Aesthetic Aspects of Digital Humanism: An Aesthetic-Philosophical Analysis of Whether AI Can Create Art



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Abstract Increased global digitalization and particularly the growing use of artificial intelligence (AI) are relegating human artists to the background. Art has long been regarded as distinctively human. Art creation and art reception fulfill humans in an incomparable way.

However, AI-created artwork is now nearly indistinguishable from human artwork and appears to fully satisfy human aesthetic needs. If this is really true, we need a new concept of art. And we need to ask ourselves the question: Why then do we still need human artists? Or is there perhaps a unique selling point of human artists after all? This chapter explores the aesthetic-philosophical aspects of digital humanism in the context of AI-created art, building on the Kantian notion of art, one of the most prominent frameworks of art in the field of philosophical aesthetics. This chapter addresses questions such as "Do we need human artists in the age of AI?" and "Are creations of AI truly art?"

1 Introduction

Given the title of this chapter, one might ask: What do art and digital humanism have to do with each other? The short answer: More than one might think at first! Creating and contemplating art is one of the most elementary bastions of the human condition. Art serves creative, social, economic, and political purposes for humans. A holistic digital humanism that considers all areas of the human condition that are affected by AI and digitalization must therefore inevitably also address the question of art.

What makes something art? This philosophical-aesthetic question, a source of contention since classical antiquity, takes on a new dimension in today's world as non-human artwork enters the art market. As artificial intelligence (AI) develops the ability to write poetry, paint, and compose seemingly independently, the question of the status of art and its creators has taken on new significance.

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Discussions of digitalization and AI frequently include the political, economic, scientific, and social spheres. However, art and culture have been integral to the human condition throughout history, and the question of whether AI can create art is not limited to the world of galleries, museums, or artists. If AI were to replace human artists, the implications for business, politics, culture, society, and science would be enormous: Galleries would hang works by AI rather than humans. Much more art would be created quantitatively, because AI needs no breaks and is faster and more scalable than humans and their creative process. Legislation would also need to be adjusted: Who is the author? Who gets the money? Therefore, this chapter investigates whether AI can create art.

To answer this question, we must first define art. To put it in philosophical terms, what is the fundamental principle of art? Numerous definitions of art exist. Immanuel Kant's approach to art (KAA) explicitly or implicitly underlies many of the existing definitions, including contemporary, modern, and older concepts of art. The KAA remains convincing and relevant today, despite its age. It is one of the most influential works in philosophical aesthetics, having significantly impacted the philosophical currents of the Enlightenment and Humanism and remaining highly relevant today.

With the advent of the Enlightenment and Kant's writings on aesthetics, the freedom of the artist became the defining characteristic of what constitutes art. The Kantian postulate of freedom has become the touchstone of post-Enlightenment art theory and implicitly or explicitly influences many contemporary concepts of art.

In this chapter, I provide a summary of Kant's freedom of the artist and assess its suitability as an argument regarding whether AI can create art. To clarify, this chapter does not address the question of whether AI is an artistic medium. Whenever human origin is unmistakable and AI is utilized in the same manner as numerous other tools, technologies, and instruments, human authorship becomes evident. Rather, this chapter focuses on instances in which AI is perceived as an "independent artist." The following questions guide my inquiry: Have we created an independent AI artist? Is the art produced by AI truly art? Does it matter whether an AI or a human creates an artwork?

First, I describe the context and methodology of the study by explaining the fundamentals of philosophical aesthetics as a scientific discipline, as well as the function and purpose of the KAA. The KAA focuses on art at the moment of creation rather than through the perspective of the viewer. According to Kant, people's thoughts and feelings when viewing art are irrelevant because art is about the creator, not the viewer. This is because if you take the viewer's perspective, there are as many concepts of art as there are humans. Every person sees something different as aesthetically pleasing from the viewer's perspective and sees other works as art or not. He argues that a suitable definition of art must center on the moment of creation and the creator.

Next, I briefly introduce the KAA. For Kant, art requires freedom. Without freedom, there can be no art, because (human) artists can only create something new if they have freedom. The concept of artistic freedom is frequently included in contemporary and modern definitions of art. Each of the so-called Old Masters

invented something new by the standards of their time, and contemporary trends such as readymade art (in which everyday objects are elevated to the status of artwork) are also based on the concept of artistic freedom. According to the KAA, only the (human) artist can transform an everyday object into a work of art.

