

THE WORK OF ART IN THE AGE OF AI IMAGE GENERATION

Aesthetics and Human-Technology Relations as Process and Performance

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Abstract

AI image generators such as DALL-E 2 are deep learning models that enable users to generate digital images based on natural language text prompts. The impressive and often surprising results leave many people puzzled: is this art, and if so, who created the art: the human or the AI? These are not just theoretical questions; they have practical ethical and legal implications, for example when raising authorship and copyright issues. This essay offers two conceptual points of entrance that may help to understand what is going on here. First it briefly discusses the question whether this is art and who or what is the artist based on aesthetics, philosophy of art, and thinking about creativity and computing. Then it asks the question regarding human-technology relations. It shows that existing notions such as instrument, extension, and (quasi) other are insufficient to conceptualize the use of this technology, and proposes instead to understand what happens as processes and performances, in which artistic subjects, objects, and roles emerge. It is concluded that based on most standard criteria in aesthetics, AI image generation can in principle create art, and that the process can be seen as poietic performances involving humans and non-humans potentially leading to the emergence of new artistic (quasi)subjects and roles in the process.

1 INTRODUCTION

Image generator DALL-E is a so-called deep learning model created by the company OpenAI that is trained on text-image pairs from the Internet (images with text captions), which enables users to generate digital images based on text input from the user, so-called prompts. Text is seemingly magically transformed into image (Chesher, forthcoming). In this particular application users often enter surrealist texts such as “an illustration of a baby daikon radish in a tutu walking a dog” (Wakefield, 2021) and “surrealist painting of twitter’s obsession with the end of days” (Gunkel, 2022) but in principle the image generator can produce any kind of image. DALL-E (currently DALL-E 2) is popular but there are also other AI image generators available, for example Deep Dream Generator, Artbreeder, Midjourney, and Fotor.

AI image generators have led to questions whether the art created in this way counts as (real) art and who or what is the artist. There are also ethical and legal issues: as with the use of all machine learning stereotypes may be reproduced (for example more images of men when the text does not mention a specific gender), there is a risk of fake news (for example images of politicians doing something they didn’t do, for example), and some artists have complained about what they see as plagiarism and violations of copyright given that the generators rely on art images scraped from the web – often images which originally have been created by human artists and are used without their consent or payment. And if there is copyright linked to the artwork at all, should it go to the human creator, those who created the AI, or even to the AI itself?

Apart from a few exceptions (Gunkel, 2017; Coeckelbergh, 2017) and recognizing that there is relevant work in related fields (for example in STS, see later), there is not yet much work in philosophy of technology that addresses these questions in a way that links to philosophy of technology to aesthetics and philosophy of art. Yet this is needed if we want to answer these

questions in a way that does not only rely on the history of thinking about what art is and should be but also takes into account work on humans and machines, and more generally human-technology relations, in the field of philosophy of technology.

In this brief essay, I propose two points of entry for discussing the fundamental questions regarding the nature and authorship of this kind of art that lie on the basis of ethical and legal concerns regarding authorship and copyright. One builds on my previous work on the question whether machines can create art (Coeckelbergh, 2017) and applies this framework to AI image generation technology. It links the discussion about AI art generation to frameworks from aesthetics, philosophy of art, and thinking about creativity and computing in order to reflect on what art is and should be in this case. The other one puts the issues in the light of the challenge to conceptualize and understand the human-technology relation(s) involved here. I argue that concepts such as instrument (or tool), extension, and quasi-other fail to capture what is happening and propose a process and performance-based approach. This approach enables me to say that artistic subjects, objects, and roles are not pre-given but emerge and are produced in and by the processes and performances involved in AI image generation. I conclude that based on standard criteria AI image generation can create art and that the process can be seen as poetic performances involving humans and non-humans leading to the emergence of new artistic (quasi)subjects and roles.

