

# The Ethical Limits of Music Creation Empowered by Artificial Intelligence

## A Case Study of the AIVA Music Creation Platform

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### ABSTRACT

Artificial intelligence technology is reshaping the field of music creation, bringing both possibilities and challenges. AI creation tools like Aiva have provided higher efficiency and a more personalized experience for music creation. However, at the same time, this has triggered a series of ethical and cultural issues. These include the ownership of copyrights generated by AI, controversies over the creative subject, and the influence of algorithms on niche music and cultural diversity. Through case analysis and an interdisciplinary perspective, the author explores the characteristics of artificial intelligence in music creation, its application scenarios, cultural influence, and the ethical challenges faced by music creation under the influence of AI. Finally, suggestions on ethical standards and the integration of humanities are put forward.

**Keywords:** Artificial intelligence music, Aiva, Humanistic ethics, Cultural diversity.

## 1. INTRODUCTION

The rapid development of artificial intelligence technology is deeply reshaping the music industry, which has an earth-shaking impact on the creation of music. The traditional music creation process is based on creators, depending on personal inspiration, creative accumulation and other factors to create. The whole process is independent. However, with the popularization of artificial intelligence technology in the field of art, in the music industry such as Aiva creative systems, it is changing the underlying logic of music creation.

The application of artificial intelligence in the field of music is not completely positive, and there is also a series of complex humanities, culture and ethics hidden behind it. The artistic nature of AI music is questioned. The weakening of the subjectivity in music creation and the potential threat to cultural diversity pose severe challenges to the future of the music industry. The issue of copyright belonging to AI directly impacts the traditional creative rules. These problems not only involve the limitations of the technology itself, but also touch music as a core value of cultural expression.

Based on the above background, this article uses Aiva as a case to analyze the impact of artificial intelligence in the field of music creation, and the potential ethics issues in music creation. In the end, it is finally made to suggestions on the ethical scale and humanities of artificial intelligence in the future music creation.

## 2. THE IMPACT OF ARTIFICIAL INTELLIGENCE ON MUSIC CREATION

### 2.1 The Core Feature of Artificial Intelligence Music Technology

The core feature of artificial intelligence music technology is that it can be personalized according to user needs. This is the inevitable feature of artificial intelligence entering the field of human creation. Another feature is that it cannot innovate in the true sense. By learning from the data of the model, these software programs can generate materials within the known range. Next, we will take the application of artificial intelligence in music generation, with Aiva as an example, to conduct a specific analysis.

Deep learning and Transformer model are the basis for artificial intelligence music generation technology. After experiencing the training of many music data, this technology has the ability to create a variety of music styles. Among them, artificial intelligence virtual artist "Ai Gong" (AIVA) is considered a representative tool in this field. After accepting sufficient amount of music data in its own model algorithm, it can create a variety of style music works according to user needs. And the quality of its works is high, so the program has been widely used in many areas, especially in the fields of film and television soundtracks, advertising soundtracks, etc. as auxiliary means.

## **2.2 The Change of the Music Creation Mode**

Artificial intelligence is called "reorganized creation" in the field of music creation. "" Self-Organizing Map (SOM) or BP neural network (BP) and other algorithms (BP) and other algorithms such as Markov Chain (MC) are reorganized. Intelligence can imitate the form very well.[1] To a large extent, the method of traditional music creation has been reshaped, making the process of music creation more efficient and unique. Objectively, the AI generation tool has the ability to quickly complete the melody and arrangement, which can help creators reduce the creative process and save the time and energy of creators. A typical case is Taryn Southern using Amper Music to complete the album "I am AI". All the melodies and ornaments are assisted by AI, and the artist only needs to choose and adjust the content.

But at the same time, music has been considered an "emotional" art since ancient times. In our country's music work "Music Ji", music is considered an artistic art "musician, the sound of the sound, and its original feelings." "We must admit that music has more serious and deeper, which is related to this world and our own inner essence."<sup>1</sup> The above two treat art from different angles, but the attention is similar: emotion. AI has the ability to simulate a certain style in music creation, but it still has great deficiencies in capturing deeper emotional experiences. So for high -quality creators, do their creation need to turn to the so -called "root" creation?

## **2.3 The Development of the AI Music Market**

In recent years, artificial intelligence in the field of music has shown a rapid growth momentum, especially in the fields of advertising, movies and games, its demand seems particularly strong. The following chart shows that the global AI music market has an annual growth rate of more than 15%. Many startups open up this track, such as Endless, is promoting the development of this field. Endless, as a real -time music creation platform, has successfully attracted many ordinary users and professional music creators to participate by simplifying its creative process and enhancing social interaction. AI music creation has reduced the entry threshold for music creation for more people, provided an opportunity to easily participate in music creation, and also provides enterprises with high -cost and beneficial personalized music solutions. Therefore, the business prospects of AI music creation are very broad and objective [2].("Figure 1")

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1. Abuel Schopenhauer: "The World of Will and Shows", Shi Chongbai Translation, Beijing: Commercial Press, 1982, p.36.