In the third section, I apply the KAA to AI to clarify whether AI can create art according to the KAA, and I explore the implications of this discussion for art in the era of AI. I argue that AI cannot satisfy the KAA if one rejects AI's ability to be free. As part of this application, I compare the KAA with historian and philosopher Hannah Arendt's definition of art, which focuses on the creative process enacted by the productive *homo faber* ("Man the Maker"). I argue that the KAA is methodologically superior to Arendt's definition of art. Kant's concept is A) time-unbound, B) culture-unbound, and C) place-unbound. He strives for the necessity of thought and not for empirical actuality. So it doesn't matter when, where, or in what setting the KAA is applied. According to Kant, art is fundamental, rationally explainable, and object indeterminate, whereas Arendt's view of art is socially embedded and focuses on the labor involved in making art.

Throughout this chapter, I argue for a positive and realistic definition of art in the age of AI and digital humanism. I do not wish to develop a technology-critical view of art that excludes AI from the creative process. Rather, human authorship should be bolstered, and AI usage should be encouraged with proper understanding of the implications of AI artistic creation.

2 Aesthetics Is the Study of the Subject of Art, and Kant Is One of Its Most Influential Representatives

Before discussing the KAA, I briefly explain aesthetics as a philosophical discipline and describe its methods.

Aesthetics is the branch of philosophy that is primarily concerned with art, beauty, and taste. According to Budd (2005, p. 4), aesthetics as a discipline plays dual roles as "the philosophy of art and the philosophy of the aesthetic experience and character of objects and phenomena that are not art." The term "aesthetics" originated with German philosopher Alexander Baumgarten (1750, 2013; Guyer, 2005) and describes the discipline or method used to take a philosophical approach to art (Franke, 2021, p. 29). Aesthetics provides a set of methodological tools to consider art in a valid scientific manner (Bredin & Santoro-Brienza, 2000). Consequently, it is crucial that this methodological toolkit is utilized in the context of AI art creation. This chapter focuses on the role of aesthetics that deals with art, though, according to Budd, the two roles of aesthetics cannot be viewed separately.

The question of the definition of art in Western culture reached its climax in the Enlightenment, and many prominent Enlightenment philosophers contributed to a philosophy of aesthetics (Nannini, 2020),¹ for example, David Hume's "Of the Standard of Taste" and "Of Tragedy" essays (1757).² Immanuel Kant is one of the most influential Enlightenment philosophers of aesthetics; therefore, I focus on the KAA as a theoretical framework for this chapter. Numerous other philosophies exist, including those that contradict Kant and provide equally valid concepts of art. However, given Kant's exceptional significance and influence in the field of aesthetics, restricting this chapter to his concept of aesthetics and art is methodologically appropriate.

I do not want to conceal here, of course, that there are also numerous other concepts of art (in philosophy and in other disciplines).³ But as has been shown in the chapters by Nida-Rümelin and Winter, and Nida-Rümelin and Staudacher it is no coincidence why Kant can be referred to in digital humanism.

3 According to the KAA, There Is No Art Without (Artistic) Freedom

Kant was more concerned with critique of other contemporary philosophers than any other Enlightenment figure. In his three "Critiques," Kant questions established dogma regarding the "obscurity of pure reason" (Matthis, 2020, p.7) and the "privacy of pure subjectivity" (Matthis, 2020, p.7). In his *Critique of the Power of Judgment*, Kant examines judgment regarding matters of taste, seeking a balance between the demands of objectivity and subjectivity that elude him in the first two Critiques (Matthis, 2020, p.7).

In his aesthetic writings, and most notably in *Critique of the Power of Judgment* (Kant, 2000), Kant proposes a concept of art that not only encapsulates the aesthetic thought of his time but also strongly influences modern and contemporary art theory. The KAA can be easily and profitably applied to fields of art in which AI is currently established. This application is possible due to the central assumption of artistic freedom that informs Kant's concept of art. The concept of freedom is the foundation of Kant's moral philosophy, which assumes that being free and being moral are mutually contingent, and this concept also underlies the KAA (Thorpe, 2014, p. 90).

In developing his concept of freedom, Kant distinguishes between the "transcendental idea of freedom" (Kant, 1998, A 533/B 561-A 534/B 562), "free choice"

¹As demonstrated in the chapter by Nida-Rümelin and Winter, the Enlightenment plays a unique role in digital humanism and the age of AI. Since this is intricately discussed in this chapter, I will not elaborate further here.

 $^{^{2}}$ In his 1739 work A Treatise of Human Nature, Hume (1739) discusses the relationship between beauty and deformity and vice and virtue. In his later writings on aesthetics, he proposes a link between art's beauty and deformity (and, by analogy, between behavior and character) (Costelloe, 2007, p. 8).

