

Are Machines Also Creative?—— Artificial Intelligence Questions Artists' Creativity

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Abstract: Contemporary art has gone out of works, no longer focusing on the works themselves, but the mechanism of production. The advantage of artists using AI is that they can help or even surpass their existing creative ability, and use AI to extend their creation. In the past, when the viewer faced art, he passively accepted the meaning given by the artist unilaterally; now, when the viewer faced art, the meaning needed to be produced together with the aid of artificial intelligence. The real significance of AI painting system lies in "co creation" and participation in the popularization and creation of artworks. In the process of reproduction and replacement, we are constantly looking for differences and personalities, which brings more possibilities to art.

1. Is creativity still human exclusive?

In October 2018, an artificial intelligence painting was photographed with a total of 430000 US dollars (RMB 3.01 million)! This is a great price for machines! Far beyond the estimated price of 7,000 to 10,000 US dollars. This work is done by obvious, a French art group, with artificial intelligence 《Portrait of Edmund de Bellamy》. This portrait was listed as the first AI artificial intelligence art that was auctioned and sold in the auction. It means that the art of artificial intelligence has entered the world auction stage for the first time. March 2019, Sotheby's in London welcomes another piece of artificial intelligence art. The device 《memory of passers-by one》 was invented and produced by German artist Mario Klingemann. This is a built-in AI computer "brain" artificial intelligence art device. The built-in AI computer works in real time by learning thousands of portraits from the 17th-19th century, projecting a series of male and female faces from the database and AI computer brain "Imagine" onto the screen. The whole device consists of a wooden sideboard and two screens connected above. When different audiences look at the screen, the portrait stream will record the face, store it in the AI computer brain, and then generate a unique, no two identical, fleeting "real-time paintings". These paintings appear on the screen once and never again. Klingemann's original intention to make this artificial intelligence device is to hope that in the future, even if he does not participate in artificial intelligence, he can continue to create new pictures.



Fig.1 Group Obvious<Portrait of Edmond de Belamy>70x70cm,2018

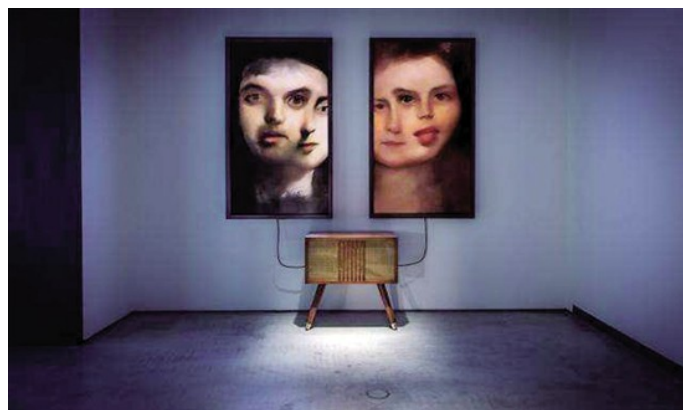


Fig.2 Mario Klingemann<Memories of Passersby I>2019

After AI enters the field of art, art is obviously no longer exclusive to human beings. The opportunity principle of machine creation, as well as the methods of automatism and free association, increase the possibility of open creation, and provide conditions for non artists' free creators. Through intelligent means such as selection, transfer and collage, the ready-made data is introduced into the art. For people who can't draw, I painting technology can help them analyze materials and improve the quality of paintings, it's easier to create the works of art you want and add to the effect. The features and advantages are that the cost of art creation and works of art is greatly reduced, and the distance between the public and works of art is shortened. But the "standardization" of artificial intelligence makes the personality and creativity contained in real art disappears. The purpose of artistic creation is to appreciate its aesthetic process. Blind reproduction of objective and reproducible content will hinder creativity. As Roger Fry said, giving children a year's sketching class may produce results that are most satisfactory to them and their relatives and friends.^① But it is precisely because of the stylized training that the original feeling in the work disappears. Once we get rid of the object of mind, we lose the extraordinary creativity.

What is the real core of creativity? The core issue of creativity is not technology, but thought. Thought leadership technology, active thinking and innovation, there are new technologies, such technology has creativity.

Creativity is unique, not unique. A distinctive work of art has vitality. Reproduction and imitation have always been the creative techniques opposed by post Impressionist artists. Cezanne has always been pursuing to get rid of the "reproducibility" factor in the picture. Through long-term thinking and repeated experiments, he strives to seek the harmonious building of the relationship between lines, colors, shapes and spaces, and is always loyal to the inner subjective consciousness. There is no doubt about Cezanne's artistic creativity. He makes a teacup a living thing, or he realizes the existence of something living in a teacup.^② He treats every object as if it were a character, endowing them with soul and vitality. Every stroke in the painting feels inner harmony and aesthetic emotion. His subjective factors penetrated into the picture through shape and color, and the creativity of color and line became Cezanne's lifelong pursuit.

