

AI empowerment: Building a new ecology of intelligent reading content production

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Abstract: Promoting the national reading work is an important way to build a booklike society. In the face of the growing demand for reading, the new technology based on artificial intelligence empowers reading, accelerates the transformation of intelligent reading content production, dissemination, consumption and other fields, and creates a new look of reading in the intelligent era. With the help of AI, the supply of intelligent reading content will be refined and refined, and create immersive communication for users in the three-dimensional and multi-dimensional intelligent reading scene. With the extension of intelligent reading form in the Internet of everything, the intelligent reading service market is increasingly multi-sided, and the personalized wisdom experience of users will be more in-depth, further realizing the construction of a new ecology of intelligent reading.

Key words: intelligent reading; Artificial intelligence; Content production; Technology enabling

As a new way of reading, intelligent reading has changed the existing form of reading. Under the background of the deepening integration of new technologies such as artificial intelligence, big data and mobile Internet with the reading industry, intelligent technology has set off a revolution in content productivity. New trends in the production, dissemination and consumption of intelligent reading content constitute a new industrial chain model of intelligent reading. The continuous improvement of users' intelligent and personalized needs has further realized the construction of a new ecology of intelligent reading. Reading, an important way to acquire knowledge, will usher in new opportunities for development.

1. The rise and inevitability of intelligent reading

(1) Intelligent reading is an important development trend of national reading work

As an important part of cultural undertakings and industries, national reading has been elevated to a national strategic level. "Building a digital China is an important engine for promoting Chinese-style modernization in the digital era, and a strong support for building a new competitive edge for the country." This shows that the transformation of digital-driven production, life and governance will become a powerful driving force for the country's development and rejuvenation. Therefore, in the national reading work, "innovative methods and means" and "actively promote the close combination of national reading work and new media technology." The technology of the intelligent era enables intelligent reading to gradually become a new trend in the development of the digital reading industry, and also conforms to the development requirements of the era of building a "learning society".

(2) Technology promotes the rapid development of intelligent reading

The development of digital technology has led to a significant improvement in China's cultural information dissemination services. In the all-media environment led by technological innovation, artificial intelligence, cloud computing, big data and other technologies have been widely used in the field of intelligent reading, creating new development opportunities for reading in terms of product optimization, accurate push, public opinion analysis, and copyright protection. With the application of 5G technology, high-speed computing and data transmission provide a conditional guarantee for intelligent reading services. The 5G technology with high speed and low delay has realized the media-rich, intelligent and multi-scene reading, and the "5G+AI" mode is more powerful in content positioning, production, communication, marketing and other links, further accelerating the intelligent development process of the reading industry.

(3) The demand for intelligent reading is increasingly strong

As an external driving force and the internal driving force of user demand, intelligent technology has presented an increasingly strong demand for reading, and the scale of reading industry has continued to grow. The 51st Statistical Report on the Development of the Internet in China shows that by December 2022, the number of Internet users in China has reached 1.067 billion, an increase of 35.49 million over December 2021, and the Internet penetration rate has reached 75.6%. According to the "China Digital Reading Report 2021", the average number of e-readers in China is 11.58, and the usage rate of e-reading forms is as high as 96.81%, which has become the mainstream reading method. Under the new technology, new media and new ecology, after years of reading promotion, the public consumption demand for reading is increasingly strong and diversified, and China is on its way to becoming a major reading country.

2. AI accelerates the transformation of intelligent reading content production

As a new type of reading mode, intelligent reading has changed the previous reading mode and contributed to the generation of a new industrial chain mode. This paper studies the production of intelligent reading content from the perspective of AI empowerment, and analyzes the new productivity of intelligent reading from three perspectives: content production, content dissemination and content consumption.

(1) Intelligent reading content production rich reading resources

In the Web3.0 era, where the demand for content consumption continues to grow and the demand for individuality is prominent, AIGC

will become an important mode of content production. First of all, AI is superior to human beings in the basic content production process such as resource mining, material integration, editing and processing, and can meet massive production needs with low cost and high efficiency. Secondly, the help of AI is not only to reduce costs and increase efficiency, but also to release creativity. In recent years, with the continuous iteration of algorithms, AIGC has become more and more mature, and its excellent performance in semantic recognition, image recognition and other aspects has gradually exceeded the human benchmark level. The award-winning AI painting “Space Opera” in the US Emerging Digital Artist Competition in 2022 is created by using the AI tool Midjourney, and its author has no painting foundation. AI makes it possible for everyone to become a content creator and generate more creative and personalized content all the time. Third, AIGC is consistent with the personalized production demand indicated by the long tail theory. The potential long tail market space is huge, but the market share of the tail with small demand and large number can not be ignored. The advantages of high creation efficiency and low creation cost of AIGC will help the long tail of the reading market continue to extend and thicken, and the volume and scope of intelligent reading content resources will continue to expand.

(2) Immersive communication of intelligent reading content creates a reading interaction scenario

The development of technology has given birth to multiple life paradigms, and has also profoundly changed people’s way of life. At the same time, reading methods and reading scenes have also changed. The immersive communication of intelligent reading will become the mainstream direction in the future. In the 5G era, unlimited network connection points, ubiquitous sensors, along with the interwoven construction and function of big data, AI algorithms, immersion technology, etc., constitute the basic environment for immersive communication.