³See Theodor W. Adorno (2004) and John Dewey (2005).

(Kant, 1998, A 802/B 830; Yost, 2016), and "practical freedom" (Kant, 1998, A 534f./B 562; Thorpe, 2014, p. 59; Kohl, 2014). For Kant, only practical freedom is necessary for the emergence of art (Sweet, 2023, p. 137):

For it is not merely that which stimulates the senses, i.e., immediately affects them, that determines human choice, but we have a capacity to overcome impressions on our sensory faculty of desire by representations of that which is useful or injurious even in a more remote way; but these considerations about that which in regard to our whole condition is desirable, i.e., good and useful, depend on reason. (Kant, 2000, A 802/B 830)

Which of these definitions of freedom is most pertinent to the KAA? According to Kant, practical freedom allows the artist to create freely as a rational being. Freedom and rational thought may seem contradictory;⁴ however, Kant argues that art must be created freely and not as a means to an end; otherwise, it is not art but handicraft (Kant, 2000, B 176). To provide a striking illustration, Hieronymus Bosch, the painter of "The Garden of Earthly Delights," selected his subject, color composition, and brushwork based on his own creative sensibility; in contrast, the painter of lane markers on a highway is bound by the requirements of traffic regulations. According to Skees (2011, p. 919), "The artist demonstrates the ability to come up with the material for the work of art at the same time she or he determines the adequate form for the work of art that can manifest an aesthetic idea."

Kant's idea of art demands the use of reason: "By right, only production through freedom, i.e., through a capacity for choice that grounds its actions in reason, should be called art" (Kant, 2000, B 174). This philosophy is systematically situated within the tradition of European art history in that Kant demands that the artist be bound to both *téchne* (i.e., craft, art; philosophical concept that refers to making or doing) and *episteme* (i.e., science, knowledge; philosophical concept that refers to knowledge or understanding). On the other hand, in dialectical conjunction, he emphasizes the principle of freedom in the act of creation (Winter, 2022, p. 6).

Freedom liberates the artist from the conditions of the moment and allows them to extend their creative ambitions throughout time. This elongation enables the artist to work across days, weeks, and months to complete their work, and this pursuit of their artistic aim grants the artist autonomy and freedom.

An extreme occurrence of an artistic expansion spanning decades is the popular art project "L'Arc de Triomphe, Wrapped," by the artist couple Christo and Jeanne-Claude. The creation of this project spanned from 1962 to 2021. The project ultimately outlived one of its creators, as Christo passed away in May 2020.

Through the ability to extend the creative process physically and chronologically beyond the moment, the artist attains the practical freedom that Kant views as a

⁴From the perspective of a reason-based concept of rationality, there is no contradiction between freedom and rational thought. On the contrary, from this perspective, rationality is a necessary prerequisite for freedom. For reason/rationality can be characterized as the ability to appropriately weigh the reasons that guide our actions, beliefs, and attitudes, freedom is then the possibility to follow just the reasons that are found to be better in such a deliberation process; thus, if I am free, it is my reasons determined by deliberation that guide me to judge and act this way or that (cf. chapter by Nida-Rümelin and Staudacher).

necessary condition for artistic creativity. According to Kant, without (practical) freedom, there is no art (Anderson, 2015).

The methodological superiority of the aesthetic-philosophical premises of the KAA becomes apparent in comparison to other philosophers' contrasting perspectives regarding artistic freedom. A socially based definition of art limits the creative act of the artist and the audience reception of the work to social entities, i.e., people, in their social context (and only from this point of view).⁵ In this case, it is difficult to establish a methodical-logical link between the artist and the artwork. For example, Andy Warhol's assertion that "art is what you can get away with" seemingly cannot be reconciled with the enlightened Kantian understanding of art. However, perhaps it can if Warhol is therefore not considered an artist in the Kantian sense. This is a logical shortcut insofar as Kant presupposes as an implication of artistic freedom that the artistic impetus arises from an act that precedes thinking and can only subsequently be accessible to thought (Kant, 2000, B 185).

Kant's notion of pre-thought implication forms the foundation of many modern and contemporary concepts of art, including Marcel Duchamp's renowned *objet trouvé* (readymade) "Fountain." In this work, the transformation of a common thing into a piece of art through the creative act of the artist appears in its purest form.