2 IS IT ART? AND WHO OR WHAT IS THE ARTIST? CRITERIA FROM AESTHETICS

Criticism of art created with new technologies is not new. The title of this paper refers to Walter Benjamin's famous essay 'The Work of Art in the Age of Mechanical Reproduction (2007)', in which he argues that mechanical reproduction of art devalues it and takes away its aura and cult value. For example, he thought that film lacks a unique presence in time and space. Earlier even photography was seen as problematic, or at least as not artistic, merely technical. For 'failed painters with too little talent, or too lazy to complete their studies,' as Beaudelaire (1980, 87) put it. Today, art created by and with computers has similarly been criticized as being not real and not really artistic or creative. At the same time, AI generated work is increasingly successful in the art world. Some ascribe properties to the artworks that are usually reserved for human-made art. For example, Jason Allen, the creator of the AI-generated work "Théâtre D'opéra Spatial" that won a prize at an art fair in Colorado, said: "I couldn't believe what I was seeing (...) I felt like it was demonically inspired – like some otherworldly force was involved" (in Roose, 2022). Some talk about a new incarnation of the Muses. Others, however, play down the artistic character of these works or refuse to call AI an artist, artistic, or creative. In this case, for example, the program Midjourney was used. Where are the demons or Muses? Opinions and experiences differ. So, is it art, and if so, what is creative about it and who or what is the artist?

If we look at how the art is generated in the case of DALL-E, clearly the first part of the process is entirely human-created: the text prompt comes from humans. In order to generate an interesting image, writing a good text requires creativity. Some texts are more creative, more original, and more inspiring than others. This is not different from (any other) art. The problem, if any, stems from the second part of the process: the image generation by the AI program. Clearly this part is done by the AI program. Once the text prompt is submitted, there is no longer human intervention. It is an automated process. Is this still art? And surely an AI cannot be an artist?

This depends on your conception of art and creativity – something philosophers in aesthetics and philosophy of art have been thinking about for centuries. If one assumes that art is about expression of an inner state or inner self, way that it stems from something in the artists' head, as Collingwood (1958) argued, then AI cannot be an artist and cannot produce art. At best, the

human who creates the text prompt is the artist. It could be said that the text comes from the “head” of the artist, who has a concept or image in mind. This is the origin and there is a chance that the initial concept or image is original and creative. But according to this view, the result after the AI has done its work is not the outcome of a process of imagination and creativity. The resulting image is only artistic in origin (the text, the concept, the image in the “head” of the human), but the AI is not an artist and the resulting work is not really an artwork.

This romantic view of art is still very popular. Empirical research on folk intuitions as to whether AI-driven robots can be viewed as artists has shown that while people are willing to grant that robots can make art, they are far less willing to consider them as artists. The authors predict that therefore people will not be willing to recognize AI as potential copyright holders. (Mikalonyté and Kneer, 2022). AI is seen as lacking artistic intentions, imagination, and creativity. Even if computers already passed the Turing test for artistic creativity ‘behaviourally’ (Boden 2010) – producing art observers cannot distinguish from human-made art if they do not know who or what is the source – the idea is that AI cannot be creative and cannot be an artist.

If, however, one believes that the process of creativity and artistic production is far less romantic and mysterious than traditional aesthetics has it, as Boden (2004) does in her work on computing and creativity, then there is more hope for the production of AI art and AI creativity. If creativity is a matter of using ordinary mental abilities, as Boden argues, then we can try to build machines that simulate those mental abilities. These simulated abilities, so this argument goes, can then potentially lead to creative work. However, one could argue that (1) the AI used in the case of DALL-E does not even pretend to simulate mental abilities and is mere image and number crushing, and (2) even if it could do so, this remains a simulation: the AI generated art is then the result of the mere appearance of creative process. The AI only simulates an artistic process and is at best a quasi-artist and at worst a fake artist. Machines can appear to be creative (Gunkel, 2017), but, so it could be argued, they are not really creative.

Another approach in aesthetics is not to look at the process but at the result. In particular, modern aesthetics often points to the aesthetic features of the work of art: a work then counts as art if these features are present. For example, one might claim that a particular work is beautiful, realistic, or surprising. One could then call a particular image a work “art” if it meets the criterion: if it is beautiful, realistic, etc. – depending on the criterion one uses – while disregarding the origin of the work of art. Such criteria for art thus enable us to evaluate the artistic character of art generated by means of AI, regardless of how it is produced (in this case by humans and by AI). If the relevant features are present in the AI generated image, then according to this definition it is a work of art. If you believe, for instance, that art equals beauty, then if someone produces a beautiful image by using an AI image generator, then according to this criterion that image should be called a work of art. And modern aesthetics does not even require that a work is beautiful: there are many additional or alternative criteria. For example, I mentioned the feature surprise. This creates many options for ascribing artistic or creative properties to AI generated images. (Note, however, that this method leaves open whether this means the human or the AI is an artist.)