Pursue difficult creativity. When artists create, they integrate rich emotions and distinctive techniques, and the works they create have indescribable beauty. There are special rules in the lines and shapes of Kandinsky's pictures. As if after the calculation of economics and the refinement of law, the position of each line is so accurate in the required position.

^① Roger Fry, 《Roger Fry selected essays & criticism》, P. 103;

^② Wassily Kandinsky 《concerning the spiritual in art》, P. 27;



Fig.3 Paul Cezanne< Mount St. Victor> 70x92cm, oil, 1904

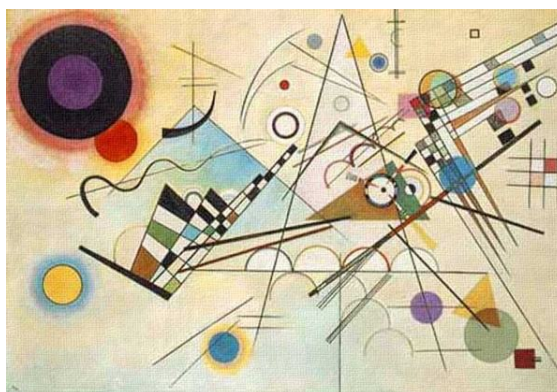


Fig.4 Kandinsky <Composition 8> 201 x 140cm, oil, 1923

The trend of creative works. Every small part of the work is a medium, which needs to obey the expression of the creator's thoughts and emotions, and change its own form with the changes of emotions. They are not a stylized thing, which can be mechanically incorporated into the structure; they are free to spread and explore the unique visual aesthetic feeling and aesthetic form, which naturally form a whole with thoughts and feelings.

The development of creativity is autonomous. Artificial intelligence is based on the auxiliary function of skills and programming, and artists must show their creativity in works of art. If an artist does not pursue the creativity and life of his works, why does he create?

2."Artificial" and "intelligent"

As the name suggests, "artificial intelligence" consists of two parts: "Artificial" and "intelligent". Artificial is the premise, intelligence is the means to achieve. We can understand it as a set of artificial manufacturing systems to study the laws of human intelligent activities to simulate human intelligence. Professor Winston of Massachusetts Institute of technology thinks that artificial intelligence is to study how to make computers do intelligent work that only human can do in the past. AI makes use of people's thinking behavior、 thinking process、 the subconscious、 science、 psychology、 philosophical knowledge and so on can make machines think like human beings, replace some mechanized work, Assist human beings to perform more intelligent tasks that can be replaced by machines.

Artificial intelligence is a human brain like machine. The eyes of Henri Focillon In, technology and materials are the basis of the development of art forms. He criticized the art world's contempt for technology. He criticized the art world's contempt for technology and pointed out the limitations of the public's understanding of technology. He emphasized the role of technology and thought that technology determines the form of visual art. He believes that the research of art form needs the support of tools, materials, techniques and other technologies, and puts forward "technology first". "In my art work, I spend too much time on hand painting, which is not what we should do in this era

in any case," Warhol said in a less well-known interview in the mid-1960s. Mechanical means that today I can use them to create art for more people. Art should be for everyone".^③ In a sense, the age of intelligence is eternal, because it can be derived indefinitely.

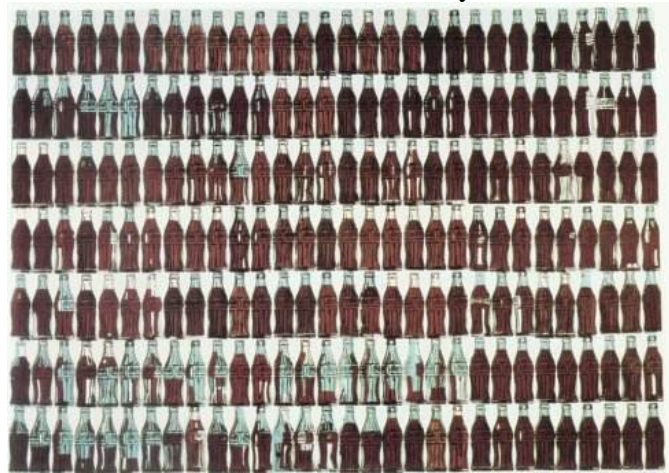


Fig.5 Andy Warhol "Coca-Cola Bottle" Screen Printing,1962



Fig.6 Andy Warhol "Monroe 12 Frames" Screen Printing, 1967

Creators are constantly joining in new artistic activities. In this way, the art of artificial intelligence not only strengthens the new aesthetic consciousness, but also plays a negative role in the art creation through the initiative of the creator, thus promoting the development of art. The reason why works of art can be embodied in all aspects of value lies in that the human spiritual world and emotion are presented in the external form of art. But artificial intelligence is the creation of machine; it is difficult to make it full of this emotional spiritual color.

