ARTificial Intelligence: Identifying Generative AI's Impact on Professional Artists

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On my honor as a University Student, I have neither given nor received unauthorized aid on this assignment as defined by the Honor Guidelines for Thesis-Related Assignments

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I. Introduction

"Art is dead [...] AI won. Humans lost." These were the words said by Jason Allen, a man who won a statewide art competition using a piece made from Midjourney, a text-to-image generative artificial intelligence (AI) (Roose, 2022). The use of generative AI may be helpful for artists in terms of creating inspiration for artworks, but its usage is currently being exploited by people who do not make art as a primary living, as well as corporations who are using generated art for their businesses. This prevalence of AI art is detrimental to the artists who depend on authentically creating art for a living. I will be using Mediation Theory to analyze this arising societal phenomenon, which, as outlined by philosopher Peter-Paul Verbeek, offers a framework to analyze technology's role in human existence by approaching it as mediators of human-world relations, rather than material objects (2015). I wish to understand on what fronts AI has impacted the artist community by reviewing literature on both the general public and artists' perceptions of AI, and I explore possible methods of mitigating its negative impacts on artists. By analyzing how the use of generative AIs impacted artists' social relationships with the world, I hope to gain some insight on how artists could coexist with AI art in the future, and ways in which AIs could be used as a mediator as defined by this theory to foster a more positive relationship between artists of all different mediums and the larger society.

II. Commercial Impact of AI on Artists

In recent years, professional artists--those who create and sell art as their main source of livelihood--have largely developed a negative sentiment towards the use of AI as a threat to their economic income. This is not without reason, as AI tools, especially text-to-image ones, vastly outpace human art making processes, thus inflating the artistic world with large quantities of art.

Our current evolution of the Internet, so called Web 3.0, is characterized by “increasing volumes of data” and “data [...] becoming more openly available to consumers”, realized with the rise of social media tools such as Twitter, Instagram, and YouTube (Rudman & Bruwer, 2016). Artists who often need weeks or months to create a piece are struggling to keep up the pace in order to stay relevant and successful in the fast-paced age of the Internet today. With the prominence of text-to-image AIs, “anyone can create drawing images with a plain text description. Such a combination of user imagination power and AI execution power makes it possible to generate new types of images at an unprecedented speed”, as explained by a group of AI researchers who analyzed the capabilities of the most popular generative AIs using a set of predefined tasks they provided to the technologies (Zhang et al., 2023). This rapid acceleration of art production on the Internet can decrease the demand for human artists, which leads to job insecurity and economic hardships for them.

The artist community was already bearing an increasing pressure of staying afloat in recent decades, where even in developed countries like the Netherlands “almost 80 percent of artists earn below average, and more than half earn less than the official poverty level”, according to Dutch economist and Art Sociology professor Hans Abbing (2011). The “starving artist” phenomenon is perpetuated further by the rise and blatant usage of AI tools even in industries like film and animation, where artists were previously the stable workforces in content creation. In Marvel Studio’s 2023 TV series “Secret Invasion”, the series employed only one “AI Technical Director” while previous comparable productions from the studio employed between 5-9 artists and illustrators (Jiang et al., 2023). Film studios and production companies were often some of the most lucrative professions available for artists, but even this avenue of income may

be eliminated for the community now as companies seek to cut costs and use AI-generated content for their productions instead of actual human works.