Of course, people might disagree about the criterion and they often also disagree on whether the criterion applies to a particular case, i.e., whether the work in question has the particular required feature. For example, people might disagree about whether a particular image generated with AI is actually beautiful, just as they might disagree about whether any other image is beautiful. The appreciation of art also tends to change over time: some works meet with wide approval at one time but are rejected at another time. Descriptively speaking, what is art differs according to historical and cultural context.

This leads us to considering the social dimension of art. Next to traditional definitions of art based on objective criteria (whether they are features of the process, the artist, or the work of

art), there is still the conventionalist definition of art: art is what people call art, for example what is accepted as art in the art world. This controversial but not uncommon definition might be employed to appreciate the artistic status of AI generated images if all other definitions and criteria fail: such images count as art when they are appreciated by people, for example by the general public and/or by the art world. AI generated images that are called “art” and are publicly celebrated (for example when they win a prize), are displayed in an art museum, or are sold for a lot of money at an art auction, certainly meet this criterion, regardless of their origin and regardless of whether any traditional objective aesthetics criterion such as beauty applies to them.

In other words, both traditional aesthetics and more recent thinking about art offer plenty of possibilities to criticize or support claims that AI generated images are art: particular AI-generated images and AI-generated images in general. First, traditional definitions of art that focus on the work of art, rather than on its (human or non-human) creator, are promising for arguing that at the very least such works can be art. “Can,” because not every image generated in this way will meet the specific criterion (e.g., beauty or being appreciated in the art world). Second, if we take the conventionalist criterion such images have a chance to become art by being called “art” by relevant people. Note, however, that not every image meets approval, not every image gets the stamp of “art” by the relevant authorities in the art world. To say that AI can generate art in principle does not entail the claim that it always does so. Moreover, there are gradations: some work is better than other work. Just like in the (rest of) the art world, there is art and there is also non-art, good art and not so good art, etc. Both traditional objective criteria and conventionalist definitions allow for failures (a particular image may not be art) and for gradations. For example, it may be that most people consider a particular image artistic, but that it is nevertheless seen as average compared to another images that is celebrated as one of the best works of art generated by AI so far.

To conclude, according to many definitions and criteria used in aesthetics and thinking about art, work created by means of AI image generation can in principle count as art. “In principle” because the application of these criteria is not always successful. But if it is, then is it right to conclude from this that both the human and the AI are artists? If we assume the romantic, expressivist view of art we must reserve that term for the humans involved. If it is art at all, the potential originality and “genius” then lies in the creation of the text prompt. The rest cannot be seen as artistic work, at least according to this definition. If we use other criteria, then in principle AI could also be seen as artist or co-artist, at least in so far as it contributes or has contributed to the result and its features (for example when it has contributed to the generation of a beautiful and surprising image), or in so far as there is agreement in the art world that the result is art and that the AI is an artist. Whatever one might think about the normative-aesthetic definitions of art, it is clear from a descriptive point of view that in the art world social agreement plays an important role not only in what is called “art” but also in who is called an “artist”. If a large part of the art world embraces AI generated art and calls it art, then whatever objective criteria philosophers working in aesthetics might come up with, the work will already be treated as art. Similarly, a particular AI program could come to be seen as an artist when a lot of people call it an “artist”. Such use of language constructs the image as art and may also construct the human and non-human makers as artists. As a philosopher or art critic, one could then try to dispute this, using counter-arguments based on the expressivist-romantic or objective criteria approach. Defining what is art and what is good art is what we, influenced by Wittgenstein (2009) and later philosophy of language, could call a ‘language game.’ And this game is not neutral towards the artistic and creative status of the makers of images: it co-constructs them as art and artists. Language matters and does things, for aesthetics and for other domains.

However, this more “performative” approach takes us already beyond the framework based on aesthetics and philosophy of art, which is helpful but limited with regard to understanding the role of technology. It says something about the art, about the human (potential) artist, and about the non-human (potential) artist, but it does not offer a more comprehensive analysis and understanding of the precise relation between the human and non-human in the process of the generation of this kind of art. For this purpose, I propose to turn to philosophy of technology, in particular philosophy of human-technology relations.

3 HUMAN-TECHNOLOGY RELATIONS IN TIMES OF DALL-E

If we want to know if and how art is created with AI image generation and who or what the artist is, we can draw on aesthetics and philosophy of art, as I showed, but we can also further enrich the discussion by examining the relation between the human and the technology in the process of creating these images. Let me consider some conceptualizations of human-technology relations that circulate in philosophy of technology and apply them to the problem at hand.

