

Defining Art in the Age of Artificial Intelligence

– Are machine-made paintings “art”?

Whenever we talk about computers, we like to associate them with the buzzwords of rationality and objectivity, which are the direct opposite of what we would use to describe art – characterized by emotion and subjectivity. However, as computers become more and more developed today, this new technology of “Creative Artificial Intelligence” emerges. From Harold Cohen’s “AARON”¹ to Simon Colton’s “The Painting Fool”², these robotic painting machines are able to generate paintings based on analysis of masterpieces’ stylistic features – such as colors, compositions, use of lines, etc. Some of these machine-made paintings become expensive auction items³; some others are so indistinguishable from human-made art that they are even able to trick connoisseur’s eyes. The increasing prevalence of creative AI and their paintings brings to our attention an essential question, which not only affects how we view machine-made paintings but also influences how we understand the nature of art: are machine-made paintings art? Personally, my answer to this philosophical question is that the machine-made paintings are not art yet; at this stage, they do not possess certain qualities that are essential to true art, which I will expand on in this paper.

¹ Moss, Richard. “Creative AI: The robots that would be painters.” Newatlas. <http://newatlas.com/creative-ai-algorithmic-art-painting-fool-aaron/36106/> (accessed August 18, 2017).

² Moss, Richard. “Creative AI: The robots that would be painters.” Newatlas. <http://newatlas.com/creative-ai-algorithmic-art-painting-fool-aaron/36106/> (accessed August 18, 2017).

³ Cascone, Sarah. “Google’s ‘Inceptionism’ Art Sells Big at San Francisco Auction.” Artnet News. <https://news.artnet.com/market/google-inceptionism-art-sells-big-439352>. (accessed August 18, 2017).

To defend my thesis, I would like to argue that paintings made by creative machines are not art because there is no intention behind these paintings' creation. To me, art can be defined in many different ways – no matter from an essentialist or antiessentialist perspective. However, no matter how a piece of work is defined, if it does not have an intention behind the creation of it, it could not be called art. In other words, I think the most essential feature for a piece of art would be the fact that it is a result of artist's intention. Machine-made paintings may easily possess any other features similar to a true piece of art – such as being aesthetically pleasing or even arousing certain emotional responses from the audience – but it lacks intention. I want to elaborate on my first argument by first explaining what intention is. Intention is “a person's subjective probability that he will perform some behavior.”⁴ It is important to notice that, “intention is not the same as plan⁵, which in this case is the human-written algorithm. I'm pointing out the differences between intention and plan, because an AI-made painting could be a product of plans, but would certainly not be a product of intention, at least for now, due to the lack of autonomous mind of AI. For example, a creative painting machine could have a plan of carrying out certain brushstrokes, but we could only call these painting behaviors “planned” but not “intentional”. On the other hand, even if we look at the most controversial contemporary artworks – a lot of artworks are just ready-mades or “physical construction on a natural site”⁶ – there are still some intention behind the creation of them. I may even argue that in contemporary art the techniques are no longer important as a standard of judgment. As a result,

⁴ Martin Fishbein and Icek Ajzen, *Belief, Attitude, Intention and Behavior An Introduction to Theory and Research* (MA: Addison-Wesley, 1975), 12.

⁵ Paisley Livingston, *Art and Intention: A Philosophical Study* (Oxford University Press, 2005), 3.

⁶ Donald Crawford, “Nature and Art: Some Dialectical Relationships,” *The Journal of Aesthetics and Art Criticism* 42, (1983): 56.

intention becomes even more indispensable. Some art works may be meant to demonstrate no intention at all, but this “no intention” is a result of artist’s thinking. However, in the current stage, AI could only create painting on the technical level due to the lack of intention. Based on my premise that a work has to have intention behind it to be called art, the current AI-generated paintings do not qualify the standard.