3. Can works created by artificial intelligence become "art"?

June 2019, In the Graduate Exhibition of the Central Academy of fine arts, one "student" was highly praised by the teachers. His name was Xia Yubing, an artificial intelligence robot developed by Microsoft. Xiaobing has experienced the same learning process as human beings in the pursuit of art. Like other ordinary students, she has never become an artist after 22 months of training from scratch. Xiaobing has learned the painting styles and techniques of different periods from 236 artists in the past 400 years. From the very beginning, she was ugly and shapeless, and now she has reached the level of a mature artist with a strong "creative ability". Microsoft Xiaobing's work is not a description of random elements piling up; it is not a transfer of another filter style generated by copying, splicing and conversion; it is a 100% independent original new work under the stable

^③ Benjamin H.Buchioh 《Neo-Avantgarde and Culture Industry》 ;

creation quality through learning analysis and stimulation. Artificial intelligence is expected to cultivate EQ on the basis of IQ (intelligence quotient), and pay attention to the development of empathy. In the future, it may also have human emotions.



Fig.7 Drawing group of artificial intelligence robot Microsoft Xiaobing

In the book 《Emotion and form》 American aesthetician Susanne Langer, in the 20th century defined art as "the creation of symbolic forms of human emotions" by examining art categories such as painting、 sculpture、 architecture、 music、 dance、 poetry、 drama、 film. The three key words are emotion, symbol and creation. It means that these three points must be included in the precondition of art. Emotion is the attitude, reaction and feeling to the characters and things, which is tendentious, profound and stable. Symbol is a symbol with representative significance, a symbol and carrier, and an objective presentation form of externalization of internal emotion. Creation, which means from scratch, represents a new idea and new ability, and its biggest characteristic is exploratory. When AI has emotion and can create art by emotion stimulation according to the way of thinking of artists, the unique creativity of human beings will be greatly challenged.

Artists will reveal their own personality and inner spiritual world through lines and colors. From the perspective of Langer's "art is the creation of symbolic forms of human emotions", artists create a harmonious emotional world. Through the elements of lines, colors, strokes and so on, artists actively display those new forms that seem to be purely subjective. In fact, they are also the result of the interaction between individuals and the times and society they live in. They are completely perceptible and have strong subjective factors. The creation process of artificial intelligence does not take the peripheral judgment as the criterion, does not rely on the interaction between the internal connection with other things and aesthetic emotion, and brings enlightenment through the form and structure of the machine itself.

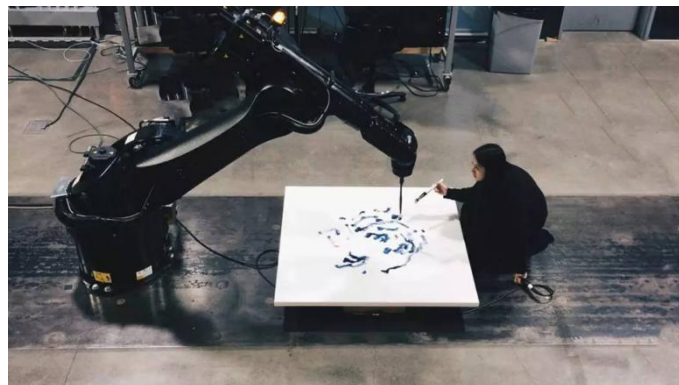


Fig.8 Artist Zhong Sujun and intelligent machine create the scene together

Whether artificial intelligence can generate code similar to spiritual world and emotional memory through self evolution can become "art" remains to be discussed.

Conclusion

The real significance of AI painting system lies in "co creation" and participation in the popularization and creation of artworks. In the past, when the viewer faced art, he passively accepted the meaning given by the artist unilaterally; now, when the viewer faced art, the meaning needed to be produced together with the aid of artificial intelligence. Contemporary art has gone out of the works, no longer focusing on the works themselves, but the mechanism of production of works, moving towards cultural politics.

Artists are also worried about being replaced. It's people who build these intelligent machines. They know how to make them work and they know their limitations. The advantage of artists using AI is that they can help or even surpass their existing creative ability, and use AI to extend their creation. In the process of reproduction and replacement, we are constantly looking for differences and personalities, which bring more possibilities to art. The future of the art world is also worth looking forward to because of its diversity.

References

- [1] Tao Feng, Research on artificial intelligence visual art [J]. Literary and art debate, 2019(07):73-81.
- [2] Aaron Hertzmann, Who owns the works of art created by artificial intelligence? [N]. People's post and telecommunications, 2019-06-19(003).
- [3] Deng Rui, Art essence theory of "art works" created by AI [J]. Western academic journal, 2019-06-10(11):57-59.
- [4] Liu Fangxi, from "mechanical reproduction" to "mechanical originality": the cultural production revolution triggered by artificial intelligence [N]. China Social Sciences Journal, 2019-04-22(004).
- [5] Zhang Xinke. Art, body and artificial intelligence [N]. China culture daily, 2019-04-14(004).
- [6] Liu Ke, Open source: Media Art from the past to the future [J]. World art, 2019 (02): 2-5 + 133.