Can artificial intelligence create art, and what issues does this question raise? You can address this question with reference to one or a combination of fine arts, literature, or music.

"Banal ideas cannot be rescued by beautiful execution" wrote Sol LeWitt as his 32nd Sentence on Conceptual Art 1. LeWitt's statement encapsulates the central issue under consideration. Artificial Intelligence (AI) has the capability to create beautifully executed art but whether this art is anything other than "banal" is debatable. This is particularly the case with the rapid, recent proliferation of Alart, and the advent of text-to-image models readily available online. These models utilise large datasets, producing content similar, but not identical, in a process known as diffusion ² – requiring only limited levels of human interaction. This is in contrast to its precursor, 'Generative Art', which developed in the 1960s, pioneered by Harold Cohen in the development of the program AARON 3. Cohen emphasised his authorship in the creation of art – the creative input was from him, not his program. Al-art is still in its infancy, and Alexander Mordvintsev's release of DeepDream in 2015 is considered to be the inception of Al-art as a concept ⁴. This was developed further with the launch of the website Artbreeder in 2018 and the release of text-to-image models, notably DALL-E, in 2021. In determining whether AI can create art, one must first consider what art is, examining the issues this creates. Although art produced by AI creates various practical issues – from legal, such as copyright and ownership, through to economic, such as the replacement of artists with machine, there are more fundamental concerns to explore. These encompass the quality of the art produced which hinders its meaningful impact, the derivative and limiting nature of Al-art, and the potential implications for the development of art itself.

To understand whether Al-art is art, an attempt to define 'art' should be made. Dickie, writing in 'What is Art' offers a definition for what he believes art to be – a work of art, for him, fulfils two quotas: "(1) an artifact (2) upon which some society or some sub-group of a society has conferred the status of candidate for appreciation" ⁵. Following this definition, any object can become a work of art if legitimised by an institution or the "artworld" ⁶. Duchamp's Readymades, ordinary objects "elevated to a work of art by the mere choice of an artist" ⁷, exemplify the application of this definition. As Dickie highlights, the act of placing a urinal – in reference to Duchamp's "Fountain" – within an institutional context converts the urinal into a work of art ⁸. Dickie introduces a clarification regarding the 'artifactuality' of a work of art. As, "If urinals, snowshovels and hatracks can become works of art, why can't natural objects such as driftwood become works of art?" ⁹. He concludes that they can, acquiring

¹ LeWitt, Sol. "Sentences on Conceptual Art." 0-9, New York (1969).

² Clarke, Laurie. "When AI can make art – what does it mean for creativity?" The Observer (2022). Online, [https://www.theguardian.com/technology/2022/nov/12/when-ai-can-make-art-what-does-it-mean-for-creativity-dall-e-midjourney, accessed 17 April 2023].

³ Hertzmann, Aaron. "Can Computers Create Art?" Arts 7, no. 2: 18. (2018). https://doi.org/10.3390/arts7020018.

⁴ Ploin, A., Eynon, R., Hjorth I. & Osborne, M.A. *"Al and the Arts: How Machine Learning is Changing Artistic Work."* Report from the Creative Algorithmic Intelligence Research Project. Oxford Internet Institute, University of Oxford, UK. (2022): 16.

⁵ Dickie, George. "Defining Art." American Philosophical Quarterly 6, no. 3 (1969): 253–56. http://www.jstor.org/stable/20009315.

⁶ Danto, Arthur. "The Artworld." The Journal of Philosophy 61, no. 19 (1964): 571–84. https://doi.org/10.2307/2022937.

⁷ Obalk, Hector. "The Unfindable Readymade." Vol.1, Issue 2 (2000). Online, [https://www.toutfait.com/issues/issue 2/Articles/obalk.html, accessed 27 April 2023].

⁸ Dickie. "Defining Art." 255.

⁹ Dickie. "Defining Art." 255.

their artifactuality simultaneously as the status of candidate for appreciation is conferred upon them¹⁰. For Dickie, in conferring status, human involvement in the artistic process is invaluable.

