

Analysis of the Development Trend of Music Arts Management in the Digital Age

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Abstract: The music industry is an important part of the cultural industry and a major force in promoting cultural development and prosperity. At present, the global music industry has been remodelled by intelligent technology to varying degrees, and digital music has become one of the main ways of entertainment for the public. The emergence of digital music has changed traditional music communication and sales channels and given rise to new production relations and management modes, which have put forward new requirements for music art management. Music art management shall start the whole process of managing art activities from a global perspective, specifically including planning, organizing, implementing, supervising and controlling. And based on the development of China's digital music industry, this paper analyzes the challenges and development trends of music arts management in the digital era.

1. Introduction

American Internet researcher Clay Shirky wrote in his book *Here Come Everyone: The Power of Organizing Without Organizations*[1] that "the Internet is not introducing new competitors into the old ecosystem, but creating a new one. Continued efforts based on digital technology to create music culture products and services with immersive experiences, build music technology innovation platforms, improve the music culture big data application system, and strengthen the development and utilization of music production, creation and consumption data resources have become the new driving force of the music industry's innovative development. China's music industry is continuously advancing deeper into digitalization, quality, scale and diversified content construction. And a series of new music experiences have been spawned during the epidemic, and music consumption is gradually expanding from traditional content consumption to diversified consumption of content and its derivatives. Clusters such as "music + long frequency", "music + short video", "music + live streaming", and "music + cultural creation" have opened up a new dimension of cultural music consumption. The music industry is rapidly moving towards a digital-driven development trend.[2]

2. Overview of music art management

Music art management is a new type of music major based on modern management concepts and management theories, the needs of the cultural market, and the reserve of music expertise. It is

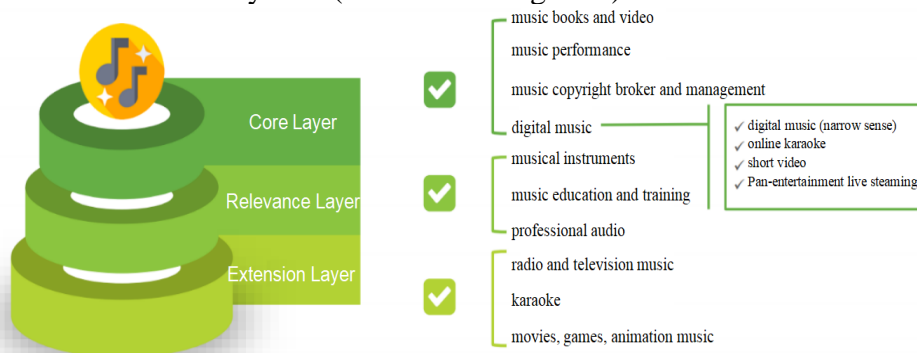
based on the teaching concept of comprehensive training and comprehensive development of potential. Through a large number of courses related to music art management, such as art production, art marketing, art broker, intellectual property rights, cultural regulations, public relations and advertising, students gain a comprehensive understanding of the laws and characteristics of music art. [3]

Music is a unique art form that is managed differently from other fields. Music arts management can closely link music to the market economy and explore this linkage from different perspectives and fields. In this way, we can better understand the socio-cultural connotations and aesthetic orientation that music conveys. Bringing musicians, investors and audiences closer together through music arts management can create a bridge of communication that facilitates the communication and development of the arts and, ultimately, the long-term prosperity of the arts.

3. The development of China's digital music industry

3.1 Market environment

Since the 1990s, China's digital music industry has undergone many reforms, and the industry structure, industry rules and market operations have progressed with the era. Currently, the industry is developing in a new way, with the digital music ecosystem beginning to take shape.[4] The digital music ecosystem not only takes advantage of the prosperous development of the mobile Internet to open up the ecological management and operation of the whole industry chain in the upper, middle and lower reaches, enriching music content and improving the virtual, interactive and popularization of music communication but also integrates and develops with other industries to extend the boundaries of the ecosystem (As shown in figure 1).



