial intelligence develop from professional intelligence to general intelligence, and plays a leading role in enhancing the national scientific and technological strength and improving people's quality of life.

Under the influence of 5G technology, the cultural industry will present a new development trend in technology and products, mode and management, change the production mode of cultural products as a whole, integrate intelligence and personality, and give consideration to scene and experience. Changes in the structure and organization of the cultural industry have also led to the increase in the volume of the cultural industry and the expansion of the layout area. Industrial integration is stronger in depth and breadth. The integration and development of emerging industries and traditional industries have become the current trend. The cultural industry is bound to face new challenges and achieve new development in the era of artificial intelligence.

2 Penetration and integration: analysis of the current situation

Facing the development opportunities of digital economy, all countries in the world regard artificial intelligence as the focus of attention and an important symbol to highlight national core competitiveness. The global pattern of artificial intelligence: future trends and China's position comprehensively introduces the layout of governments and economic and financial institutions in the field of artificial intelligence. As the book says, "AI will bring a revolution in scientific research paradigm". In the era of transformation and upgrading with "intelligence and informatization" as the breakthrough, only by keeping up with this round of reform and further promoting industrial development with information intelligence, can a country truly grasp the initiative of development. Industrial integration is a new type of industrial form. It is a change under the condition of technological innovation. It is a process of mutual competition and collaborative evolution between different industrial constituent elements, and finally, a new type of industry is formed. [1] The rise and development of the cultural industry are inseparable from the revolution of science and technology. Industrial integration comes into being in line with the development trend of the times. To reap intelligent dividends and lead the trend of the times, in today's era of vigorous development of artificial intelligence, we must choose a development path in line with our own reality, actively respond to challenges and seize opportunities.

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3 Man-machine coexistence: opportunities and challenges

Artificial intelligence brings new historical development opportunities and is bound to produce new problems. Countries need to explore a road of artificial intelligence in cultural industry in line with national conditions.

3.1 Artificial intelligence brings new opportunities for the development of the cultural industry

In the future development of an intelligent form of cultural industry, man-machine integration will become an important direction. At the same time, with the popularization of 5G technology, cognitive intelligence technology will continue to make breakthroughs, which can produce more cultural formats.

Artificial intelligence promotes the content creation of cultural products. Artificial intelligence was applied earlier in the field of news communication. As early as 2014, Quakebot, a manuscript writing robot of the Los Angeles Times, has been put into use. Since then, internationally renowned news media such as the associated press, the New York Times, and Forbes have also introduced AI writing technology. [2] These artificial intelligence machines applied at the practical level completely avoid the subjective and objective influence commonly seen in artificial writers. They can produce drafts immediately and work all day, greatly improving work efficiency.

In April 2021, Alibaba DAMO Academy released the largest Chinese pre-training language model PLUG (pre-training for language understanding and generation). The model integrates the ability of language understanding and generation. It is outstanding in the field of long text generation such as novel creation, poetry generation, and intelligent question and answer. [3] The technical processing core of this "universal writing artifact" is natural language processing technology, the machine can "understand" human language to the greatest extent, and accelerate the implementation of artificial intelligence in the cultural industry.

Artificial intelligence creates new cultural consumption demand and promotes the intellectualization of cultural product marketing. People's demand for cultural and entertainment consumption is changing towards a more personalized and diversified direction, which gives birth to people's huge demand for high-end cultural products. Experiential and situational consumption mode is a very popular consumption mode since the integration of artificial intelligence and cultural industry. With the upgrading of artificial intelligence technology, the new consumption mode produced by the integration with cultural industry has gradually entered people's vision. For example, the "smart tourism" and other new tourism experiences developed in the tourism industry in recent years have upgraded tourism from "punch card" photo accompanying tourism to "experiential" personalized in-depth tourism, which has brought vitality and power to the cultural tourism industry through experiential consumption.