A common way of conceiving of the relation between humans and technology is an instrumental one: technologies are tools, instruments for human purposes. Systems like DALL-E are seen as tools, instruments for achieving human ends. In this case a human wants to create a work of art and for this purpose uses the AI image generator. Based on this understanding of the technology, if there is any artist around in this case then it is the human, who had the idea for a text prompt. Admittedly, the human uses technology. Just as in other kind of art artists use tools and media (painting tools, video camera, etc.), here human artists (or aspiring artists) use DALL-E or another tool for the purpose of creating their images. Whether it is good art or not, and whether it is art at all, may then be discussed in the same way as the question is discussed for other types of art. Nothing new going on here, or so it seems.

This instrumentalist understanding and the corresponding description of what happens is not entirely wrong, on the contrary, it seems almost trivial. Humans are doing this (they use the technology), and AI is a tool. As Heidegger (1977) noted in his famous essay on technology, the instrumental and anthropological definition of technology is ‘uncannily correct’ (5). Humans are creating these images with technology: they give the text prompt, and the technology is a tool that generates the image in the service of the human, who had a goal (i.e., had a concept and an image in mind, and had the general goal of creating a work of art, for example, or general goal of trying out the tool).

However, this is also a too limited understanding and description of what goes on here. A good way to question this is to point to the unintended effects of the technology. From the point of view of the creator (but also of the viewer), the AI may do something unexpected and surprising. It might create an image that was not intended at all. Perhaps the creator didn’t think of it at all or didn’t imagine that this kind of image would be the result of the text prompt. And when this happens, the tool, the technology, comes to the foreground (Heidegger may say: it becomes present-at-hand) and reveals itself as being involved in the creation and indeed as being more than a tool, more than an instrument. Consider again Jason Allen’s experience: looking at the result, he had the feeling that someone or something else did this, that it is not the work of a human. The AI may even be expected to offer the unexpected, to surprise us. And even if the image is not that surprising, if we do not involve the idea demonic or alien intervention, and if we don’t call it art, one could say that given the role the AI plays in the generation of these images, the result will often, if not always, be more and different than the text prompt and what the human might have imagined the AI to do. The AI-generated image cannot be reduced to the text and not even to the concept or image the text prompt creator

had in mind. Clearly there is “more” happening, and this “more” is generated (some would say: created) by the machine, not by the human.

A less instrumental understanding, then, might be offered by using the concepts of “extension” and “enhancement”. If I use the generator, one could argue, my artistic agency is technologically extended or enhanced. It is me-plus-the-machine who is doing it, and some would say that I can even do more or better with the AI than without. The image generation extends my textual work and what I had in mind, does more than what I imagined, and enables me to do something that I could not do on my own. For example, if I am not able to paint a photorealistic image of a piece of fruit (an image which, for example, I wanted to play a central role in the larger image I had in mind), then with the help of the AI I can realize this. One could say that my artistic mind and act is extended with the technology and that this enables me to realize my goal. However, these concepts are not only rather old-fashioned – for example, after McLuhan’s (1964) extensionist thinking (or at least a narrow interpretation of what he said), media studies have moved on to argue that media do not just extend but also re-shape both subject and world – but they are also still too instrumental and too anthropological. What happens in the case of AI generated art is never a mere extension or enhancement of what was already there on the part of the human user. The resulting image is also more than that, something is added by the machine and that something can be connected with the text prompt but also at the same time goes beyond it. Using the terms extension and enhancement still gives most of the credit to the human artist. This is misleading, or at least is often misleading and misleading in case when we clearly experience that the AI does or did more. The terms do not enable us to make sense of the experience that something more is happening that cannot be reduced to what the human intended or imagined. This was the case of the creator who exclaims that a demon or a god must have been at work, but also in many other cases. Looking at these images, we often have the feeling that they are connected to the text but also add something new or surprising. If not a demon, it seems that at least the AI must have been at work.