III. Ethicality of Generative AIs

In this section, I will exemplify the ease of using generative AIs to create stylized artworks with a particular AI I have had personal experience with, Midjourney, and analyze how this ease of access will muddy the distinction between AI and human generated art, and the ethical implications of using AI generated art for one's own material gains. Midjourney is a generative AI that users interact with through a third party app, Discord. By sending commands such as "/imagine" for image generation, and "/describe" for AI-generated captions for an existing image, the AI will respond with respective content to the user. If the user interacts with the AI on Midjourney's official Discord server, all other users on the server can also see what the user's prompt was and what the AI generated for them. Moreover, users have many options to tailor their prompts with tags that specify the style of image that they want to generate. For example, the option "--stylize [number]" lets the user tweak the artistic style of the image. The Midjourney user documentation states that the AI "has been trained to produce images that favor artistic color, composition, and forms"; the "style" default of Midjourney images is set to the value of 100, but users can choose values in the range of 0-1000. A higher number means that the image will be more artistically stylized--extensive shading, well-defined and rendered shapes--while a low number like 0 will resemble an amateur drawing with simple composition and flat colors (*Midjourney Stylize Parameter*, 2024). While these parameters can let artists who use Midjourney as inspiration tailor their reference images, it also allows illegitimate users who wish to pass off the AI's work as their own to generate more realistic and believable "artworks".

The widespread popularity of Midjourney mixed with human inability to distinguish between its content and human content has already led to controversies. A 2023 study from Cornell University found that humans had a 38% failure rate to detect AI-generated images (Lu et al., 2023). All of these factors contribute to the threat of artists' livelihoods as AI art rises into prominence. In 2022, an Illinois state art competition was won by someone who submitted a Midjourney generated image to the digital category of the contest. While the submitter specified it was created "via Midjourney" in the artwork's description (Chikarkova, 2024), the judges admitted that they did not know that Midjourney was a generative AI tool. However, the usage of it did not violate the contest's rules which allowed "any artistic practice that uses digital technology as part of the creative [...] process" (Roose, 2022). The aforementioned incident reveals a gap in understanding between the abilities of generative AI tools and other digital artistic software like Photoshop, and also an underappreciation of the effort required to create art from human artists. While using text-generating tools like ChatGPT or Grammarly AI is widely considered to be dishonest, and banned in academic settings, there has not been a clear consensus on the proper usage of AI art, nor widespread regulations that deem its appropriateness in different situations. In this instance, the contestant argued that he used "over 100 prompts" to get the image he envisioned for the final submission, and used other tools, including Photoshop and Gigapixel, to further render the image, and thus his artwork deserves as much credit as other artists who did not use an AI generated work (Chikarkova, 2024). This argument reveals that a portion of the general public--the judges and people who thought the contestant's win was deserved--has a disconnected grasp of the functions of Midjourney compared to older artistic software such as Photoshop. As AIs use images made by humans to train their models, their outputs are often impossible for humans to tell if they are human made or not from a visual

standpoint. It is imperative that humans working in the artistic sphere, such as art critics, must familiarize themselves with how AIs work to better understand its role in creating visual media and distinguish it from human designed visual media if necessary.

Lack of awareness from the public on how to distinguish between digital media and AI generated artwork, as well as a blurred view of artistic integrity when it comes to AI usage, can lead to oversaturation of the art market and overexpectations of what actual artists can accomplish. Both factors cause a diminished public perception of artists as a collective community; if more AI art is circulated in society, and people are known to be amiss at detecting AI images, then more demands will be placed on artists to produce as fast and highly detailed art pieces as those generated by AIs. When actual artists fail to meet society's heightened standards, they will be forced to accept lowered prices for their work. Furthermore, the sudden influx in AI-generated content saturating artistic spaces right now is commodifying art (Jiang et al., 2023). Making art requires effort and practice from the artist, and the process of creation, along with the final product, is a form of personal and cultural enrichment. In human artworks, each piece has its own style, something that makes the work inseparable from the artist (Botella, 2013). When the effort of making art is taken away, the generated art simply becomes a form of entertainment. Generative AIs use millions of images online as their training models, and its outputs are a synthesis of wide arrays of images, rather something distinctive of an individual. There is no "human touch" or personal flair on an AI generated image that would make it distinctive from another person's. Removing the hints of individuality from artworks would render them to be mass produced commercial goods.

