Will the Oversupply of AI-generated Art Crush the Art Market

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Introduction

In recent decades, AI, short for artificial intelligence, has been brought to every aspect in our daily life because of the rapid-spreading nature of digital technology, which greatly influences both economic and everyday social activities. Today, AI has become an even popular and controversial topic because it starts to notably touch the domain of human creativity and emotional expression notably, while in the past time, the art field was always considered by the public as unique characteristics of human beings. The rapid advances in AI technology foreshadow direct threats to human beings, including environmental issues, labor issues, and ethical problems. In this case, ethical rules and standards of ethical conduct are necessary and urgent to apply in regulation in this newly developing domain to ensure privacy, safety, fairness, and transparency. With clear regulation, it appears that AI technology has a promising prospect in the post-work society, with the possibility to assist and augment humans in various fields.

What is Happening in the Digital Art Community

The Fuse of the Debate

In 2022, the Colorado State Fair's annual fine art competition has a special winner, Jason Allen, who submitted an AI-generated work named "Théâtre D'opéra Spatial". This piece of news lighted the fuse of social debate between traditional art and AI-generated art. According to the New York Times, Mr.Allen's work "Théâtre D'opéra Spatial" set off a fierce backlash from the majority of artists, who accused him of, essentially, cheating (Roose, 2022). Artists are furious about this art prize since Jason's work was created using Midjourney, an independent AI research lab, in which a piece of finely detailed and photorealistic artwork is created based on only textual description without craft and skill. However, different groups of people share

different opinions about AI-generated art. While most artists were against AI-generated art,

Jason stated that he would not apologize since he did not break the rule of the contest (Roose,

2022). As the state-of-the-art machine learning algorithms, text-to-image AI tools like

Midjourney have quickly boomed in popularity among the public because the technology lowers

the entry bar of people who can make "art". A social platform, Discord, creates an open creative

community for Midjourney, which gives the opportunity for everyone to join and share progress

with others in collaborative effort. More specifically, in Beta version of Midjourney, after putting

in the prompt "/imagine" and typing descriptive phrases or sentences in a channel, four iterations

of the same idea will be generated in approximately sixty seconds. There is also an option after

for users to improve the quality of the iterations. In the digital art community, the trend of

advanced AI tools opens Pandora's box and raises various concerns about environmental issues,

labor problems, and ethical issues of AI-generated art.

Environmental Issues

Bad money drives out good. A serious environmental problem in the digital art

community arises with the rapid spread of AI-generated art. Recently, an app named Lensa AI

appears, catching users' eyes and becoming the most popular iPhone app in the United States in

Apple's app store. Owned by Prisma Labs, Lensa is created based on Stable Diffusion, which,

similar to Midjourney, is another popular text-to-image AI tool. Users can upload their portrait to

Lensa and receive dozens of portraits in a variety of art styles in seconds. That AI-generated

portraits like Leansa portraits taking over social media platforms strongly pollutes the

environment of the digital art community. As a result of the speedy production of AI-generated

content, the number of AI-generated images having incredibly similar composition, similar pose,

and similar art style will soon exceed the number of regular time-consuming artwork and

photographs on most social media platforms. By the time, tags and image searching function will be unusable, which results in a terrible user experience.

Unemployment Affects Individuals and the Society

Unemployment brings various problems to the digital art community. Besides the significant job loss, social inequalities and social unrest issues will increase as a result. The threat of AI is not only in the digital art community but also the whole society.

Job loss becomes a serious issue related to AI-generated art in the digital art community. In the modern world, the majority of freelance commercial artists rely on illustrations, photo editing, advertisements, publishing industries, and etc. with years of professional art skills. "What makes this AI different is that it's explicitly trained on current working artists," RJ Palmer, a digital artist, tweeted last month. "This thing wants our jobs, its actively anti-artist" (Roose, 2022). Most AI tools are built by scraping images from the internet, often without permission and proper attribution to artists. After training with the unethical data, AI can mimic these artists' art style, and becomes an alternative quicker but cheaper replacement of existing artists. In the whole digital art community appears a general techno panic about AI destroying jobs and the digital art community in the near future.

AI-generated art is changing the market and occupation, which causes the increasing gap between the rich and the poor. Since those traditional tasks can be completed in a cost-efficient but still high-quality method using AI tools, it illustrates how rapidly digital technologies transform from leading edge to commodification. According to Brynjolfsson, "If capital in the form of AI can perform more tasks, those with unique assets, talents, or skills that are not easily replaced with technology stand to benefit disproportionately. The result has been greater wealth concentration" (2022). Therefore, the crisis of unemployment will bring to the majority in the

society. AI will ultimately lead to unemployment and increase the social inequality between the rich and the poor if people cannot adapt to the new technology.