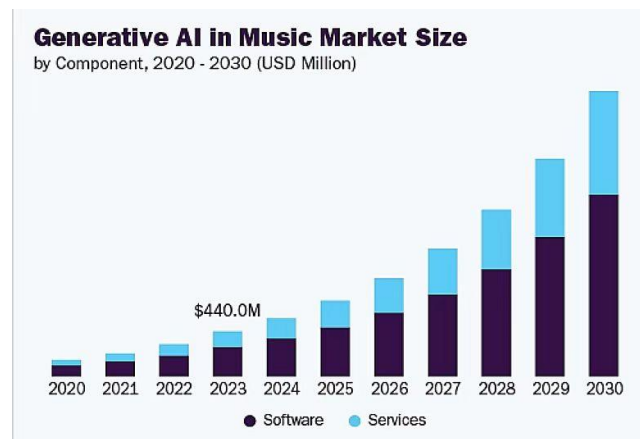


Figure 1 Generative AI in music market size.

a Data source: grand view research.

### 3. THE CHALLENGE FACING ARTIFICIAL INTELLIGENCE IN MUSIC CREATION

#### 3.1 Disputes of Music Creation Subjectivity

In the field of music creation, the general use of artificial intelligence has aroused warm discussions and arguments about creative subjectivity. Traditional music creation depends on the creativity and talent of the creator, but the music creation generated by AI mainly depends on the role of specific calculation methods and data processing procedures, creators, technical developers, and users using AI tools. It becomes blurred. Due to the rapid development of contemporary technology, artificial intelligence can produce music works in a short period of time according to instructions. At the same time, with the change of technology and the "domestication" of users, the quality of works generated by artificial intelligence will continue to improve. [3] Therefore, the subjects often consciously entered the new technical field when the new technology can serve the creation before thinking about whether the new technology can be created.

In a word, artificial intelligence has the concept of the text of Roland Bart in the field of music creation- "Text is an intercourse composed of citations from countless centers", that is, the text is not created by the author himself. Instead, it is composed of existing meaning symbols. In music creation, when artificial intelligence gradually occupies the dominant position of creation, the status of people and tools (algorithms) may be reversed, that is, the algorithm replaces the

inspiration of the creator and becomes the source of the creation; it is no longer creative creation. As a "subject" tool, the tool is reversed to the "subject" controller.

#### 3.2 The Emotional Lack of Artificial Intelligence Algorithm

Artificial intelligence is essentially driven by algorithms and data. They can simulate emotional reactions or identify emotions, but these simulations are not based on real feelings or inner emotional experiences. "Even if considering the experience of human works produced by AI, this feeling often comes from the sensory stimuli generated by simulation, not a deep -seated emotional experience."<sup>2</sup> But music is an art of emotion, and it is an important medium for human emotional experience and expression. Therefore, music creation not only requires superb technical support, but also requires the creators' abundant and real emotional investment. In the final analysis of artificial intelligence, the music "creation" lacks the emotional experience that is unique to the heart of human beings. For example, the artificial intelligence music creation platform AIVA, it is a multi -mode learning to integrate the music data and transform text information into into Music generation parameters to generate music works that meet the needs of user needs. By strengthening learning, Aiva can generate a variety of models and multi -track audio editing and style migration. It can be seen that the current artificial intelligence's creation of music is essentially the continuous

2. Zhang Yinze. Artificial Intelligence Times Popular Music production and consumption art sociology inquiry [D]. Xi'an Conservatory of Music, 2024.

processing of data and multiple matching models. The generated music is full of technology and algorithms, and only lacks real emotions and souls.

From ancient times to the present, countless famous musicians have proved to the world that only the creators have poured their emotions, thoughts and experiences into the works can they write a touching work. During the trough of life, he was seriously ill and his hearing gradually lost. At that time, Europe was ruled by the feudal dynasty, and the free thought and national movement were suppressed. With joy, he also inspired him to create this work with strong infectious power. During the War of Resistance Against Japan, at the severe juncture of Chinese musicians, Xinghai, in the danger of the nation. Essence "William Kingdeman quotes Susan Lange's words that successful art works are" an unfinished symbol". Lange believes that only specific forms of music appear superficial and too old -fashioned, and truly successful music work should have deep meaning beyond specific forms."<sup>3</sup> The audience's real experience, immersed in music works, is associated with the creators' emotions. The reason is to be reasonable and moved. At this time, a word we often say, to a certain extent, reveal the reason why people can be moved to a certain extent, emotion is one of the important factor.