Subjective freedom⁶ in the Kantian sense as a premise of the creative act may be controversial nowadays, insofar as an artwork is created precisely from the perspective of reflection. A work of art derives from the creator's highest degree of subjectivity, and its social acceptance is irrelevant (i.e., who likes it, in what social context it is created or has an effect, or what monetary worth the art market assigns it).

Essentially, Kant's definition of art can be simply expressed as the philosophy that art requires freedom. Before exploring the central question of this chapter—"Can AI create art according to Kant's definition of art?"—I provide a brief definition of AI.

⁵Such a definition of art would almost lead to the question "What is art?" ad absurdum. According to a definition like this, art would consist of whatever a viewer declares to be art. Yet, if applied to art-creating AI, the question would be easily answered (at least from an aesthetic-philosophical point of view): AI can do art. For example, Roose (2022) shows that an AI-created artwork has won an art competition. And it did so legitimately, given there was no indication in the call for submissions that the artist had to be a human creature. Human viewers have considered the creation of AI as a work of art and, in this situation, superior to the work of human artists.

⁶Basterra (2015) explains subjective freedom according to Kant as follows: "The Subject of Freedom explores the idea of freedom theoretically as the limit that enables thinking, and practically as something other that constitutes subjectivity."

4 What Is the State of the Art in Art-Making AI?

For the purposes of this chapter, allusions to AI primarily refer to generative art, which is defined as art made by an autonomous system. The progression of AI is quite rapid in today's world, and new technological breakthroughs are already in development. Thus, I do not restrict this analysis to specific technologies or applications. Within a Kantian framework, aesthetic-philosophical considerations focus on the underlying principle and the foundations. In this section, I briefly explain the scope of AI for the purposes of this analysis.

AI-generated art is an umbrella term that includes any form of art that cannot be generated without the use of programming (Mazzone & Elgammal, 2019, p. 1). Significant progress has been made in recent years in the field of AI-made art, particularly through the development of generative adversarial networks (GANs). In the initial iterations of GAN-created art, artists would manually select images from their datasets and fine-tune the algorithm to generate images that would serve as a component or otherwise aid in the creation of art. DeepDream, a Google project, was one of the earliest examples of AI's artistic potential (Ghosh & Fossas, 2022). The DeepDream tool was designed to study neural networks (Szegedy et al., 2015); however, artists and programmers were curious about the image generation process, so developers made the code used to generate the images available to the public (Mordvintsev et al., 2015; Ghosh & Fossas, 2022).

In recent years, the emergence of GANs has spurred a surge of algorithmic art that employs AI in novel ways to create art (Schneider & Rea, 2018; Mazzone & Elgammal, 2019, p. 1). Unlike traditional algorithmic art, in which the artist must write detailed code to specify the rules for the desired aesthetics, the new wave of algorithmic art enables artists to use machine learning technology to program the algorithm to "learn" the aesthetics by observing a large number of images (Mazzone & Elgammal, 2019, p. 1). The system can then develop new images that adhere to the aesthetics it has learned. In the next section, I address the question of whether AI can make art.

5 Can AI Create Art from an Aesthetic-Philosophical Standpoint?

As stated, recent technological advancements in the field of computer science have directly led to the consideration of AI in the context of art. Artificial neural networks (ANN) and GANs have elevated the capacity of machine learning (ML) to a level of complexity once deemed utopian (Shahriar & Hayawi, 2022; Santos et al., 2021). The technical reality has shifted such that poetry, paintings, and songs made by AI are now nearly indistinguishable from those created by humans. Elgammal et al. (2017) studied human volunteers' responses to computer-generated and artist-created artwork. They found that human subjects were unable to distinguish between

art created by the proposed system and art created by human artists and exhibited at prestigious art festivals. Indeed, on a variety of metrics, human subjects rated computer-generated works higher than human-generated works. Thus, existing evidence supports the notion that AI is capable of independently producing works of art (Elgammal et al., 2017).

This evidence is also aligned with Hannah Arendt's definition of art as the outcome of the creative *homo faber* (Arendt, 1998),⁷ which has been described as follows:

Homo erectus stands upright; homo sapiens thinks; homo faber makes. Homo faber uses tools to create things. They transform the material available to them into a world full of objects fit for use based on an idea of what the final product should be like and how the world ought to be. Arendt thought that art was the highest kind of activity that homo faber is capable of. (The Hannah Arendt Center for Politics and Humanities, 2023)

In *The Human Condition*, Arendt investigates the fundamental categories of the *vita activa (active life)*: labor, work, and action (d'Entreves et al., 2022). Arendt places artistic creation in the third of these categories. She refers to artistic production as the output of *homo faber*, the fabricator of the world (Arendt, 1998), and she describes the outcomes of this creative process as robust and long-lasting in contrast to commercial goods, which she defines by their characteristic impermanence.