Dickie's clarification is useful when considering Al-generated art. Applying Dickie's definition, Al-art could become art even though there is a range of Al-generated art produced with differing levels of human involvement. Al-art encompasses art created by artists utilising Al as a tool — finetuning datasets and editing the image after its generation — through to text-to-image models, requiring only a prompt to generate an image. The latter, despite negligible human input into the creative process, still satisfies Dickie's definition of art. However, the idea of an 'artworld'/institution may become an outdated concept given the speed at which Al is developing. Dickie's definition is too rigid for a medium so flexible and unpredictable. One cannot account for the future. Assuredly predicting whether there will be an 'artworld'/institution in the future is an impossible task.

Perhaps then, to account for this, an anti-essentialist approach to the definition of art must be utilised, an 'open concept', as outlined in Weitz's "The Role of Theory in Aesthetics". Weitz writes that "a concept is open if its conditions of application are amendable and corrigible" ¹¹. He highlights that "'Art,' itself is an open concept. New conditions... have constantly arisen and will undoubtedly constantly arise". Weitz emphasises that the concept of art can be extended ¹². Utilising this approach, AI can create art independent from the 'artworld'/institution – and even from the human. However, art which does not draw from human experience will affect the nature of the art produced.

Human experience is irreplaceable when creating a meaningful work of art. As "Computational imagery has no such referent in nature or to anything outside of itself" ¹³, decontextualised artworks are created. This art is removed from the context in which human-created art is made (in the presence of social forces), hindering the standard of art produced and the development of art in the future. Human-created art and Al-generated art – distinct from art created by artists utilising Al as tool – are fundamentally different and are distinguishable due to artistic intent. This is incorporated into the creative process and cannot currently be replicated by computers.

The intention of an Al-generator when creating art is not to create a work of art to reflect popular culture, family, history — but to solve a problem posed. Human-created art has the power to contextualise a time-period through the mediums used, messages conveyed, and subjects depicted, something which current Al-art does not do. In "Can Computers Create Art?", Herzmann highlights the inability of Al to "respond meaningly to their culture, experiences, world events, responses to their work and other aspects of their environment" ¹⁴. Human involvement in the creation of a meaningful work of art is essential. A sentiment echoed in Tarkovsky's Stalker ¹⁵, placing humans at the centre of the concept of art itself. As Elwes states, "You can't really envisage how a machine could even start to do

¹⁰ Dickie. "Defining Art." 255.

¹¹ Weitz, Morris. "The Role of Theory in Aesthetics." The Journal of Aesthetics and Art Criticism 15, no. 1 (1956): 27–35. https://doi.org/10.2307/427491.

 $^{^{\}rm 12}$ Weitz. "The Role of Theory in Aesthetics." 32.

¹³ Mazzone, Marian, and Ahmed Elgammal. "Art, Creativity, and the Potential of Artificial Intelligence." Arts 8, no. 1: 26. (2019). https://doi.org/10.3390/arts8010026.

¹⁴ Hertzmann. "Can Computers Create Art?" https://doi.org/10.3390/arts7020018.

¹⁵ Tarkovsky, Andrei. "Stalker." United States: Janus Films (1979).

something like put a urinal in a museum" ¹⁶. This limits the level of engagement an individual can have with a work of Al-art. However, Mazzone and Elgammal's 2019 journal, "Art, Creativity and the Potential of Artificial Intelligence" emphasises the aesthetic quality of a work of Al-art that "speaks the language of a painting" through "colour choices, form elements, arrangement of forms on a 2-D surface", deposing these elements in the eye of the viewer ¹⁷. An individual can find meaning from a work of art purely through aesthetics. But, as recognised by Duchamp, artworks which prioritise visuals, "intended only to please the eye" ¹⁸, come at the expense of meaningful interaction between artist and viewer. Perhaps it would be apt to classify Al-generated art, created with limited human interaction, as "retinal" art. This was a term coined by Duchamp in his attempt to produce art "in service of the mind" ¹⁹. Although some meaning can be found through engaging with "retinal" Al-art, this is limited.