IV. Threat to Artists' Copyrights

From a legal standpoint, the use of generative AI can also be detrimental to artists by infringing on their intellectual property rights. This can be manifested in several ways; firstly, by AI companies using artists' works without their knowledge or consent as data to train their AI models, and secondly by allowing others to duplicate an artist's stylistic choices or motifs by use of the generative AI. While free use works in the public domain or works contributed to free-access organizations like Creative Commons exist for anyone to use those materials for any purpose, the large amount of data, whether textual or imagery, required to train large language models (LLMs) can mean that the use of copyrighted works are also being used in the training for these AIs. Stability AI, the company behind the deep learning model Stable Diffusion, has admitted to the use of copyrighted works from artists in the training of their model (Sag, 2023).

When discussing the legal ramifications of training LLMs using copyrighted material, it is also important to first understand the "fair use" doctrine in the current U.S. copyright statute. It states that using copyrighted material is permissible for a number of purposes including commentary, criticism, and research (U.S. Copyright Office, 2024). It can be argued that the training of AI models is a critical part of research in the new technological advances of machine learning, and as such, the use of copyrighted material should be permitted by these AI researchers. However, the usage of AI models has certainly gone beyond the purposes of pure research in recent years. Often, AI companies will offer a paid plan for the use of their text-to-image model. Stable Diffusion from the aforementioned Stability AI has a free plan for anyone with non-commercial usage; however, professional creators who wish to have commercial usage over their generated images pay twenty dollars a month (Stability AI, 2024). During the training and developmental stages of this AI model, fair use would have applied. But

today, Stability AI is expanding its public reach into commercial bases and the company is profiting from the previous copyrighted materials it had used in its development.

Consequently, Stability AI has come under fire for their commercialization of the AI. In fact, they were sued in 2022 by a group of artists for copyright infringement. One claim made by the artists was that users can create artworks in other artists' styles by entering their name into the prompts, creating "indistinguishable" AI-images from their real works (Brittain, 2023). Commercial users of Stable Diffusion could profit by generating images that resemble these artists' works and selling them to other unsuspecting customers. Although the usage of AI images is still a fairly new issue, and as such, few court rulings can be used to decisively curb the misuse of artists' works by AI training companies, we could look at precedent cases regarding fair use, and what common law in the United States had established as permitted uses of someone else's work versus a copyright infringement. In a literature review of recent copyright cases against generative AIs in 2023, written by a University of Washington Information Law PhD student with guidance from UW professors, the author brought up a previous example of fair use: Warhol Foundation vs. Goldsmith. In this case, the Warhol Foundation published Andy Warhol's rendition of photographer Lynn Goldsmith's photo of the musician Prince on a magazine cover to memorialize his passing. Goldsmith sued the foundation after their publishing of Warhol's rendition. Even though the rendition was visually different from the original photograph, the Supreme Court ruled that the purposes of the rendition and Goldsmith's photo were both of the same intent, to memorialize Prince, and as such it was not protected by fair use (Hayes).

With the precedent of this Supreme Court case, similar logic can be applied to the current situation: the users of AI, their generated images, and the original artists whose copyrighted

works were used during training. While it is difficult for Stability AI to control what prompts are entered by users to generate their images, users who do choose to use artists' names to generate stylistically similar images, even for personal use, are not transforming the usages of the image for purposes of critique or artistic merit. This is exemplified by one of the artists Googling their name and finding AI generated lookalikes of her artworks in a recent news article describing the unfoldings of the Stable Diffusion case (Brittain, 2023). When someone publishes AI images that mimic the original styles of an artist, their usage of the AI image is not for the purposes of critique, research, or similar transformative means of creativity that fall under fair use. Rather, they are using the powers of AI tools to recreate the original artists' purposes in their artworks, and they seek to benefit similarly from the generated image as the original artist had. This harms the original artists as these AI artworks can be circulated and purchased by others without fair compensation to the artist. Moreover, the influx of AI facsimiles can devalue the uniqueness of the original artist's style in the market, making their artworks less valuable and further affecting their livelihoods.