In the aspect of product marketing, artificial intelligence can carry out large-scale personalized intelligent distributions of content. For example, the intellectualization of advertising, on one hand, targeted advertising through user portrait analysis; on the other hand, it also strengthens the acceptance of consumers. In his book "filter bubbles: what the Internet didn't tell you", Lee·Bariser put forward the concept of "filter bubbles", which directly refers to the problem of algorithm manipulation. In his opinion, the information received by users is often affected by retrieval history, reading behavior, and habits, which will be controlled by algorithms. [4] The growing maturity of algorithms and the increasing computing power of artificial intelligence make the "customized information" exposed to the audience more "palatable".

Artificial intelligence provides personalized services for the cultural industry and promotes the form innovation of cultural products. Artificial intelligence technology has been widely used in film and television industry. Through this technology, creators can create digital actors to complete the difficult actions that real actors cannot complete and the settings of various illusory scenes, such as Alita: Battle angel, Gemini man, etc., these films have not only made considerable box office, but also brought the audience a new film viewing experience.

The new form of cultural products spawned by artificial intelligence technology also provides reference for other cultural industries and creates new development opportunities. At the world Internet Conference held in Zhejiang, China in November 2018, Xinhua news agency released the world's first artificial intelligence anchor. Virtual images created using artificial intelligence technology are almost no different from real people. Just enter the news text and the artificial intelligence synthesis anchor can play. [5] This technology is bound to bring significant changes to the development of various fields of cultural industry.

Holographic projection technology has emerged in recent years. This real and shocking visual experience can easily realize virtual imaging without wearing a bulky VR helmet. Holographic projection technology can not only produce three-dimensional aerial illusion, but also make the illusion interact with the performer to complete the performance together. Among them, the most famous is the Japanese virtual singer " Hatsune Miku". She is the first virtual idol in the world to hold a concert using holographic projection technology. During the performance, she can also change clothes quickly and perform on the same stage with virtual partners. Her charm and economic benefits are no less than real idols.

3.2 Challenges brought by artificial intelligence to the cultural industry

While artificial intelligence injects vitality and kinetic energy into the development of the cultural industry, the possible risks and challenges can not be ignored, which is worthy of our reflection and attention.

Unemployment fear and ethical anxiety. While

artificial intelligence brings progress and convenience to mankind, legal, ethical and social challenges also follow. First, impact the traditional employment structure. In a brief history of the future, Herali once proposed that the wide application of artificial intelligence will certainly lead to large-scale unemployment, and unemployment may dispel the meaning of individual life at a deeper level. In the long run, the development of artificial intelligence will greatly change the employment structure. Secondly, while artificial intelligence reduces the cost of interpersonal communication, the relationship between people is also facing the possibility of alienation, and then the challenges faced by social ethics will rise sharply. Therefore, some scholars and professionals believe that industry rules need to be formulated for this purpose, and the research and development of artificial intelligence must match social ethics. Thirdly, the development of the era of artificial intelligence will enable the intelligent technology class to have the right to speak. This intellectual privilege may bring a new round of social change. While science and technology is the primary productive force, technology has also become the power to rule the society, and the freedom and democracy under the traditional social model will be weakened. [6] Advanced artificial intelligence with deep learning ability may bring technical distortion. Many film works, such as Star Wars, the Matrix, the Terminator, and Artificial Intelligence, present a variety of possibilities for the relationship between artificial intelligence and people in the future, which leads to reflections on artificial intelligence and the essence of life.

Knowledge gap and the formation of information cocoon room. The "knowledge gap hypothesis" put forward by American scholar Tichenor in 1970 holds that "with the increasing information transmitted by mass media to society, people with different socio-economic status have different speeds of acquiring media knowledge, and people with higher socio-economic status will acquire such information faster than people with lower socio-economic status". [7] The development of artificial intelligence technology requires the complex integration and accumulation of different disciplines, and its understanding requires multi-disciplinary background knowledge. In the future development and application of artificial intelligence, the higher the standard and level of personal life, the higher the degree of contact and utilization of artificial intelligence, that is, the formation of "artificial intelligence gap". From a global perspective, the development of artificial intelligence is also mainly concentrated in a few countries and regions, showing an unbalanced state, which will also deepen the intellectual polarization brought by the knowledge gap in the increasingly prosperous future of artificial intelligence. In addition to deepening the expansion of the knowledge gap, intelligent algorithm recommendations in the era of artificial intelligence will also cause the information cocoon effect. Users only follow the information they like recommended by the intelligent system, and an information barrier will be formed over time. At the same time, the information platform will also focus on the characteristics of laziness, curiosity, ugliness and privacy in human nature, and use vulgar and low-quality content to attract network traffic. Such content is strongly recommended by intelligent systems, resulting in the marginalization of truly valuable and meaningful information.