Art produced by Al-generators is necessarily derivative, relying on data sets composed of references "typically pulled from the internet" ²⁰. The Al-generator Stable Diffusion, built by the company Stability.AI, "trained the model on the LAION-5B data set" ²¹, consisting of "5.85 billion... image-text pairs" ²². The images created by such text-to-image models rely on art and media that have been created prior to the conception of an Al-generated artwork. Before Basquiat, it would be impossible to input the prompt 'produce me an image of X in the style of Basquiat'. Al-generators cannot produce art independent from what came before. Human-created art differs as humans have the capacity to create art, which is not dependent on the past, enabling artistic development. This is outlined by Herzmann, who wrote that in order for AI to fulfil his criterion of 'creativity' "an AI artist would have to exhibit some form of growth" ²³, something not currently possible. Even though it can be argued that the medium in which these artworks are produced is innovative, the art created, is not. It does little to further the evolution of art.

It is, however, possible to incorporate innovation into Al-generated art. There are artists who utilise Al as a tool to create art independent from text-to-image models. Adopting the use of Al, fine artists can "produce works within their own traditions...", often exhibiting in "traditional or mixed-media art spaces" ²⁴. The art created by these artists, utilising Al as an element within their creative process, is not necessarily derivative as Al is being utilised uniquely, supplementing traditional mediums. Helena

¹⁶ Ploin, A., et al. "Al and the Arts: How Machine Learning is Changing Artistic Work." 53.

¹⁷ Mazzone and Elgammal. "Art, Creativity, and the Potential of Artificial Intelligence."

¹⁸ Rosenthal, Nan. "Marcel Duchamp (1887-1968)." Department of Modern and Contemporary Art, The Metropolitan Museum of Art (2004). Online, [https://www.metmuseum.org/toah/hd/duch/hd_duch.htm, accessed 15 April 2023].

¹⁹ Arnason, H. H. and Marla F. Prather. Duchamp as quoted in "History of Modern Art: Painting, Sculpture, Architecture, Photography." Fourth Edition. New York, Harry N. Abrams, Inc. (1998), 274.

²⁰ Vargas, Steven. "How Al-generated art is changing the concept of art itself." Los Angeles Times (2022). Online, [https://www.latimes.com/projects/artificial-intelligence-generated-art-ownership-bias-dall-e-midjourney/, accessed 15 April 2023].

²¹ Heikkilä, Melissa. *"This artist is dominating Al-generated art. And he's not happy about it."* MIT Technology Review (2022). Online, [https://www.technologyreview.com/2022/09/16/1059598/this-artist-is-dominating-ai-generated-art-and-hes-not-happy-about-it/, accessed 15 April 2023].

²² Schuhmann, Christoph, Romain Beaumont, Richard Vencu, Cade Gordon, Ross Wightman, Mehdi Cherti, Theo Coombes et al. "Laion-5b: An open large-scale dataset for training next generation image-text models." arXiv preprint arXiv:2210.08402 (2022).

²³ Hertzmann. "Can Computers Create Art?" https://doi.org/10.3390/arts7020018.

²⁴ Ploin, A., et al. "Al and the Arts: How Machine Learning is Changing Artistic Work." 11.

Sarin, visual artist and software engineer, utilises generative adversarial networks as a "controlled intervention to modify the texture of an existing image" ²⁵, using Al to enhance a drawing, an undoubtedly innovative technique. However, until an artist has contextualised a work of Al-art (for example, by finetuning a dataset to include culturally and historically relevant images or by editing the image post-generation) it is limited in scope and impact.

The Al-generator Midjourney lists the types of data collected when the service is used. This includes "Text or image prompts you input into the Services" ²⁶. Al-generators have the potential to not only utilise existing datasets, but utilise personal data inputted into text-to-image models. The potential self-generating nature of these models leads one to question whether prompts will be required in the future and whether human interaction within the creative process will eventually be non-existent.