V. Possible Mitigations of AI Usage for Artists

It is important for AI companies to foster a positive relationship with artists, since the use of human-created works is crucial for the development of AI. Also, the mitigation of relationships between the artist community and AI developers could mean an additional revenue stream for the companies, as more artists would be willing to use AI tools as part of their creative processes if they felt their job security and property rights were not threatened by AIs. Under Mediation Theory, a theoretical framework that seeks to examine the relationship between humans and technology, it proposes to view technology as extensions of human beings with equal relations to humans, rather than treating technology as human subjects (Verbeek, 2015). AI

companies could remediate the situation by enacting stricter controls of how people should interact with their models, so that the benefits of the AI as a technology can truly be exemplified, and its harm to social groups like artists be curbed. This aligns with Mediation Theory's view because AI companies are interacting with society, with the technology, AI, as the medium. By redesigning their technology so that more communities can leverage their products instead of having negative perceptions of it, companies can repair their relationship with the immediately affected communities through their technology. This also benefits the companies in the long run because more people are likely to be exposed to and use their products, generating revenue, and they are more likely to become a lasting establishment in society if they are positively perceived by the majority in society. One possible remedy is to ban the use of specific artists' names in user prompts: for example, user prompts that contain names of artists who have active copyrights will not be able to be executed by the AI. Furthermore, in the terms and conditions agreed to upon by the users of AI when they first access the tool, the companies can specify rules that disallow usage of artists' names in prompts, since previous court rulings and the current legal doctrines surrounding copyright and fair use do not support such blatant repurposing of copyrighted works.

With Mediation Theory, when AI is viewed as a relational being to humans, it is apparent why artists feel threatened by the rise of AIs when technology can replicate something they have been doing for years in a matter of seconds. If the threat of replicating something dangerously close to an existing artwork is eliminated, and AI could truly be used for its ability to synthesize different visual factors into new images, it can be used as a tool of creativity for artists. During the process of designing a piece of art, there needs to be explorations of ideas. Numerous scholars have proposed frameworks of the design process for artists, with each of them containing a "generative" or exploratory phase in which the artist goes through a selective

process with a range of ideas to materialize what they wish to create (Botella, 2013). AI tools could, and are, being used by artists to generate ideas that serve as starting points for what their final artworks will be.

Human artists also have certain creative advantages over AI artworks, which can help them maintain an audience even as AI art floods the market. Also in line with Botella's explanation of the artist's creation phase that makes man made artworks distinct to its audiences, a study done by University of Southern California researchers found that when participants were asked to blindly rate two different artworks, one done by AI and one done by a human, on six different criteria, the participants mostly were correct in distinguishing between AI and human made artworks specifically. Furthermore, the participants ranked criteria such as "Development of Personal Style", "Degree of Expression" and "Originality" higher for human artists vs. AI (Hong & Curran, 2024). This provides some hope for artists that seek to connect with audiences who appreciate art as a creative field--patrons of art will likely still be able to distinguish between human and AI art, and artists are not replaceable by AIs on the intrinsic value of creativity, even as AIs may overtake humans in speed and quantity.

VI. Conclusion

While AI tools can be helpful to artists in terms of generating creative inspiration, it is clear that these tools are also detrimental to the interests of professional artists. They can harm artists' incomes as artists struggle to keep up with AI's pace of generating artworks, taking jobs away from artists as companies shift to using AI for artistic design roles, and create misuses legally when AI tools can be used to mimic an artist's style and past creations. In order for artists to coexist with these new technologies, there must be further regulations taken on the training processes of generative AIs and the permissive use of AI images in different art fields.

Professionals in the art world should also raise their awareness and ability to discern AI generated art. As the development of LLMs and AI technologies is in full force right now, artists as a collective community must learn to adapt their livelihoods around the influx of AI tools, and seek to distinguish their works from AI images in order to preserve their role in society.

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