There are hidden dangers in data security and intellectual property rights. In the integrated application of artificial intelligence and cultural industry, the hidden danger of data security increases gradually with the increasing complexity of information in the database. Artificial intelligence needs to rely on a large amount of data for calculation and analysis. The generated intelligent cultural products are recombined by extracting applicable data and elements from the formula. It is difficult to distinguish the part with copyright protection from the part with public data, which is very easy to cause the content infringement of artificial intelligence cultural products, which will greatly reduce the creative enthusiasm and investment of original cultural products. In addition, AI will also lead to other violations, such as some AI face-changing software, which increases the risk of personal privacy and information disclosure by collecting a large amount of face dynamic information.

In fact, the development of artificial intelligence is still in a relatively primary stage, and there are still many outstanding problems. Thomas Sargent, the winner of the Nobel Prize in economics, once pointed out that "artificial intelligence is actually statistics, which only uses a gorgeous language. Compared with the brain, artificial intelligence still has many shortcomings, such as' algorithm black box ', large demand for data, poor noise resistance and high energy consumption, which is far from being fully applied." [8] Although artificial intelligence is commonly used, there is still a technical "ceiling" at this stage. Although the risk impact and ethical anxiety it brings are not fully revealed, it still provides a cautionary guide.

4 Regulation and supervision: thoughts and suggestions on the development

4.1 Technological progress and talent training

The key to the development of cultural industry in the era of artificial intelligence is to cultivate high-quality innovative talents. Compared with artificial, in some basic types of work with complex operation, artificial intelligence is more efficient and advantageous, and it is easier to replace auxiliary posts in the cultural industry. Nowadays, in the field of cultural industry, the demand for labor force in the market is a compound talent who knows both technology and cultural and creative output under the "one specialty and multiple abilities". The cultivation of practical ability and thinking ability in the stage of basic education is an important stage for the cultural industry to cultivate high-quality compound talents. We should deepen the combination of industry and education and transform the power of knowledge into economic power. This requires education to be ahead of schedule, have a forward-looking awareness of the cultural industry market,

and reserve and cultivate innovative talents suitable for the market and technological development in advance.

4.2 Standardizing the data and strengthening supervision

The world produces a huge amount of data and information every day. Behind these data is the development trend of all walks of life and even the future development direction. At the legislative level, the protection mechanism of personal data information needs to be further improved. The development of artificial intelligence is based on data. In the cultural industry, the development of artificial intelligence should standardize the data in order to effectively improve the performance of the integration of the artificial intelligence industry. At the same time, it is necessary to clarify the definition of intellectual property rights of artificial intelligence, improve the relevant legal system, combat the excessive acquisition and illegal disclosure of public-private data, and make the rational application of artificial intelligence technology within the scope specified by law.

5   Conclusion

Looking around the world, artificial intelligence technology has penetrated into all walks of life. The arrival of 5G era, as a communication infrastructure, has also opened a new application mode of "interconnection of all things". With the support and assistance of technology, the transformation of artificial intelligence to the cultural industry will enter a new stage. However, over reliance on technology has always been a double-edged sword. The convenience brought by artificial intelligence provides creativity and nutrients for people's life and production, but potential hidden dangers and risks also surge in this rapidly developing era of science and technology. At present, the technology of artificial intelligence still has obvious limitations, and the integration and reconstruction with the cultural industry is also a long and arduous road. We should rationally analyze the needs, reasonably formulate goals, and take practical development measures to make artificial intelligence move forward in innovation and revision and benefit mankind.

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