Arendt asserts that artistic creativity is a unique human practice, which raises the question of whether AI's computational infallibility is not merely comparable to human creativity but perhaps superior. Is AI the superior artist? This conclusion can only be valid if two premises are true: (1) art creation is considered a practical activity, according to Arendt's definition, and (2) a receptive viewer attitude is adopted.

For example, in the project "The New Rembrandt," a cooperative initiative between the Delft University of Technology, Microsoft, ING Bank, Museum Het Rembrandthuis, and Mauritshuis, an AI tool created a Rembrandt van Rijn painting in the renowned artist's style to remarkable effect (The Next Rembrandt, 2023). It is difficult for non-specialists to distinguish between a genuine Rembrandt and the AI-generated "Rembrandt," as similar studies by Gangadharbatla (2022) show.

Twenty data scientists, developers, and AI and 3D printing specialists worked for 2 years on the project. The researchers scanned Rembrandt's full collection of more than 300 paintings in high definition to conduct a comprehensive analysis, which resulted in a database with more than 150 GB of data. The team then utilized an ANN to boost the resolution of the paintings and enhance the visual quality of previously damaged paintings. The program analyzed each image and classified the painting based on multiple factors, including the subject's attire, gender, gestures,

⁷Why am I referencing Hannah Arendt? The answer is simple: She has made significant contributions to aesthetics and art theory (Riley, 1987). And Arendt not only studied Kant but also authored lectures and essays on Kant, and his impact on her philosophy cannot be denied (Kateb, 1999). Cf. Arendt's *Lectures on Kant's Political Philosophy* (Arendt, 1989). So, it's even more remarkable that her definition of art contradicts Kant. In referring to Arendt, I would like to present a comprehensive overview of the variety of art definitions.

facial expressions, eye color, and more. A total of 67 distinct features were captured in this analysis (Westhoff, 2020).⁸

If "The Next Rembrandt" is analyzed based on its brushstrokes, color composition, and effect on viewers, the AI artwork is comparable to that of its namesake and data-providing role model, Rembrandt van Rijn, one of the greatest artists in European art history.

Kant's postulate of individual freedom in the artistic act of creation contrasts with Arendt's idea of art, which centers on the artistic act and the viewer. In principle, the prerequisite of freedom in Kant's definition of art precludes the possibility that AI can create sui generis art (i.e., art that originates sui generis). The algorithmbased AI can only produce art "in the way/in the style of." In other words, algorithmbased AI can only be epigonic. To be clear, it is very impressive if an AI or another human being is able to paint in the way of Rembrandt (and in the case of a human being, it is even more impressive; for the human being need not have such a large database and has to "grasp the spirit" of the Rembrandt paintings in order to paint like him). But painting in the way/in the style of Rembrandt is not creating something really new.

This discrepancy between the application of Arendt's philosophy of art and the KAA derives from the fundamentally computable nature of AI. In the current state of the art, even the most advanced GANs and KNNs rely on algorithms and are, in principle, "nothing more" than complex sequences of implications. From a philosophic-logical standpoint, they are fundamentally if-then relationships. Part of the nature of implication is its premise-boundedness, meaning that an implication cannot generate any output that can extend beyond its premises. Any GAN or KNN, no matter how complex, requires an initial impulse. From this impulse, AI can create unpredictable and remarkable outputs for humans; however, it is not scientifically accurate to attribute freedom to these AI tools.

For example, DALL-E and its sequel DALL-E 2, iterations of a disruptive KNN-based program created by OpenAI, can generate graphics from textual descriptions (OpenAI, 2023). The application employs ANNs to convert arrays of input words into arrays of output pixels. The application can make photorealistic visuals in the written form (Singh, 2022). DALL-E is capable of mapping wholly novel notions and producing artwork in a variety of aesthetic genres. Millions of Internet-accessible photographs were used to train the model to create images. The program is built on OpenAI's Generative Pre-Trained Transformer 3 (GPT-3), a text generator capable of generating texts, text summaries, and even poetry (Ramesh et al., 2022).

