Demands on Artists under the Rapid Development of Artificial Intelligence Generated Art

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Abstract. As Artificial Intelligence (AI) continues to redefine the boundaries of creativity and AI-generated art becomes increasingly popular in the creative field, societal expectations and demands for artists are changing dramatically, and artists are shifting from traditional craft and technical skills to a more complex role. This paper explores three pivotal requirements arising from this shift: moving beyond universally recognized emotional symbols and emotional expression templates in creative practice, delving into more nuanced and elusive emotional states; strengthening interdisciplinary competencies, combining art creation with scientific technologies and linguistic and expressive capabilities, which facilitates artists to adapt the trend of this era and makes their expression align to their ideas; and advancing reforms in art education, paying more attention on the use of AI art tools or some applications and focusing on students' talent and appreciation in order to nurture more with instinct intelligence and unique views.Together, these issues exemplify how the rise of AI has not only transformed the tools of artistic creation, but has also reshaped the definition of artistic practice in the 21st century.

Keywords: Artificial intelligence, Art, emotional expression, art education

1. Introduction

With the advancement of science and technology, the application of artificial intelligence has gradually permeated the domain of artistic creation, and numerous researchers have probed into the ethical dilemmas of AI-generated art—encompassing the attribution of its copyright and the challenges posed to artists' careers by its utilization [1]. Upon reading the literature, it is found that there are fewer and relatively one-sided studies on the requirements of society for artists in the era of the development of AI-generated art, as well as on the responses that artists should take. Therefore, based on a number of literatures on related topics such as emotional expression in AI-generated art [2,3] and the role of interdisciplinary knowledge in AI-generated art [4], as well as the concepts and effects of art education reforms that have been or are being practiced in colleges and universities in the current era [5-8], this paper conducts a study on the requirements of artists in society in the era of AI-generated art. These include "artists should more subjectively explore and excavate more delicate and difficult-to-express emotions in their creations, and express them in a way that breaks through universally recognized emotional symbols", "artists should enhance their interdisciplinary abilities in order to better utilize scientific and technological tools to meet the needs of creation",

and "universities and colleges should improve their art education reforms and effects [5-8]. "Artists ought to strengthen their interdisciplinary competencies to better leverage technological tools in meeting creative demands" and "Colleges and universities should prioritize reforms in art education —encompassing both traditional and emerging art disciplines, as well as the refinement of talent selection criteria." This paper adopts the method of literature analysis and combines relevant cases to carry out the research.

2. Demands on emotional expression

As AI technology continues to evolve in the field of art creation, artists face many new challenges in expressing emotions through their creations.AI technology, after being trained with a large amount of data, can mimic universally recognized emotional symbols in order to convey specific emotions in their works, which helps artists to convey emotions to a certain extent, but it still has many limitations, as AI performance still relies on human input and interpretation [2]." In other words, while artificial intelligence can offer technical assistance, it lacks the profound, intricate emotional experiences and expressive capacities inherent to humans. Research points out that AI tends to rely on already widely recognized emotional symbols (tears, certain color combinations, specific facial expressions) when creating emotionally resonant works. AI models such as AffectGAN, for example, can generate images based on emotional labels such as "happy" or "sad," but their expression of emotion is more of a computational simulation than a true feeling. Although these specific elements can be easily recognized by the algorithm, they lack real personal experience and emotional depth, which ultimately makes the AI-created works look superficial and difficult to express more delicate emotions [3].