What is more, unemployment caused by AI will also bring a profound impact on a series of further social problems. The effects have externalities to a large degree. In the recent decades, there are increasingly more records about deaths from suicide, drug overdose, and alcoholism in the United States, what economists Anne Case and Angus Deaton call "death of despair" (Brynjolfsson, 2022). Social instability increases due to unemployment for both individuals and the community. For individuals, unemployment will bring crisis both physically and mentally. For the whole community, high unemployment resulted in an unstable society, increase the social marginalization, and finally reduces the gross domestic product (GDP). Overall, unemployment has a significant negative impact on individuals and society.

Ethical Problems

AI-generated art is a nightmare of social bias, copyright and privacy. Artists claims that these AI tools are essentially a high-tech form of plagiarism (Roose, 2022). Unethical utilities of AI tools which harm other's privacy and copyright hide behind AI. Ethical issues can be separated into two sections to discuss, including social bias and unethical dataset.

AI does not create new things, but instead, technology observes and illustrates the present world, amplifying the existing historical cultural biases. Users feel angry and unsafe with portraits generated in Lensa because of an obvious occasional sexualization across all gender categories. Since the complex and mixed dataset, it is simple to generate lewd images, or biased images using Lensa, either intentionally or unintentionally. For example, users realize that portraits they generated based on their own face are modified to be whiter and slimmer for beauty. "It turns out the AI takes those Photoshopped images as permission to go wild, and it

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appears it disables an NSFW filter," Tech Crunch reported (Malone Kircher & Holtermann, 2022). We live in such a digital landscape filled with complexity, biases, and rating content that the process of selecting raw dataset and operating machines definitely needs to take more careful consideration.

Furthermore, there is a complicated ethical issue in AI-generated art's training dataset. Besides the misuse of artwork without permission from artists, AI-generated art also intrudes on users' privacy. In Lensa AI's privacy policy, it is claimed that after these "face date" used in generating AI portraits, all the data provided by users will be deleted within 24 hours, and users should not have concerns about these data being used in identify any individual (Malone Kircher & Holtermann2022). However, Lensa AI's policy also states that these "face data" will be used in future AI training. The giant number of participants in training data brings concerns about users' privacy and also caused the responsibility vacuum. With the development of machine learning, the way it trains magnifies the use of private data, causing a privacy issue. Meanwhile, we need to recognize that machine itself cannot be the agents of responsibility but those who build the model and those who collected the data.

Will Machine Replace Artists

"Could a machine imitate a human so well that its answers to questions were indistinguishable from a human's?" Alan Turing proposed such a test about machines in 1950. Will machines replace human beings? This topic is popular not only in sci-fi movies and dystopian novels for a long time, but also in various industries in the real world. With the development of machines, a crisis in the labor market exists. Artists are worrying about the AI-generated art tools with better operational efficiency and a more significant cost reduction will

take place of human artists in the digital art market. Those who have skills are losing their economic and political power and are gradually being replaced by those who control technology. However, human beings still maintain the power of creativity when AI is focusing on augmenting humans rather than mimicking them (Brynjolfsson, 2022). That AI will have a great impact on society in the near future should be acknowledged, but at the same time, we should still hold a positive view of AI at work ideally, and at least AI will not replace human beings overnight in any field. On the one hand, the degree of maturity of AI art still has space to enhance. On the other hand, humans have abilities to adapt, understand, empathy, and so on, which AI do not have. So machines will not replace human beings.

What is Machine Learning

Machine learning, as a subset of AI, means that machines observe and learn from the large amount of dataset, and finally mimic the behaviors in the data. Instead of heavily coding and programming, machine learning is more like a self-learning process. The present AI-generated art tools are based on using artists' work. Instead of creating something new, what AI does is to combine other's work together and mimic other artists' art styles, which means the present AI tools rely heavily on human beings. Similar with the learning process of human beings, machine learn and find patterns from its data, which becomes its "knowledge". During the process may also make mistakes. For example, not all portraits generated in Lensa are delicate and correct. Mistakes always happen, especially when AI tools are used to handle human fingers. Humans with 6-finger hand frightened users. But theoretically, given sufficient data and enough time, refined and correct images will be created with the evolution of AI tools.

Machines will Not Replace Humans

Compared with AI, human beings have absolute advantages based on humanity. One of the biggest advantages of human beings over machines is our ability to understand, interpret, and react to the emotions of those around us (Alarie, Cockfield&GTP-3 2021). Specifically in the digital art domain, commercial artists nowadays receive commission requested by their clients to create a work of art for them. During this process, not only professional art skills are required, but also soft skills including communication ability and adjustment ability. During the process of a commission, a few discussions and revisions are involved before the final proposal is settled down. Responding to the revise request, human artists have the ability to create different iterations, and also bring new creative ideas, which, the present AI-generated art tools such as Midjourney do not obtain. With flexibility, human artists can better handle certain complicated tasks with a humanized service, which will be their advantage and be the reason why machines will not replace humans today.