5G has brought enough bandwidth to realize the landing application of virtual reality, augmented reality, holographic media and other technologies in content dissemination, and created a three-dimensional visual virtual reading interaction space. At the first National Reading Conference in 2022, the virtual digital Sapiens of China Mobile Migu Digital Reading Experience Museum made their debut, and brought “5G+ digital wisdom explanation” to the reading exhibition area, creating a novel experience of multi-screen linkage and 720 degrees full immersion for participants. AI algorithm not only optimizes the presentation form and interaction mode of reading resources, but also deepens the deep integration of people and media, and improves the effect of immersive communication. Through embodied participation, the audience carries out multi-dimensional communication and interaction, from being outside the book to being immersed in it, and obtains a sense of participation, belonging and identity in the process of reading content transmission. Immersive communication becomes a reality.

(3) Intelligent reading content consumption patterns improve the reading wisdom service experience

As an important force for social change at present, intelligent technology has reconstructed the media pattern. In the face of new diversified reading methods, the operation strategy of the intelligent reading industry has also focused on improving the reading experience of users.

First of all, reading in the intelligent era reflects the changes of media forms. The blessing of new technologies has completed users’ abandonment of traditional reading forms, and the information integration system with intelligent terminals as the core has become the main medium of reading consumption. This provides a convenient platform for people’s self-expression and spiritual output needs, and users have a high degree of freedom in the control of reading time, space and mode.

Secondly, the deep learning and emotional computing of intelligent reading take emotional care as a breakthrough to improve the level of intelligent service in the next step. Reading in the intelligent era has evolved from an individual behavior of acquiring knowledge to a community behavior with strong communication attributes, and users’ multi-level emotional needs need to be met urgently. AI virtual reading creates a sense of companionship and care, predicts emotional needs through intelligent analysis of user interaction behavior data and deep learning, creates a service experience beyond expectations for users, and creates the value of intelligent reading services.

3. AI helps build a new ecological environment for intelligent reading

(1) The supply of intelligent reading content has been refined and refined

The update and upgrade of readers’ needs have put forward new requirements for the quality and categories of intelligent reading content. The construction and in-depth derivative development of IP content provide resources for high-quality audio-visual reading content. Intelligent reading will focus on creating quality reading with diversified themes and high-quality content, and establish the supply relationship between intelligent reading and more fields, so that the integration and connectivity of various fields will go deeper. Professional knowledge services in the field of reading that provide precise services accumulate culture and improve literacy for users, and the specialization of content supply and the refinement level of reading content in vertical fields have also been further improved with the help of AI.

(2) The intelligent reading scene will move towards three-dimensional and multi-dimensional

With the support of 5G technology, the reading scene in the intelligent era will break the space-time boundary of information transmission, become more three-dimensional and multi-dimensional, achieve the deep integration of content and scene, and meet the needs of full-scene reading.

AI expands the content of intelligent reading, extends the concept of reading to audible, visible and touchable, and realizes multi-sensory perceptual experience. VR, AR, 3D hologram and other technologies will achieve a deep integration with intelligent reading, breaking the boundary between reality and virtual, and creating an immersive full-sensory reading experience scene. In the 5G environment, the transmission speed, fluency and content texture of reading content will be improved in a large span, and the presentation of scene reading

will be more three-dimensional and smooth.

(3) The intelligent reading form will be extended in the Internet of everything

Paul Levinson's theory of media evolution points out that the history of media development is that the essential attributes of media are constantly supplemented and innovated, so as to be infinitely close to the evolutionary history of human needs. With the advent of the Internet of Everything era, mobile phones, e-readers, wearable devices, smart homes, car systems and other intelligent reading terminals will be interconnected, and reading will appear in all life scenes in an all-round, full coverage and three-dimensional manner. With the help of the Internet of everything, through multi-screen linkage and cross-screen interaction, the reading ecology characterized by scene and interaction will be rebuilt. The strong freedom and integration of reading form will extend a broader reading service model, realize intelligent interaction and humanized development, and the expansion and extension of reading form will give reading new life.

(4) The intelligent reading service market is becoming increasingly multi-sided

The future of intelligent reading should be based on the continuous value output after the expansion and expansion of knowledge connotation and knowledge boundary; It will make the production and dissemination of knowledge radiate a wider range of groups. Under the background of the increasing awareness of users to pay for knowledge, in addition to the demand for mass entertainment, the expansion of knowledge services in education and professional fields has created a new reading market. Powerful publishing companies such as China Publishing Group, Chinese Online, and the Commercial Press have created new publishing channels by organically combining intelligent reading with education. It shows that the reading service market is becoming more and more multi-sided.

4. Conclusion

As a new type of reading method, intelligent reading, enabled by technology and needs, brings readers rich reading content, diversified reading methods and diversified reading experience. With the comprehensive rollout of AI, 5G and other technologies, the innovation of intelligent reading content production, dissemination and consumption will open a new ecological pattern of reading, and meet people's new spiritual and cultural needs and new expectations for a better life with better content, more three-dimensional and multi-dimensional dissemination, and more intelligent services. The era of artificial intelligence provides a driving force for change in reading innovation, and this change will become more profound with the development of science and technology.

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