It can be seen that the inspiration and enthusiasm in artistic creation cannot be banned and replaced by artificial intelligence, and it is even more difficult to surpass.

### **3.3 The Ethical Issue of AI Music**

The rapid rise of AI music has also aroused the public's in -depth attention to its moral issues. Issues such as copyright ownership, cultural diversity protection, and technological abuse have become hot spots for public discussion. Among the many issues, the copyright issues generated by AI music are particularly obvious. Because AI creation music is based on imitation and learning of a large number of existing music works, this will inevitably cause controversy of the ownership of music copyright. Is the copyright of the music "created" by artificial intelligence belongs to many music songs, or data developers, trainers, or AI itself?

Related survey data show that the attitude of different ages and professional groups to AI music is significantly different. Some creators are skeptical of AI technology and worry that they will weaken the value of human creators, while ordinary users pay more attention to whether AI music can provide higher -quality entertainment experience. It can be seen through chart analysis that young groups have higher acceptance of AI music, but they are also worried that algorithm's restrictions on cultural selection. This concept shows the public's more comprehensive understanding of the advantages and potential risks that the public may bring, and emphasized that in the process of technological innovation, the industry must pay more attention to ethical issues.

### **3.4 Technical and Art Tension**

Marx Weber lives in the era of human industrialization. At this time, people's understanding of art has changed with the development of social technology. In Marx Weber's world of removing charm, he believes that the development of science and technology has split human beings and nature. With this link synchronized, human beings are "removing charm" to the world. This kind of removal is accompanied by the increase in rationality of mankind, the decrease in value of value rationality, and the increasingly deserted spiritual world. At this time, the charming work is still art. People can seek spiritual comfort in art. However, at this time, the artwork is still the creation of the artist, and it is full of the great creation of Ben Yaming's "Ling Rhyme" in his discussion of the "artwork of mechanical replication". When technology continues to develop, mechanical replication occupies the upper hand, and the creation of artwork has also changed dramatically. The Frankfurt School has a special name: "Cultural Industry". We can find that the cultural industry is essentially a cultural production model based on industrial production. In the relevant theory, the Frankfurt Party has launched a layer of criticism. They believe that the cultural industry brings a popular culture. Because the root of this popular culture is industrial production, the culture provided by it is a standardized culture. The standards in form and content imply the annihilation of individuality and innovation.

Art is a product and consumer product. "The goal of the cultural industry is to create a cultural product that consumers can easily identify and

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3. Zhang Yinze. Artificial Intelligence Times Popular Music production and consumption art sociology inquiry [D]. Xi'an Conservatory of Music, 2024.

consume large -scale consumption, so that the creativity and uniqueness of individuals are overwhelmed by homogeneous cultural production. This theory reflects the modern society Deep reflection of cultural production methods, and criticism of individual freedom and creativity."<sup>4</sup>

When technology has developed to this day, artificial intelligence has become an unavoidable trend. It has invaded many areas, and the field of music is no exception. Artificial intelligence provides a demand for personalized customization for people, but in essence, the work it produces is also a product, and this product can not be realized under the influence of artificial intelligence's reorganization production, which cannot achieve it. Commodities are vulnerable to the market and obey the public culture. In this process, artificial intelligence is affected by the data source, making your works more in line with the popular taste of the market. Therefore, whether the value of artificial intelligence can achieve the value of human art creation is divergent. AI has the ability to imitate a specific music style and create complex structured music works, but there is no clear answer about whether AI can truly understand and convey emotions. In Aiva's classical music works, such as some works that imitate Mozart or Beethoven's style, it is very technically close to the level of human composers. Many people think that AI music is lacking in soul and innovation, and it is more like a "value presentation" rather than a real "art presentation". This phenomenon highlights the high tension between technology and art, suggesting that although artificial intelligence has made breakthroughs at the technical level, further research is still needed in the two aspects of cultural connotation and art depth. This has prompted us to re-examine art and think about whether it is just a manifestation of technical capabilities, or relying on human emotions and experience to maintain.