In response to this limitation, one might jump to the entirely opposite side of the human-technology relation spectrum and invoke the term (quasi-)other, a term we find in Ihde’s (1990) postphenomenological work. Ihde sees ‘quasi-otherness’ (p. 100) as a human-technology relation that makes the technological object appear as quasi-human and/or quasi-living. A humanoid robot, for example, may appear as an artificial other: it is not just a machine, a “something” but instead is experienced as a “someone”, a “someone else”. It appears as an other, or at least as almost an other. It may also appear alive or as animated, as having a soul. Similarly, one might argue that in some cases the AI who creates these images appears as a quasi-other, in the context of this discussion as an other artist. The experience of a demon intervening is also an experience of (quasi-)otherness. The AI then appears as a non-human entity who co-creates the work of art – if not takes over the creation entirely, perhaps diminishing the feeling of agency on the part of the human (would-be) artist.

However, I suspect that in the case of technologies such as DALL-E, such an experience is rare. Usually, quasi-otherness is too strong a term to describe the “more-than-instrumental” quality that is experienced by the human creator and by the viewers. We can safely assume that in most cases most people (potential artists and viewers) would claim that they are aware that the AI is a technology, a machine that generates the images – even if what goes on is “more” than the human creative input. They might experience that there is more going on than what the human does and intends, but still be unwilling to grant the AI the status of an “other” or similar. After they have somewhat de-romanticized the “genius” of the artist (although a lot of that is still going on today), they might be even less willing to romanticize the machine. (Or at least that is what they will say. Their experience might be more complex, and in previous work I have highlighted the continuing influence of romanticism.)

In any case, to do justice to the usual or “normal” experience of AI in this context (AI is seen as a machine but at the same time as doing more than just executing what the human intended or imagined), it seems that we need a conceptualization that is somewhere in the middle between on the one hand technological otherness and on the other hand ordinary instrumentalism, and that still goes further than extension thinking in recognizing the significant and unique role of the technology. We need an approach that does justice to the more-than-instrumental role of the AI in the creation of this art, but at the same time one that does not make it seem as if the AI is always and necessarily an other that has little to do with the human. Furthermore, so far little has been said about the temporal aspects of the (potential) creation of this kind of art; we can do better.

4 A MORE RELATIONAL AND DYNAMIC APPROACH: PROCESS AND PERFORMANCE

One way to progress in this direction is to change the question. So far, I have tried to describe the relation between human subject and technological object by focusing on the status of the relata. The discussion was already about how humans and AI relate in this context, yet the focus was on the ontological and artistic status of the AI, which implicitly or explicitly was compared to that of the human (the human artist or in any case image creator). To call the AI a “machine,” for instance, is to say something about its status as “non-human”, perhaps the opposite of human. In any case, it is all about the status of the relata, which then (each) do something. But what if we turn this around, and no longer take the relata as pre-fixed and given, and rather bring the relation and the process itself to the foreground of the analysis?

The inspiration for my move here is in line with contemporary relational approaches to moral status of technology (see for example Gunkel’s and my work) and with the way mediation theory has moved to a view that is more dynamic, or at least more explicitly dynamic: a view in which subject and object are constituted in the relation (Verbeek, 2005) and in which there is a joint production of meaning that links people, technologies, and the cultural world (Kudina, 2021). But it is especially inspired by a philosophical tradition that is often neglected in contemporary philosophy of technology but that can help to support this way of understanding technology: process philosophy. In the beginning of the 20th century, Bergson (1944) and Whitehead (1978) have argued that reality is not a collection of things but a matter of process and becoming. Both we (human subjects) and things (non-human objects) are not pre-given but emerge from processes of becoming. This approach helps to move beyond subject-object dualism and to recognize the temporal dimension of what we call reality.

Process thinking has had only limited influence in contemporary philosophy of technology [exceptions are (Simondon, 2017) and the thinkers he has influenced, for example Stiegler, but also (Langsdorf, 2015), who has proposed to use Whitehead in postphenomenology], but has a lot of potential for conceptualizing human-technology relations in a way that offers a more temporal and dynamic perspective on them. Moreover, in previous work (Coeckelbergh, 2019), I have argued that a performance-oriented approach does not only help to stress the non-instrumental, active role of technology, but also enables us to conceptualize human-technology relations in a more dynamic way, since the concept of performance also brings in a temporal dimension next to other dimensions (e.g., a social and bodily dimension). As we use technology, we engage in what I have called ‘technoperformances’. Technology, then, is not so much about things and about how we relate to them – as at least part of the (post)phenomenological tradition has it, see again Ihde’s (1990) categorizations of rather static human-technology relations – but more about how humans perform with technology in a dynamic and temporal context (and how these technologies in turn also perform and shape the humans and their performances). This direction of thinking can again be interpreted as moving beyond a strict

subject-object dualism, or at least as being compatible with the view that subject and object emerge in the process – here emerge in and through performances.