The potential implications of this are the increased homogeneity of art in the future, produced with a resounding lack of social deviancy. The Russian Constructivists utilised art as a tool to force social change, approaching the concept of art from a utilitarian perspective, stressing the importance of "real materials in real space" ²⁷ and the development of art as a "visual programme" ²⁸ to aid a modern, socialist society. It would be possible to envisage a future where AI-art could be utilised in such a way to "administer the aesthetic" ²⁹. Produced independently from human interaction (and social forces), Al-art could maintain cultural hegemony by cementing a homogenised, "common world-view" 30. Much like the decline of the Constructivists in the face of Stalin's growing hostility towards the avantgarde ³¹, contemporary art could face Al-imposed censorship as Al-art becomes dominant. However, when predicting the future in regard to AI, a level of scepticism must be acknowledged due to the dangers of "overestimating" 32. This technology is in its infancy and the consequences of the increased use and implementation of Al-art are unknown. In this respect, one can draw a comparison with the development of photography – a medium which came to have a "profound and unexpected effect on painting", inspiring greater abstraction, displacing "portraiture's social function" 33. Photography and fine art coexist, perhaps the same can occur with Al-art and fine art. But these fears are not unfounded. In the essay "AI Aesthetics", Manovich states "AI has already become a mechanism for influencing the

²⁵ Ploin, A., et al. "Al and the Arts: How Machine Learning is Changing Artistic Work." 25.

²⁶ Midjourney. "Privacy Policy." 2.1.1 Personal data. Online, [https://docs.midjourney.com/docs/privacy-policy, accessed 16 April 2023].

²⁷ P., Silka. "Russian Constructivism – The True Vanguard Art Movement." Widewalls (2016). Online, [https://www.widewalls.ch/magazine/russian-constructivism, accessed 16 April 2023].

²⁸ Wolfe, Shira. "Art Movement: Constructivism" Artland Magazine, Articles and Features. Online, [https://magazine.artland.com/art-movement-constructivism/, accessed 16 April 2023].

²⁹ Pepi, Mike. "Could There Ever Be an Al Artist?" Frieze, Opinion (2018). Online, [https://www.frieze.com/article/could-there-ever-be-ai-artist, accessed 16 April 2023].

³⁰ Ramos, Valeriano, Jr. "The Concepts of Ideology, Hegemony, and Organic Intellectuals in Gramsci's Marxism." Theoretical Review No. 27 (1982). Online, [https://www.marxists.org/history/erol/ncm-7/tr-gramsci.htm, accessed 16 April 2023].

³¹ Wolfe, Shira. "Art Movement: Constructivism".

³² Brooks, Rodney. "The Seven Deadly Sins of AI Predictions." MIT Technology Review (2017). Online, [https://www.technologyreview.com/2017/10/06/241837/the-seven-deadly-sins-of-ai-predictions/, accessed 21 April 2023].

³³ Hertzmann. "Can Computers Create Art?" https://doi.org/10.3390/arts7020018.

imaginations of billions", emphasising the "aesthetic decisions" AI is making for individuals ³⁴. It should therefore remain a vital consideration given its potential.

Non-human actors within the creative process force us to consider what art is and the role of humanity in the creation of art. Al-art, with negligible human input into the creative process, is undoubtedly art but has limitations and concerning repercussions. Art produced by text-to-image models is decontextualised from the world in which it is exhibited and thus limited in its emotional impact and level of meaningful engagement. Innovation and therefore the evolution of art is hindered by the inherently derivative nature of Al-art. These issues force one to recognise the danger of Al-art in that the potential homogeneity of art could strip art of its power as a force for change. There is, however, currently a place within the artworld for Al to coexist with more traditional mediums pioneered through the work of artists utilising Al to create art. This innovation must be encouraged as Al will only become more sophisticated with the potential to dominate.

Word Count: 1,994

Bibliography:

- Arnason, H. H. and Marla F. Prather. Duchamp as quoted in "History of Modern Art: Painting, Sculpture, Architecture, Photography." Fourth Edition. New York, Harry N. Abrams, Inc. (1998).
- Brooks, Rodney. "The Seven Deadly Sins of AI Predictions." MIT Technology Review (2017). Online, [https://www.technologyreview.com/2017/10/06/241837/the-seven-deadly-sins-of-ai-predictions/, accessed 21 April 2023].
- Clarke, Laurie. "When AI can make art what does it mean for creativity?" The Observer (2022). Online, [https://www.theguardian.com/technology/2022/nov/12/when-ai-can-make-art-what-does-it-mean-for-creativity-dall-e-midjourney, accessed 17 April 2023].
- Danto, Arthur. "The Artworld." The Journal of Philosophy 61, no. 19 (1964). https://doi.org/10.2307/2022937.
- Dickie, George. "Defining Art." American Philosophical Quarterly 6, no. 3 (1969). http://www.jstor.org/stable/20009315.
- Heikkilä, Melissa. "This artist is dominating Al-generated art. And he's not happy about it." MIT Technology Review (2022). Online, [https://www.technologyreview.com/2022/09/16/1059598/this-artist-is-dominating-ai-generated-art-and-hes-not-happy-about-it/, accessed 15 April 2023].
- Hertzmann, Aaron. "Can Computers Create Art?" Arts 7, no. 2: 18. (2018).
 https://doi.org/10.3390/arts7020018.
- LeWitt, Sol. "Sentences on Conceptual Art." 0-9, New York (1969).
- Manovich, Lev. "Al Aesthetics." Strelka Press, (2018). Online,
 [http://manovich.net/index.php/projects/ai-aesthetics, accessed 16 April 2023]
- Mazzone, Marian, and Ahmed Elgammal. "Art, Creativity, and the Potential of Artificial Intelligence." Arts 8, no. 1: 26. (2019). https://doi.org/10.3390/arts8010026.
- Midjourney. "Privacy Policy." 2.1.1 Personal data. Online, [https://docs.midjourney.com/docs/privacy-policy, accessed 16 April 2023]
- Obalk, Hector. "The Unfindable Readymade." Vol.1, Issue 2 (2000). Online, [https://www.toutfait.com/issues/issue 2/Articles/obalk.html, accessed 27 April 2023].
- P., Silka. "Russian Constructivism The True Vanguard Art Movement." Widewalls (2016). [Online, https://www.widewalls.ch/magazine/russian-constructivism, accessed 16 April 2023].
- Pepi, Mike. "Could There Ever Be an Al Artist?" Frieze, Opinion (2018). Online, [https://www.frieze.com/article/could-there-ever-be-ai-artist, accessed 16 April 2023].
- Ploin, A., Eynon, R., Hjorth I. & Osborne, M.A. "Al and the Arts: How Machine Learning is Changing Artistic Work." Report from the Creative Algorithmic Intelligence Research Project. Oxford Internet Institute, University of Oxford, UK. (2022).

³⁴ Manovich, Lev. "Al Aesthetics." Strelka Press, (2018). Online, [http://manovich.net/index.php/projects/ai-aesthetics, accessed 16 April 2023].

- Ramos, Valeriano, Jr. "The Concepts of Ideology, Hegemony, and Organic Intellectuals in Gramsci's Marxism." Theoretical Review No. 27 (1982). Online, [https://www.marxists.org/history/erol/ncm-7/tr-gramsci.htm, accessed 16 April 2023].
- Rosenthal, Nan. "Marcel Duchamp (1887-1968)." Department of Modern and Contemporary Art, The Metropolitan Museum of Art (2004). Online, [https://www.metmuseum.org/toah/hd/duch/hd duch.htm, accessed 15 April 2023].
- Schuhmann, Christoph, Romain Beaumont, Richard Vencu, Cade Gordon, Ross Wightman, Mehdi Cherti, Theo Coombes et al. "Laion-5b: An open large-scale dataset for training next generation image-text models." arXiv preprint arXiv:2210.08402 (2022).
- Tarkovsky, Andrei. "Stalker." United States: Janus Films (1979).
- Vargas, Steven. "How Al-generated art is changing the concept of art itself." Los Angeles Times (2022).
 Online, [https://www.latimes.com/projects/artificial-intelligence-generated-art-ownership-bias-dall-emidjourney/, accessed 15 April 2023].
- Weitz, Morris. "The Role of Theory in Aesthetics." The Journal of Aesthetics and Art Criticism 15, no. 1 (1956): https://doi.org/10.2307/427491.
- Wolfe, Shira. "Art Movement: Constructivism" Artland Magazine, Articles and Features. [Online, https://magazine.artland.com/art-movement-constructivism/, accessed 16 April 2023].