(Data source: iResearch——Research Report on the Development of Music Industry in China)

Figure 1: China's music industry category classification

The popularity of mobile Internet among nationals, together with the continued promotion of growth rate and fee reduction, drove the scale of China's mobile Internet users to continue to rise. In 2022, mobile Internet access traffic reached 261.8 billion GB, an increase of 18.1% over the last year. The monthly average mobile Internet household traffic (DOU) for the year reached 15.2 GB/household per month, up 13.8% from the last year; the DOU for the month of December reached 16.18 GB/household, up 1.46 GB/household from the end of the last year. Accordingly, the transformation of channels has brought about the iteration of users' information and content acquisition methods, and users' awareness of payment and copyright of digital content has been strengthened. At the same time, users' emotional needs in the virtual world are increasing, leading to active interaction behaviour. All kinds of social environment characteristics factors also provide the source of power for the development of digital music. And driven by the Internet model, the digital music industry has become more transparent in terms of resources, more capable of technological

updates, and more relaxed in terms of channel access mechanisms, all of which allow musicians to be less bound by the traditional music industry model and more flexible in terms of music creation and marketing methods.

3.2 Technical environment

With the popularization of mobile Internet and the improvement of infrastructure construction, the Internet content information accessible to users has escalated indexation upgrade. Digital music content, which is more flexible and convenient than traditional media, has become a more suitable form of content consumption for the general public, and the digitalization of communication media is an irreversible trend in the music industry under the current environment. On this basis, the booming development of emerging technologies such as 5G and blockchain has also brought new opportunities for the development and standardization of the digital music market (As shown in figure 2).[5]



Figure 2: Technical Environment of Digital Music Development in China

4. Challenges of music art management in the digital age

4.1 Insufficient supply of quality music works

The development of digital technology and communication technology has promoted the rapid improvement of music communication ability. Especially with the development and maturity of intelligent terminals and mobile Internet, music communication channels have been rapidly expanded, and the number of communication subjects has been increasing, showing diversified and three-dimensional characteristics, which has promoted the massive communication of music content. However, compared with the continuous expansion of music communication channels, the release of high-quality masterpieces and the rapid formation of channels are not yet compatible. The development of the music industry relies on classic music content on the one hand and also needs to continuously release high-quality original new compositions on the other. The continuous launch of original content is fundamental to the virtuous cycle of the music industry chain, and good works are the biggest driving force for the development of the music industry. And the important reason behind the lack of quality is the imperfect incentive mechanism of musicians and the insufficient realization of the value of musicians' music works. Despite the impact of the Internet on the development of physical records, there is still a gap between the level of creative incentives in the Chinese music industry and those in Europe and the United States. In comparison, the annual per capita income of music creators in the United States is 11 times higher than that in China. The lack

of incentives affects the incentive to create, and the lack of originality limits the overall development of the music industry.[6]

4.2 Digital music copyright protection is more difficult

In the digital era, more online communication channels, the gathering of more Internet users, and more diverse and mature technological developments have enabled musicians to have a more convenient and efficient environment for music creation and communication. But at the same time, the development of the digital era has also made it more difficult for musicians to protect their copyright in digital music and to maintain their rights. Compared to traditional music, which relies on records and tapes for recording and communication, the virtualization and digitization of digital music make the duplication of digital music less costly and easier to operate, and the small sound loss after duplication makes it possible for digital music to be duplicated multiple times, which again increases the difficulty and threshold of copyright protection for digital music. From the perspective of rights protection, the absence of physical objects and the low reliance on logistics and transportation easily leave process data to make digital music public rights difficult and the high cost of infringement enforcement, which has become a national pain point for the development of the music industry (As shown in table 1).

Table 1: Digital music copyright protection[7]

Type	Music Copyright Protection
Digital Music	Unlike traditional music, which can rely on material objects such as records and cassettes as the basis for calculating the extent of rights and the amount of compensation due, it is difficult to account for the actual amount of plays and downloads required to defend the rights of digital music, resulting in the great difficulty of defending the rights of digital music.
Traditional Music	The low verifiable difficulty of material objects, such as records and cassettes and the ease of tracking down data, such as transportation logistics, make traditional music less difficult to defend compared to digital music.