Now, I will explain the reason why I do not absolutely deny creative painting machines’ ability to create art, and why I bring in the question of “yet” in my thesis. First, the definition of art may change in the future; second, AI’s possibility of growing an autonomous mind is unknown either. My previous discussion was conducted on a literal and definitional level, and my denial of AI’s ability to create art at this stage is based on the definition that no matter what other qualities it possesses, an artwork has to have an intention behind it. However, the definition of art could change as context becomes different. I want to make an analogy by presenting the aesthetic and conventionalist definition of art. “Aesthetic definitions do better accounting for art’s traditional, universal features, but less well, at least according to their critics, with revolutionary modern art.”⁷ For example, according to aesthetic definitions, Marcel Duchamp’s Fountain would not be counted as art. Then there emerge the conventionalist definitions, which “have been strongly influenced by the emergence, in the twentieth century, of artworks that seem to differ radically from all previous artworks.”⁸ Therefore, it’s fair to assume that the emergence of AI-generated paintings might bring about newly adapted definitions of art. The reason why I think such changes have not yet occur is that current AI painters are

⁷ Thomas Adajian, "The Definition of Art", The Stanford Encyclopedia of Philosophy (Summer 2016 Edition), Edward N. Zalta (ed.), URL = <<https://plato.stanford.edu/archives/sum2016/entries/art-definition/>>.

⁸ Thomas Adajian, “The Definition of Art”.

still at a developing stage, and are not enough to form a paradigm shift as a collective effort, like the Renaissance. Another reason why I bring up the question of “not yet” is because we don’t know how developed AI will become in the future. If the creative painting machines are able to grow an autonomous consciousness by themselves, and are able to create paintings “intentionally”, then the paintings generated by these machines may also be called art.

One objection to the thesis of “paintings made by creative AI are not art yet” can be objecting to the question of “not yet”, because nowadays more and more people are actually embracing these machine-made works. For example, in June 2017 a group of researchers from Rutgers University conducted a study on “CAN” – the Creative Adversarial Networks which makes “‘Art’ by Learning About Styles and Deviating from Style Norms.”⁹ The results of this study “show that human subjects could not distinguish art generated by the proposed system from art generated by contemporary artists and shown in top art fairs. Human subjects even rated the generated images higher on various scales.”¹⁰ In addition, some participants were even indicating that they preferred machine-made paintings more than human-made ones, because those generated by “CAN” are more visually pleasing, inspiring, and communicative. Therefore, the question of “yet” should be taken out of the picture, as the “paradigm” already shifted due to people’s acceptance, and the age of creative AI has already come. Moreover, the thesis of “machine-made paintings are not art yet” will be objected, inferring that these paintings are already art.

⁹ Elgammal et al. “CAN: Creative Adversarial Networks Generating ‘Art’ by Learning About Styles and Deviating from Style Norms” (paper presented at the eighth International Conference on Computational Creativity (ICCC), Atlanta, GA, , June 20th-June 22nd, 2017).

¹⁰ Elgammal et al. “CAN: Creative Adversarial Networks Generating ‘Art’ by Learning About Styles and Deviating from Style Norms”

I'd like to respond to this objection from two perspectives: first, I will reject how the objection defines art; second, I will reject the objection's comment on whether or not the paradigm shift has come yet. First, being hard to tell apart from human-made art, and being aesthetically pleasing are not the essential standards of judging art. A beautiful automobile created by Tesla may be more aesthetically pleasing and beautiful than artist Wolf Vostell's iconic concrete car sculptures, but the former one should not be regarded equivalent to an artwork. This example illustrates that a piece of AI-generated painting will neither be regarded as art merely because it is more aesthetically pleasing. In addition, the objection states that Rutgers University's study also demonstrates that people are having a harder and harder time telling AI-made paintings and human-made ones apart, therefore AI-made paintings are accepted as art. Again, an AI-made painting may be infinitely similar to a human-made one, but the level of similarity does not really matter when it comes to judging whether or not it is art. These two qualities brought up in the objection are not exactly relevant to the study of art's definition that I discussed in defense of my thesis. Second, I would like to respond to the question of whether or not the definition of art has changed by pointing out an indispensable quality for paradigm shift in art to occur. It is important to first notice that paradigm shift in art is different from those in science: It doesn't happen with the occurrence or emergence of one particular new thing. For example, Copernicus discovered heliocentrism, and therefore the previous geocentrism naturally did not hold water anymore, resulting in a paradigm shift. In the world of art, a paradigm shift is a collective effort: the Renaissance was not created by any single painting of any single artist such as Leonardo da Vinci, nor was modern art "invented" by Marcel Duchamp's

one single work “Fountain”. It needs a very massive amount of experiments to produce a new phenomenon. If one day, an AI-made paintings are widely put on display in art museums, then we may come back and reconsider whether the paradigm shift has taken place.

In conclusion, base on the fact that the robotic painting machines now are not able to produce works out of any intentions, I would argue that the paintings they create are not art. However, they may become more developed in the future, and the definition of art may change as well. Therefore, whether or not AI-generated paintings are going to be considered as art in the future is still not a set thing.

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