How can these theories and concepts be used in the case of DALL-E?

Inspired by process philosophy and the other theoretical directions mentioned, I propose to see the generation of images as a two-step or three-step process mediated by text and by AI, in which the non-human role and the human artistic subject emerge and are produced (rather than pre-given), and which can be characterized as a series of (techno)performances. The first step, entering the text prompt, is a performance with words, carried out by the human. It is mediated and shaped by writing and digital technologies such as the DALL-E program and its interface (e.g., an online website). The second step, the image generation, is a machine learning performance, carried out by the AI program on the basis of image data. Combined, both performances produce an image but at the same time and under the right conditions (e.g., approval by art critics, more general social approval) they may also produce an artist (overnight Mr Allen became an artist), an artwork, and an “artistic” AI tool, which in turn – third – leads to (more) performances of viewers and critics in the art world, the (social) media, and so on. (Quasi-)subjects are here not seen as the romantic deep and rather mysterious origin of the work of art (the starting point of the artistic process), but its outcome. What an artist “is” and what it means to be an “artist” in this context is produced by this process, which includes also linguistic performances by various stakeholders in the art world and the media.

If we use this approach, we can see AI image generation as a poietic process, a process of making and creation, in which potentially not only the art but also human and non-human artists are made and created. The text prompt may well have its origin in the “head” of the artist (But how do we know what happened there? And how mysterious do we want to leave that part? Or maybe we cherish the mystery? Maybe we want the mystery will always remain to some extent?). But that person can only become an artist, and that work of art can only become a work of art, through the entire process including the role of the technology and the role of the viewers and critics, who ascribe properties to the art work and make the text prompt creator and the AI into artists. (Of course, we may use objective criteria to support or criticize what goes on here, but this too is part of the process. In spite of their claims to the contrary, philosophers do not stand outside the process.)

To say that the image or the work of art is created by the human or that it is created by “the AI” is then both a reduction and misleading description of that entire process and of these performances. Humans and AI are connected in the human-technology relation, and that relation is not a static one but a dynamic, changing one in which there is a genesis and emergence of subjects and objects, artists and art works through process and (co-)performance.

Note that when artists used older technologies such as paint brushes or later photography, there was also already such a poietic process and performances; humans and technology were also already connected in such a dynamic relation. The proposed approach is also applicable to older artistic technologies. However, with AI those poietic processes and performances take a specific form and character because of the participation of AI, which now has its own performance (image generation) without direct human intervention at that point in the process, with the process as a whole producing new works of art and makes new artists.

This approach is not only an application of process thinking but is also compatible with approaches in STS such as actor-network theory (Latour) and (other)posthumanist theory (Haraway, Hayles, and Barad). For example, Zylinska (2020) and Romic (2022) have argued that there is a long history of nonhumans involved in artistic production and that AI art can be understood as a sociomaterial ensemble or assemblage (see also Flusser, 2011): concepts and materiality meet, are in dialogue. Going beyond the concept of assemblage, Barad has argued that humans and non-humans are not pre-given, but emerge through what she calls ‘intra-

actions'; there is a mutual constitution of 'entangled agencies' (Barad, 2007). And earlier the concept of performance was already used by Pickering (1995) to talk about the entanglement of human and non-human agency in constantly shifting relationships with one another. According to Pickering, scientific practice is about the performance of scientists but also of the material things in the lab. There is a 'dance of agency' between people and things. Narratives (Romic 2022) also play a role in framing what is going on. AI is not only about material technologies but also about the way we talk about it and the narratives about it (Coeckelbergh, 2021), for example myths.

What happens in the case of AI art creation, then, can also be understood as involving entanglements, dialogues, intra-actions, and dances between the performances of humans (who do text prompts) and the performances of AI (which generates the image), which are in turn embedded in, and shaped by, wider material and narrative contexts (con-performances) in which they take place, by which they are shaped, and to which meaning they contribute.

Note, however, that the relation between what humans do and what AI does here have the character of sequentiality and in this sense there is a still some separation, not so much between humans and technology but between performances. There are at least two performances: first there is the human text prompt (which arguably is itself an entanglement between human and technology), then there is what the AI does in terms of image generation. The dance of humans and technologies involves first a move from the human (as entangled with the technologies of writing and digital technologies), then a move from the AI (and then potentially also moves by other humans, for example art critics.)