However, with the wide dissemination of works created by artists with independent emotional symbols, AI can still imitate their superficial characteristics making the innovative emotional symbols reduced to universally recognized emotional symbols. The work of Japanese artist Yayoi Kusama is a typical example. Her "House of Infinite Mirrors" series does not rely on traditional emotional symbols, but rather stems from her spiritual experiences, such as obsessive-compulsive disorder and hallucinations. She once said, "My creations are not inspired, but urgently needed." Her art does not speak of a definite "sad" or "happy" emotion, but rather creates an emotional space that is immersive, confusing, and reflective. This constitutes a sophisticated subjective experience—one that artificial intelligence struggles to truly grasp and comprehend at its core, yet can only replicate in form. The problem is that even Kusama's style, once widely disseminated, can be imitated by AIs, and most appreciators have difficulty distinguishing whether the author is an AI or Kusama himself. With AI becoming more and more adept at imitating existing styles, artists must continue to innovate, think outside the box, and redefine their own emotional language; otherwise, even those originally unique expressions may become universally recognized emotional symbols. In other words, there is a dynamic relationship between the artist's innovation and the AI's imitation after training through data, and there is no suitable method to solve this problem. This is challenging for artists and may put them under greater pressure, while it may cause artists to innovate for the sake of innovation, detaching them from the essence of creation.

The "spiritual charm" of art comes from its uniqueness and unrepeatability, and in the age of AI, art creators must revive this "spiritual charm" through deeper emotional exploration [9]. In conclusion, while artificial intelligence does usher in new possibilities for art, it also compels artists to rethink: how to preserve authentic human emotions in an era of highly advanced technology? Expressing those subjective, fuzzy and unpredictable emotions is not only a challenge to the creative method, but also an insistence on artistic authenticity and originality.

3. Demands on interdisciplinary knowledge

"Collaboration between artists and AI is no longer a matter of choice, but a necessity" [10] . Today, as AI-generated art is gradually becoming a trend, artists need to master much more than traditional painting or modeling skills; they need cross-border knowledge, mastery of algorithms, understanding of the logic behind the technology, and need to integrate these things with their own aesthetic judgments. However, most current AI systems are themselves developed for commercial use, and very few are dedicated to artistic creation. As a result, these AI tools lack sensitivity to the needs of creation, and AI software is not well suited to meet the creative needs of artists. Therefore, it is imperative for artists to acquire interdisciplinary knowledge and even engage in the development of AI tools, AI data training, and other related processes, thereby enhancing the relevance of AI tools to artistic practice. Turkish-American artist Refik Anadol is a typical example. In his project "Archive Dreaming", he used machine learning to process 1.7 million documents and turn them into a large-scale art installation that can be "immersed" in. He says the project is exploring the possibility of "when AI is not just a tool, but a collaborator in the dream world". In another project, Unsupervised, he trained AI to "sleepwalk" through the MoMA museum's art collection over the past 200 years, reorganizing human visual culture into a "non-human way of looking at it. The artist has to become the architect of the algorithm, designing the data, training the process, and even the way of understanding," he says [4]. The artist is no longer just using the tool, but is creating with the tool, and this is where AI art really comes to life.

In addition to technical skills, there is another point that is often overlooked: linguistic expression and cultural understanding. Nowadays, many AI tools rely on "input prompts" to generate content, and such prompts are actually like the "command language" of artists. If the expression is precise and emotional enough, the result given by AI will be closer to the ideal demand. Therefore, disciplines such as literature, semiotics, and even cultural theory, which seem to be far away from technology, have now become necessary skills for artists to talk with AI. Therefore, integrating AI into art is not just a technical challenge, but also a shift in mindset. Artists need to become a "multi-talent" who can write code, understand culture, tell stories and understand emotions.

4. Demands on reformation of art education

Today, with the rapid development of artificial intelligence and the increasingly blurred boundaries between disciplines, traditional art education also needs to be reformed to meet the new requirements of the times. The traditional teaching approaches that primarily focus on imparting painting techniques and foundational modeling skills are no longer sufficient. Professor Tan Xiujiang said in an interview that art education nowadays can no longer be limited to the training of practical skills such as painting techniques, but should comprehensively cultivate students' creative thinking and scientific and technological literacy [5]. In other words, what art colleges should do is not only to teach students how to draw, but also to help them become creators who can better utilize digital tools to express their ideas, have independent aesthetics, and think. This change should be reflected in two aspects: firstly, the curriculum should be interdisciplinary, combining art and technology; secondly, when selecting and training students, they should pay more attention to their talent, unique aesthetic character, ability to express their views and potential. Within China, the Nanjing University of the Arts has taken a pioneering position in this field. By establishing a digital art school and offering courses in digital media art, public art, virtual reality, and other directions, it hopes to cultivate young artists with "both an international outlook and an understanding of technology" [6]. These programs include hands-on practice in making works, and also encourage