Thinking about replacement of AI, what society and artists are worried about the most is the threat from an "unfettered market" but not from the machine itself. In an unfettered market, innovations created by automate human labor, here, which is considered as AI-generated art, will be given excessive social incentives, while human labor and the technology that augments humans will be given relatively weak incentives (Brynjolfsson, 2022). With an unfair resource allocation, an automation-spurred job loss becomes the main issue in the market. In the modern age, technology is causing tremendous changes in occupations of all fields and the whole labor market need time to adapt to the transformation. According to these considerations, that machine will replace humans is a situation that is unhealthy for a society. Therefore, in order to decrease the sudden job loss and other potential crises, such as social panic and ethics, caused by machines, timely regulation is of significant importance.

Regulation of AI

Recently, the blueprint issued by the White House Office of Science and Technology Policy outlines five core principles about AI regulation. The five principles included are creating safe and effective systems, discrimination protections, data privacy, notice and explanation and human alternatives, consideration, and fallback (the White House Office of Science and Technology Policy, 2022). In the modern age, technology evolves exponentially, and the speedy development itself, in particular, becomes an issue. Both the public and the government need time to react and to adapt to the changes. People nowadays start to realize the harm of unfair and unethical use of technology, data, and automated systems. Although the framework offered by the White House this time is still not an effective part of the policy of the U.S. government, the blueprint that aims to protect the public's data privacy and govern AI technology suggests how issues related to AI have been taken into consideration seriously and nationally. Since new challenges appear every minute with the rapid technological changes, including a sudden transformation in labor market and an ethical issue, timely updated policies and government supervision are important for the long-term development of AI technology in the whole society.

Transparency as Solution

When setting regulation policies, transparency is the key point. Transparency, as the main concerns the public worries about the AI tools, can be the breakthrough point to regulate the new technology. Specifically in regulation of AI tools, transparency is separated into two sections, in technical readability and in business operation, which will be the guides for regulators to set policies against the opacity.

Based on the complexity in the domain of AI, it is not a system that is easily understandable, which is important for the law to realize. Burrell mentions an opacity that stems from the mismatch between mathematical optimization in high-dimensionality characteristic of machine learning and the demands of human-scale reasoning and styles of semantic interpretation (Burrell, 2016). Till now, code writing, algorithm design, and modeling are specialized skills mastered by only a small group of specialists. Opacity in terms of the readability of code exists as a barrier between the professionals and the public. Individuals using AI tools such as Midjounery usually do not understand how these tools are created and developed, and how the ethical issues exist hidden behind. Users may not understand the diploma of artists whose artworks are used as training data in AI tools, and it is necessary to inform participants aware of any potential harms to others and to themselves before. Therefore, regulators play an essential role in this process. Regulators are supposed to supervise the creators who take the practical responsibility and control the further use of the technology in a transparent way.

What is more, transparency also exists in business. Opacity of algorithms could also be attributed to willful self-protection by corporations under the protection of competitive advantage, which could also be a cover for a new form of concealing sidestepped regulations, the manipulation of consumers, and patterns of discrimination (Burrell, 2016). For this potential issue, business has the responsibility to share the part of data that would cause threat to the public, and regulation is necessary as an assistant applied to inspect the business and make sure the code available for scrutiny. Avoiding the unethical and criminal use of AI tools, transparency in regulation will contribute to a trustworthy, reliable, and healthy market.

Conclusion: The Future of AI-generated Art

Controversy on new technology is not a bad thing. When the camera first came out, many painters recoiled it and regarded it as a debasement of human artistry (Roose, 2022). Similarly with the time of invention of camera, we are in an era where machines and human beings work together. Attention to new technology will encourage its growth. Although there are still limitations and uncertainties existing, AI has already become a technology that holds great promise with rapid development.

Today, the information a society created is increasing exponentially every second. Big data analytics, which means finding patterns, correlations, and insights from examination of large amount of data, becomes an important method which contributes to reducing complicated labor and organizing information systematically. The fact that AI-generated art is breaking the market to some extent should be acknowledged, however, at the same time, we should still realize that machines will not replace human beings, for the reason that humans have advantages and for a better society. Ideally, under a transparent and restricted regulation, AI will assist and augment human beings as a tool but not competitor, and will create new occupations and services, ultimately providing wit potential benefits and generating more value far beyond our imagination for the whole society.

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