#### **4. THE ETHICAL SCALE OUTLOOK AND HUMANISTIC CARE OF AI MUSIC**

##### ***4.1 Strengthening Technical Research and Development and Improving AI Emotional Understanding And Penetration Ability***

As mentioned earlier, the music works generated by AI show high complexity and accuracy at the technical level, but whether it can achieve the artistic value of art is still controversial. The symphony "AI Symphony" created by Aiva is a significant example. By analyzing and learning a large number of classical music, this work has generated music fragments with complex structures and coordinated tones. It can be comparable to the works of traditional human composers, but they have been questioned by some professional musicians in the industry. They believe that this is the case. Although the music is perfect in form, there are still lack of emotional expression and originality. Music works still have to be moving with true emotions, and the current artificial intelligence is obviously lacking in terms of emotional expression. Therefore, researchers and developers aim for the music created by AI to be continuously growing and sustainable. To achieve this, they must focus on the music generation algorithm, construct emotional models, and deeply explore how human music creators express emotions in music. By analyzing different emotional music works, summarizing a vast number of works with different styles and emotions, a more comprehensive emotional model for AI can be established. This enables AI to "create" more touching and meaningful music works.

##### ***4.2 Treatment of AI music ethics issues***

Affected by the creative method of "reorganized creation" mentioned earlier, the data source of the reference of AI Music during the generation process is the music work of other creators. First of all, feeding the works of these music creators to AI for model training, which itself involves copyright violations.[4] During the process of music generation, because AI cannot truly create originality, the melody and fragments used in their creation may cause disputes over the copyright. As a result, these issues have affected two aspects of AI and originals: for the original creators, their original works have been regarded as materials,

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4. Zhang Yinze. Artificial Intelligence Times Popular Music production and consumption art sociology inquiry [D]. Xi'an Conservatory of Music, 2024.

involving the protection of intellectual property rights of the original creators. For the created AI music works, since it draws on the original work of the creator, its copyright ownership is controversial.[5] What about the user who belongs to AI, or is it a creator who is borrowed? If the ethical entanglement generated in it cannot be reasonably resolved, it will become a road block that hinders the development of AI music.

Therefore, if AI music continues to develop smoothly, it is necessary to work hard on the ethical scale. First, deal with the relationship with other original creators. For example, establish a set of music materials for the Music Materials for training AI models to ensure the copyright issues of the materials. Secondly, although artificial intelligence generates music, although it has learned existing music works, its creative process is a complex calculation and optimization process, not a simple copy or plagiarism,"<sup>5</sup> Therefore, it is necessary to clarify the issue of the ownership of the music copyright between the creators and the AI, and establish a reasonable copyright system that belongs to the AI music. Finally, the social level needs to be improved and protected by related laws, forming social coordination, and using legal forces to promote the healthy development of the industry.

#### **4.3 Human Care Value of AI Music**

Under the flood of contemporary consumerist culture, the boundaries between music and our daily life have become more and more blurred. Music provides only the short-lived heart pleasure or emotional comfort, not the depth of the soul, not the soul on the soul Resonance, and AI music is mainly relying on data processing and algorithm functions, the convergence of music works produced by it has further enhanced, and the threshold for music has decreased, making it easier to become a way of ordinary entertainment and pastime. However, art should not be embellished with daily life, but should bear multiple responsibilities such as reactions and revealing social problems, triggering public thinking, and promoting cultural development. Therefore, it is particularly important to re-understand and give music to the traditional and important position of constructing AI music.

The application of artificial intelligence in the field of music should always be closely linked to the three fundamental principles of truth, goodness, and beauty. The far-reaching cultural significance makes music works under AI an empowerment of human emotions and experiences that explore human emotions and experiences instead of just technology display. In this way, music works under AI can better meet people's needs for spiritual culture, promote the construction of a richer and diverse cultural ecology, and promote the prosperity of social harmony and culture.

### **5. CONCLUSION**

Artificial intelligence technology is rebuilding the music creation industry in a breakthrough way. On the one hand, AI has optimized the creative process of music and saves time costs for creators to a certain extent. On the other hand, these technologies also bring many ethical and cultural challenges. During the process of music creation, there have been problems such as the subjectivity of music creation, emotional lack of artificial intelligence algorithms, and ethical exploration of AI music. Without solving these problems, the development of AI music successors will be worn with heavy shackles, and it is difficult to get away in the predicament.

There is still a lot of room for development and research on artificial intelligence music. From one perspective, the combination of AI music and other art forms will bring us a new way of artistic display, such as through fusion of visual art and dance to create more interactive multi-angle art creations. On the other hand, in the context of globalization, the long-term impact of AI music on cultural exchanges and diversity protection is worthy of in-depth exploration. Artificial intelligence is not only a technical tool, but also a potential driving force for cultural heritage and innovation.[6] Considering the various challenges that we may face in the future, how to further optimize AI technology to more comprehensively meet people's expectations in emotional and cultural aspects has gradually become a core issue that needs to be addressed. By balancing technology and culture, as well as efficiency and humanistic care, the music industry is expected to achieve sustainable development in the coexistence of intelligence and diversity.

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