4.3 Weak international influence of music products

Throughout history, a large number of Chinese musical instruments, music scores and music books have crossed borders and oceans to serve as a bridge between Chinese and foreign cultural exchanges. For example, the musical and cultural exchanges between China and Japan, which began during the Zhenguan period of the Tang Dynasty, contributed to the enrichment and development of Japanese music, and the word "music" in Japanese is of Chinese origin. However, in contemporary China, the export of music products is still in a relatively disadvantageous position. In the development of China's digital music industry, the low popularity of China's original music, both overseas and locally, has become one of the pain points in the industry's development. From the local perspective, our people are deeply influenced by the music works and musicians in Europe, America, Japan and Korea, where the industry development is more mature; at the same time, due to the copyright issue and the musicians' sharing system still to be solved and improved, our national musicians are not strong in relying on music works to realize, and the creation of original music works needs to be improved, which further affects the singing ability of original works. From an overseas perspective, the difficulty of translating Chinese lyrics, coupled with the fact that music works from Europe, America, Japan and other places go to sea early and have a deep influence on people everywhere, makes the influence of China's original music works overseas weaker (As shown in table 2).

Table 2: International influence of China's music products[8]

Music Communication	Challenges
Domestic Communication	Compared with Europe, America, Japan and South Korea, China's musicians rely on the ability to music realization is poor; copyright issues and musician sharing system construction problems need to be solved to improve, but also affect the number of musicians on the creation of original musical works so that the works sung hindered.
International Communication	Because the pronunciation of Chinese characters and the phrasing of the lyrics are more difficult for foreigners to learn and translate than in English and other languages, it affects the singing of original music in overseas regions.

5. Development trend of music art management in the digital era

5.1 Industry upgrade gives rise to innovative talents in music and art management

In the new environment, the role of music arts managers as a whole has diversified, and the scope of music arts management work has begun to expand to include theatre characteristics management, music composition, artificial intelligence, and other aspects. These fields contain the previous research content but also can break through the traditional limitations and develop abroad, so it can be seen that music art management talents need to broaden their horizons, develop a more in-depth understanding and knowledge of the art market, and then explore a path of organic integration of the music industry with two-dimensional culture, immersive scenes and artificial intelligence and other emerging things, so as to create good conditions for the music industry to better realize value output. This will create good conditions for the music industry to better realize the export of values, so as to drive new consumption and gradually develop into a new form of industry in the context of the new era.

On the other hand, music art management also requires an in-depth understanding of art policies and regulations, art creation processes and laws, forming good music literacy in practice, mastering the basic knowledge structure, grasping the current stage of management, art and other related industry frontier information in real-time and dynamically, and effectively improving the planning, execution and management abilities of music art management related practitioners themselves.

5.2 Artificial intelligence drives digital music communication "individualization."

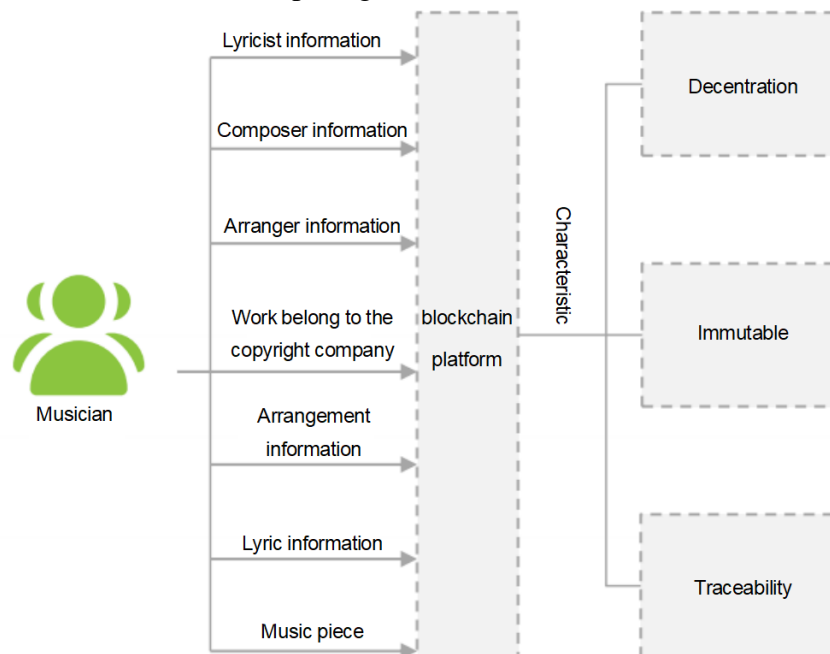
The artificial intelligence technology that grows up with big data and the "information cocoon" of users brought by "recommendation algorithm" driven services have become the focus of streaming media music platforms. The major streaming platforms have taken various initiatives in their efforts to let users get recommendations for their favourite music while avoiding the concentration of a single song list and the inability of users to expand their musical tastes. For example, EMUMO began to increase the pace of AI intelligent recommendation function research and development in 2017. Based on an artificial intelligence algorithm, the intelligent recommendation function can comprehensively analyze users' emotions as well as recommend suitable music according to the scene customers are in, and it can also capture users' listening preferences based on data, thus increasing interactivity. The degree of accuracy of big data and understanding of users' music preferences and habits even surpasses the users themselves, which not only changes users' listening habits but also promotes users' awareness of paying for music with individualized music recommendations, and promotes users' consumption of music activities online