Together with these approaches from STS and posthumanism, the proposed concepts of process and performance thus help to shed light on what happens in AI image generation and art generation in a way that goes beyond the question "Is it art?" and focuses more on the precise human-technology (and potentially human-art) relations that are enabled by the technology and its human users, understood as process(es) and performance(s). The approach implies that the artistic-ontological statuses and qualities of the humans, the technology, and the (potential) art work are not fixed on beforehand but are generated in the process and through the various performances and entanglements. And ultimately, even the aesthetics philosopher or philosopher of art who argues about what art is and should be in this case can be seen as a performer (a performer with words), whose role here also emerges from a process in which technology plays a crucial role. It is only because there are these new technological possibilities and the corresponding artistic practices that the question regarding art is and needs to be asked once again and is put in a new light, invites these new philosophical performances so to speak. The same is true for the philosopher of technology. In this sense, the technological (and human) performances "produce" the role of the critic and philosopher; that role, too, is not pre-given but co-shaped by the relevant processes and performances.

Finally, the proposed approach has some affinity with post-author theories in postmodern literature theory, film theory, and elsewhere, which already de-centred the artist before AI's performances put their central position into question. Roland Barthes's famous "death of the author" concept is relevant here: Barthes (1977) argued that the author is not (or no longer) the authority when it comes to the meaning of the text. In the light of the approach developed here, one could broaden, interpret, and re-frame such claims as saying that in artistic creation in general (literature, art, etc.) there is a wider poietic process of art and meaning generation, in which readers, listeners, critics, and all kinds of people play a role, and then add that also non-humans such as technologies have their part – a part that is increasing. While the application of Barthes's concept to the use of language models such as ChatGPT may be more straightforward – one could complain that today the author is murdered by AI text generation or say that this is nothing new – a similar "scandal" seems happening today in the creation of visual art. With the death of the artist, we witness not just the birth of the reader (as Barthes put it) or the birth of

the spectator, but also the birth of technology, which now plays an even more crucial role in artistic creation and further de-centring the artist. How one describes and evaluates this development depends on whether one holds on to the traditional, romantic and human-centred views of art creation and aesthetics already mentioned earlier, or whether one is willing to explore different approaches such as the one proposed here.

5 CONCLUSION

To conclude, my application of standard criteria from aesthetics and philosophy of art has shown that there are sufficient arguments to say that AI image generation can in principle create art (which does not mean every image generated in this way is actually art) – unless, of course, one holds on to a traditional romantic idea of art and artists. Moreover, the process of artistic creation in the case of technologies such as DALL-E can be seen as a multi-step, sequential process of poietic performances involving humans and non-humans and leading to the emergence of new artistic (quasi)subjects, objects, and roles in the process: the human becomes a participant in a process (as text prompt creator, as art critic, as a philosopher of art, etc.) and the AI becomes more than just a machine. Human artists are no longer in the centre. Both humans and machines are co-performers; the image – sometimes a work of art – is the result of their co-performance(s). The image is the result of their “dances” and performances, and ultimately the subjects and objects themselves are created, made, performed, and emergent in and from this process and these performances.

This approach thus allows for a more relational, temporal, and arguably more refined analysis and assessment of what is happening in these cases of AI image/art generation, one that goes beyond traditional aesthetics, de-centers the artist, and fully recognizes the more-than-instrumental role of the technology as shaping art and artists. On the whole, this essay also offers an analysis that is critical, since the criteria from aesthetics and the description of the process can help us to discuss claims regarding artistic value and meaning – in this particular DALL-E case and in technology-assisted art creation in general. The criteria from the first part of the discussion enable us to make normative arguments of what works are aesthetically valuable and count as art (and which creators of images are artists, if that matters at all), whereas the description and analysis in terms of process and performance can help us to better understand how these ascriptions work and how even the philosophical discussions about their status (and the status of the potential artists) come about. However, the latter approach in terms of processes and performances is never merely descriptive but offers a challenge for the normative discussion: it shows us that whatever philosophers may claim about what art is and should be and (with a nod to Benjamin) whatever cult and aura artists may create around themselves and their art, there are also other relevant processes and performances: what counts as art is not only decided in the coulisses of the artworld or in the study room of the aesthetics philosopher or art critic, but also, increasingly, by technology itself.

Data Access Statement

Not applicable.

Contributor Statement

The author is the single author of the manuscript.

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