In brief, DALL-E "creates" an independent "work of art" based on keywords, which at times are surprisingly close in style to the targeted pre-images. Yet, when viewed from an aesthetic-philosophical perspective, DALL-E does not create art

⁸The following works are particularly relevant for a full review of "The Next Rembrandt": (Yanisky-Ravid, 2017, p. 663; Yanisky-Ravid & Velez-Hernandez, 2018, pp. 3–4.; Maggiore, 2018, pp. 383–384.; Zibner, 2019, p. 3).

autonomously. In this instance, the "creation of art" is ultimately a form of permutation in which existing elements are recombined in a highly complex and highquality manner. When DALL-E is reduced to its aesthetic-philosophical principles, the input-providing human remains the artist, regardless of the complexity of the algorithm or the excellence of the outcome. DALL-E cannot sui generis generate a creatio ex nihilo. Conversely, Kant argues that human beings are capable of creatio ex nihilo (i.e., creation out of nothing) because human beings are able to act autonomously. The ability to be free is a necessary requirement for making art (Skees, 2011; Matherne, 2014).

Unlike the Old Master painters, such as Albrecht Dürer, Raphael, or Johannes Vermeer, whose creative impetus is nearly indisputable, many contemporary artists demand this ascription from the viewer first. For example, Tomoko Takahashi's installation "Leftover" (2007), a composition of technical garbage from our industrial civilization, compels the audience to understand the creative act that underlies the transformation of profane everyday items into pieces of art by an intentional act of thought. An AI tool could reproduce a comparable arrangement of everyday items. However, unlike a human, the AI tool would be incapable of coming up with the artistic idea that underpins the arrangement. To do so, the AI tool would need to be capable of freedom.

In the Kantian view, the ability to produce art necessarily involves artistic freedom. According to the KAA, AI cannot produce art if it does not have the fundamental capacity for freedom. This syllogism demonstrates the idea as follows:

(A1) Art requires freedom

(A2) AI is in principle not capable of freedom

(K) AI cannot do art

The validity of this syllogism is contingent on the acceptance of its premises A1 and A2. If these premises are changed, the claim regarding the ability of AI to create art would differ. If AI were ascribed the ability to be free, then it would also be capable of creating works of art according to the KAA.⁹

However, freedom must not be bound to calculability. It is the essence of freedom to remain free of computational necessities, as Kant points out in basing the act of creation on a rationally incomprehensible dialectic. The inexplicability of art is due to the fact that the work emancipates itself from its creators insofar as it eludes their rational grasp. For example, anyone who has experienced the linguistic intensity of a poem by Hans Magnus Enzensberger will be able to approach the intellectual complexity of the work from different angles but will be unable to comprehensively understand the work of art as a whole.

⁹Among others, exponents of the transhumanism, mechanism, or animism partly take this position (Nida-Rümelin & Weidenfeld, 2022).

6 Conclusions

According to the KAA, art requires freedom. Thus, the ability of AI to create art depends on the attribution of freedom to AI tools. If one defines freedom in the Kantian sense, in the sense of the Enlightenment and Humanism, one cannot attribute freedom to AI, at least according to the current state of the art.

However, it would be short-sighted to ban AI entirely from the realm of art. As an artistic medium, AI opens new and expanded possibilities for human artists and art as a whole, particularly regarding the possibilities of form and design. For this reason alone, AI will be increasingly relevant to the field of art in the future.

Nonetheless, the nexus between human authorship and artwork remains even in the age of AI. Regardless of how AI tools are incorporated into the process of creating art, only human creativity and the artistic freedom that underlies it are ultimately capable of generating art, according to the enlightened Kantian concept of art. For Kant, it is the artist who ennobles the application of paint into a work of art. The question of whether AI can be considered an artist equal to humans can therefore be answered with no. AI does not create art sui generis. AI art is only art because a human being with freedom instigates the act of creating something artistic.

Even as I argue for a realistic and positive concept of art in the age of AI, I acknowledge the importance of social, political, economic, and scientific recognition of the fact that what AI "makes" artistically is ethically, legally, and culturally desirable for humankind.

Discussion Questions for Students and Their Teachers

- 1. What concepts of art can you think of that contradict the ones presented here?
- 2. What do you think? Should AI be given the status of an artist?
- 3. What difference does it make whether artwork was created by a human or an AI tool?

Learning Resources for Students

1. Cahn, S.M. and Meskin, A. (2008) *Aesthetics: a comprehensive anthology*. Malden: Blackwell Pub.

If you don't know anything about aesthetics as a field of research yet, you need to read this: This anthology provides a comprehensive overview of aesthetics from antiquity to the present day and brings together the most significant writings in aesthetics and philosophy of art from the past 2500 years.