and offline.

At present, artificial intelligence has been applied in music composition, music communication, music education and music technology equipment-related fields with remarkable results, expanding a new space of music art management.

5.3 Application of blockchain technology in digital music copyright protection

As an emerging technology, the emergence of blockchain has provided new ideas for solving many problems in the field of intellectual property and has become the most talked about topic in the field of global innovation. Blockchain technology will play an important value in the determination of copyright ownership, benefit distribution and sharing in digital music copyright protection due to its significant features such as decentralized feature, tamper-proof and reliable database. In the era of digital copyright nowadays, blockchain technology can largely solve the problems of difficulty to confirm, difficulty to profit and difficulty to defend digital music copyright because of its decentralization, anti-tampering and reliable data features.



(Data source: iResearch——Research Report on the Development of Music Industry in China)

Figure 3: Blockchain technology promotes the development of music industry

In the future digital music copyright protection, blockchain technology will automatically timestamp the uploaded data and record the deposition time; such a mechanism ensures the validity of the deposition of works. And coupled with the asymmetric encryption technology adopted by the blockchain system, digital signature by the private key and authentication of a signature by a public key generated by the private key, the uploaded personal works will be combined with the timestamp and cryptographic hash operation to generate digital asset evidence, and this deposition can be used for judicial proof in case of infringement in the future. Thus, the security foundation of digital music copyright will be further strengthened (As shown in figure 3).

6. Conclusion

To sum up, music arts management is a dynamic and interdisciplinary emerging profession that faces many opportunities and challenges in the context of digital technology. Whether it is a

horizontal cross-border alliance or a vertical technological change, technology is at the core of industrial change. While we cheer the digitalization of the music industry, we also need to calmly observe and analyze the "cold" side of technology because technological progress is a double-edged sword, music art is a warm force from the heart of human beings, and the integration of technology and music art management is what humanity needs.

References

- [1] Harris P. *The Power of Organizing Without Organizations* [J]. *Information Management Journal*, 2009, 43(6): 45-47.
- [2] Hu Shichang, Yang Lei. *Analysis and Evaluation Research on the Construction of the Music Art Management Curriculum System Based on the Deep Learning Model* [J]. *Journal of Sensors*, 2022
- [3] Hu S, Yang L. *Analysis and evaluation research on the construction of the music art management curriculum system based on the deep learning model* [J]. *Journal of sensors*, 2022, 1-9.
- [4] Stafford S A. *Music in the digital age: The emergence of digital music and its repercussions on the music industry* [J]. *The Elon Journal of Undergraduate Research in Communications*, 2010, 1(2): 112-120.
- [5] Johansson S, Werner A, Åker P, et al. *Streaming music: Practices, media, cultures* [M]. Routledge, 2017.
- [6] Mehr Samuel A., Krasnow Max M., Bryant Gregory A., Hagen Edward H. *Toward a productive evolutionary understanding of music* [J]. *Behavioral and Brain Sciences*, 2021, 44(122).
- [7] Claflin S. *How to get away with copyright infringement: Music sampling as fair use* [J]. *BUJ Sci. & Tech. L.*, 2020, 26: 159.
- [8] Fung A Y H. *The emerging (national) popular music culture in China* [J]. *Inter-Asia Cultural Studies*, 2007, 8(3): 425-437.