students to collaborate with the industry and experiment with various possibilities. Internationally, the Creative Computing Institute at the University of the Arts London is a typical example. Their philosophy is to train a group of "creative technologists who can understand and critically utilize computing technologies" [7]. The curriculum includes creative programming, human-computer interaction, artificial intelligence, and data-driven art creation, with the goal of enabling artists to become tech-savvy "digital culture shapers". In addition, domestic institutions of higher education such as the Xi'an Academy of Fine Arts have initiated the upgrading of their evaluation criteria, placing greater emphasis on students' creative thinking, interdisciplinary capabilities, and personalized expression, rather than solely focusing on the solidity of their technical skills. They encourage students to engage in experimental creative practices, so that art education can be closer to the needs of social and technological development nowadays [8]. In terms of academic research, some scholars have also proposed that future artists must be "people who understand both programming and poetry", and must be able to manipulate data as well as transform it into works with cultural connotations and emotions. Therefore, many art education institutions have now taken "teaching students how to work with AI" as one of their teaching goals. Overall, if arts education is to remain vibrant in this era of smart technology and interdisciplinary integration, it must keep up with the pace of the times. It must not only teach students how to use the new tools, but also help them develop their own artistic language and expression. Only when "technology" and "creativity" are truly integrated, and talent training methods are more inclusive and diverse, will art schools be able to cultivate future artists with strong comprehensive abilities.

5. Conclusion

This paper focuses on the topic of "the requirements of artists in the era of rapid development of AI-generated art", and analyzes the three aspects of "emotional expression", "mastery of interdisciplinary knowledge", and "reform of art education". We analyze it from three aspects: "emotional expression", "interdisciplinary knowledge mastery", and "art education reform". In the aspect of "social requirements for artists' emotional expression", this paper mainly discusses that artists should pay attention to digging out more delicate emotional expression and focus on using innovative emotional symbols to convey emotions in their works. Meanwhile, this paper acknowledges that once artists have accumulated a certain volume of innovative works, AI technology can be trained to formally mimic their innovative emotional symbols through large-scale data input—and such imitations may become indistinguishable to viewers, thereby leading to the homogenization of artists' creative innovations. The paper also points out that it is currently impossible to propose a solution to break this dynamic between the two.

In relation to the dimension of "interdisciplinary knowledge mastery," this paper indicates that current AI technologies and software functionalities are not aligned with the practical needs of artists. At the same time, it is concluded that modern artists should master the scientific and technological knowledge of AI, and even participate in the research and development of AI software in order to develop the functions of AI software according to the actual needs of creation. In addition, this paper proposes that to leverage AI more effectively in artistic creation, artists should prioritize enhancing their linguistic and expressive capabilities, thereby enabling them to issue commands more precisely and ensuring that AI-generated works are better aligned with their creative needs.

In relation to the issue of "art education reform," this paper draws on cases of universities that have already implemented reforms and articulates the core educational philosophies of the relevant institutions.. Through these philosophies and social development, the paper proposes that art

education should focus on the interdisciplinary combination of art and science and technology in the new era, and at the same time pay attention to the selection criteria of traditional art - a criterion that should focus on the talent of the art learner, the ability to express emotions subjectively, the aesthetic ability, and the creative thinking, and so on.

Due to the small number of empirical studies used in this paper and the limited number of references to the literature, the findings of this paper have some limitations; future research needs to continue to study and explore, refer to more relevant literature, and expand the experimental samples in order to make the findings more generalizable.

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