2. Graham, G. (2005) Philosophy of the arts. London: Routledge.

This easy-to-understand introduction is equally accessible to students and scholars outside the discipline. What's especially notable about it is that it's jargon-free and will appeal to students of every discipline. In addition, it contains regular summaries as well as suggestions for further reading.

3. Kurt, D.E. (2018) Artistic Creativity in Artificial Intelligence. Nijmegen: Radboud University.

This is a dissertation on the topic of art and AI. There's almost no better overview of the current debate—and it is obviously very current research on the subject. All relevant examples of art-creating AI are mentioned and classified. Anyone who wants to be state of the art in the subject area can get a good overview in this dissertation.

4. Boden, M.A. (1998) "Creativity and artificial intelligence", Artificial Intelligence, 103(1–2), August 1998, pp. 347–356.

Although the article is quite old, or precisely because it is quite old, it shows what has not changed to this present day. Despite all the technical progress, the questions about artificial creativity remain the same. Furthermore, it is highly relevant, especially in the field of AI research, no matter under which aspect and in which discipline, to understand the status quo at the respective state of technology.

References

Adorno, T. (2004). In G. Adorno & R. Tiedemann (Eds.), Aesthetic theory. Continuum.

- Anderson, T. (2015). Artistic freedom in Kant and Hegel. *Philosophy in the Contemporary World*, 22(1), 67–79.
- Arendt, H. (1989). Lectures on Kant's political philosophy. University of Chicago Press.
- Arendt, H. (1998). The human condition. University of Chicago Press.
- Baumgarten, A. G. (1750). Aesthetica. Ioannis Christiani Kleyb.
- Baumgarten, A. G. (2013). Metaphysics. A critical translation with Kant's elucidations, selected notes, and related materials Fugate, C.D. and Hymers, J. (transl. and ed.) : Bloomsbury Publishing.
- Basterra, G. (2015). *The subject of freedom: Kant, Levinas (commonalities)*. Fordham University Press.
- Bredin, H., & Santoro-Brienza, L. (2000). *Philosophies of art and beauty: Introducing aesthetics*. Edinburgh University Press.
- Budd, M. (2005). Aesthetics. In E. Craig (Ed.), *The shorter Routledge encyclopedia of philosophy*. Florence.
- Costelloe, T. M. (2007). Aesthetics and morals in the philosophy of David Hume. Routledge.
- d'Entreves, M. P., Arendt, H., Zalta, E. N., & Nodelman, U. (Eds.). (2022). *The Stanford encyclopedia of philosophy* (Fall ed.) Accessed February 23, 2023, from https://plato.stanford.edu/archives/fall2022/entries/arendt/
- Dewey, J. (2005). Art as experience. TarcherPerigee.
- Elgammal, A., Liu, B., Elhoseiny, M., & Mazzone, M. (2017). CAN: Creative adversarial networks, generating "Art" by learning about styles and deviating from style norms. *International Conference on Innovative Computing and Cloud Computing*.
- Franke, U. (2021). Baumgarten's invention of aesthetics. In J. C. McQuillan (Ed.), Baumgarten's aesthetics. Historical and philosophical perspectives. Rowman & Littlefield.
- Gangadharbatla, H. (2022). The role of AI attribution knowledge in the evaluation of artwork. *Empirical Studies of the Arts*, 40(2), 125–142.
- Ghosh, A., & Fossas, G. (2022). Can there be art without an artist? *arXiv Preprint*. arXiv:2209.07667.
- Guyer, P. (2005). Values of beauty: Historical essays in aesthetics. Cambridge University Press.
- Hume, D. (1739). A treatise of human nature. John Noon.
- Hume, D. (1757). Four dissertations. A. Millar in the Strand.
- Kant, I. (1998) Critique of pure reason, Guyer, P. and Wood, A.W. (transl. and ed.) : Cambridge University Press.

Kant, I. (2000) Critique of the power of judgment, Guyer, P. and Matthews, E. : Cambridge University Press.

Kateb, G. (1999). The judgment of Arendt. Revue Internationale de Philosophie, 208(2), 133-154.

- Kohl, M. (2014). Transcendental and practical freedom in the critique of pure reason. *Kant-Studien*, 105(3), 313–335.
- Mordvintsev, A., Olah, C., & Tyka, M. (2015). Deepdream—a code example for visualizing neural networks. *Google Research*. Accessed February 23, 2023, from https://ai.googleblog.com/201 5/07/deepdream-code-example-for-visualizing.html
- Maggiore, M. (2018). Artificial intelligence, computer generated works and copyright. In E. Bonadio & N. Lucchi (Eds.), *Non-conventional copyright—do new and atypical works deserve protection?* (pp. 382–399). Edward Elgar.
- Matherne, S. (2014). Kant and the art of Schematism. Kantian Review, 19(2), 181-205.
- Matthis, M. J. (2020). The beautiful, the sublime, and the grotesque: The subjective turn in aesthetics from the enlightenment to the present. Cambridge Scholars Publishing.
- Mazzone, M., & Elgammal, A. (2019). Art, creativity, and the potential of artificial intelligence. *Art*, 8(1).
- Nannini, A. (2020). The six faces of beauty. Baumgarten on the perfections of knowledge in the context of the German enlightenment. Archiv für Geschichte der Philosophie, 102(3), 477–512. Nida-Rümelin, J., & Weidenfeld, N. (2022). Digital humanism. Springer.
- OpenAI Accessed February 23, 2023, from https://openai.com/product/dall-e-2.
- Ramesh, et al. (2022). Hierarchical text-conditional image generation with CLIP Latents. OpenAI Papers, 3–23. Accessed February 23, 2023, from https://www.shutterstock.com/press/20453
- Riley, P. (1987). Hannah Arendt on Kant, truth and politics. Political Studies, 35(3), 379-392.
- Roose, K. (2022). An AI-generated picture won an art prize. Artists aren't happy. *The New York Times*, 2, 2022.
- Santos, I., Castro, L., Rodriguez-Fernandez, N., et al. (2021). Artificial neural networks and deep learning in the visual arts: A review. *Neural Computing and Applications*, 33, 121–157.
- Schneider, T., & Rea, N. (2018). Has artificial intelligence given us the next great art movement? Experts say slow down, the 'field is in its infancy'. Artnetnews. September 25. Accessed February 23, 2023, from https://news.artnet.com/art-world/ai-art-comes-to-market-is-it-worththe-hype-1352011
- Shahriar, S., and Hayawi, K. (2022) "NFTGAN: Non-fungible token art generation using generative adversarial networks", 7th International conference on machine learning technologies (ICMLT), (pp. 255–259).
- Singh, A. (2022). How does DALL-E 2 work?. Diffusion, and more diffusion, Aug-Mented Startups. *Medium*. Accessed February 23, 2023, from https://medium.com/augmentedstartups/how-does-dall-e-2-work-e6d492a2667f
- Skees, M. W. (2011). Kant, Adorno and the work of art. *Philosophy and Social Criticism*, 37(8), 915–933.
- Sweet, K. (2023). Kant on freedom, nature and judgment. Cambridge University Press.
- Szegedy, S., Liu, W., Jia, Q., Sermanet, P., Reed, S., Anguelov, D., Erhan, D., Vanhoucke, V., & Rabinovich, A. (2015). Going deeper with convolutions. *IEEE Conference on Computer Vision* and Pattern Recognition (CVPR), 1–9.
- The Hannah Arendt Center for Politics and Humanities. (2023). Accessed February 23, 2023, from https://hac.bard.edu/amor-mundi/the-greatest-achievement-arendt-and-art-2023-02-26.
- The Next Rembrandt. (2023). Accessed February 23, 2023, from https://www.nextrembrandt.com.
- Thorpe, L. (2014). The Kant dictionary. Bloomsbury Publishing.
- Westhoff, M. (2020). The next Rembrandt. Digital Innovation and Transformation. Accessed February 23, 2023, from https://d3.harvard.edu/platform-digit/submission/the-next-rembrandt/
- Winter, D. (2022). Warum Künstliche Intelligenz keine schöne Kunst im kantischen Sinne hervorbringen kann. J.B. Metzler.

- Yanisky-Ravid, S. (2017). Generating Rembrandt: Artificial intelligence, copyright, and accountability in the 3A era - the human-like authors are already here—a new model. *Michigan State Law Review*, 2017, 659–726.
- Yanisky-Ravid, S., & Velez-Hernandez, L. A. (2018). Copyrightability of artworks produced by creative robots and originality: The formality-objective model. *Minnesota Journal of Law*, *Science & Technology*, 1, 1–53.
- Yost, B. (2016). Kant's demonstration of free will, or, how to do things with concepts. *Journal of the American Philosophical Association*, 2(2), 291–309.
- Zibner, J. (2019). Artificial intelligence: A creative player in the game of copyright. *European Journal of Law and Technology*, 1, 1–20.

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