The Humanity Aspect of Art and Creative Process in The Midst of Industry Era 4.0 Towards The Era of Society 5.0

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Abstract

In the era of advanced technology where Artificial Intelligence (AI) is developing so rapidly and has become an integral part of human life, its existence has many influences on how humans live their lives. The speed and convenience offered by AI comes with negative impacts such as degradation of humans' main potential (creation, taste and intention). This is possible when AI is not controlled scientifically and ethically. When civilization from the industrial era 4.0 moves towards the era of society 5.0, AI technology becomes a necessity. Changes in this era also have implications for humans in interpreting art and the creative process. It is very important to step back and review the ethical aspects of technology so that AI, which is ideally intended to help humans do better work, can be implemented wisely.

Keywords: art, creative process, technology, AI, ethics.

1. Introduction

Artificial Intelligence (AI) is a rapidly growing trend today. According to CNBC report, in 2023 there are some AI programs that are most popularly used, namely ChatGPT (total visits 14.6B), Character.ai (total visits 3.8B), Quillbot (total visits 1.1B), Mid Journey (total visits 500.4M), Hugging Face (total visits 316.6M), Bard (total visits 241.6M), NovelAI (total visits 238.7M), Capcut (total visits 203.8M), Janitor AI (total visits 192.4M), and Civitai (total visits 203.8M) total vis,its 177.2M). Through a series of clear instructions, AI technology that is based on algorithmic work systems is able to perform data analyzing and transforming, and then to produce output. With a deep learning approach, data stored in data banks can be easily processed, calculated and tested mathematically, enabling a result (output) to be created quickly. When algorithms are integrated into digital media, such as computers and gadgets which are developing rapidly today, it empowers the device to further help humans in various fields of life, such as business, communication, design, etc.

AI came with positive impacts especially in simplifying the complicated process and enabling the equality of opportunity. With the help of AI, the human creative process becomes easier, more effective and efficient. Everyone can write a book, design a product, paint in various styles, compose music, create sculptures, or carvings in a short time where in the past such creative work could only be done over a long period of time. From the economic perspective, this technology is enabling people to speed up production, and hopefully can contribute to the economy and welfare.

In the field of education, AI offers a pathway for further research that has the potential to have a favorable impact on both the efficiency and the development of competencies, thus enabling students to engage in hands-on learning by interacting with previously crafted designs and observing how an evaluation of the model is built over time (Syahrizal, Yasmi, & Mary, 2024). The role of AI in developing digital movies and television shows an important contribution to the world of education, specifically in terms of changing conventional teaching methods to be more acceptable to today's generation. AI technology deconstructs and displays skill operation content in a comprehensive and refined manner that is able to adapt to the evolution of the market and the needs of the animation

industry (Vundela & M, 2024). Research conducted by Haron et al. indicates that the RepTree algorithm is the most effective algorithm compared to other classification methods used for prediction models in educational institutions. This prediction model can assist parents, teachers, and lecturers in tracking students' performance and providing necessary counseling and guidance. This research can also provide analysis that helps in the allocation of scholarships, the provision of other training that students may require, and finally, the institution or organization will gain various benefits from the provision of accurate prediction information (Haron, Mahmood, Amin, Ahmad, & Jantan, 2024).

On the other hand, the use of AI itself could be a threat to humanity. With all the convenience offered by AI technology, there are a number of ethical issues that arise, including plagiarism, incorrect application of algorithm systems which can crucially affect the results, not to mention privacy and security issues among other problems. Apart from that, human dependence on AI technology, especially in creative work, jeopardizes human existence due to the degradation of the main human potencies which is creativity, feeling and initiative. Humans are alienated from the work they create because of the absence of human awareness in the creation process.

The complications regarding art and creative products generated by AI technology have been arising since around the year of 2022. The complication we are discussing here is not only about the ethical aspects, how the AI technology is threatening human's existence and the way humans perceive the meaning of art itself, but also some issues around privacy and security, copyright, and the way data is collected and used by the program developer.

Hollie Mengert, a Disney's illustrator, discovered that 32 pieces of her work had been used by a computer science student in Canada for a machine learning program to reproduce her visual art style. Sarah Silverman, US comedian, sued an AI company and Meta for using her writings without permission for their machine learning program. In the meanwhile, Stephen Thaler and Jason M. Allen, AI based creators, have their own battle with the US court to get a full copyright for their AI based art and creative products.

Now the question would be, is it doable for the companies that create artificial intelligence programs to improve their database collection systems and limit its use so it will not infringe the copyrights of human artists? Improving a system that involves paying a fair share of royalties to human artists will certainly create financial complications for software companies, but facing lawsuits from artists will be time and energy consuming as well. On the other hand, how to judge whether the use of works produced by artificial intelligence programs is fair or not? How to determine the crucial portion of human involvement in controlling an artificial intelligence program in producing art and creative work?

Today's Industrial Era 4.0 makes humanity move in a global market mechanism that requires speed, accuracy, mass quantities and, most importantly, high profitability. Artists and creative businesses in this ecosystem are forced to improve their abilities to survive the era. Those who are unable to keep up with this super fast pace will be marginalized. Technology, which should be able to facilitate human work in fulfilling basic life needs and getting a better life with the support of technology, should not backfire on humans and reduce the quality of humanity.

2. Method

The approach used in this study is a qualitative descriptive approach, a method that emphasizes critical analytical reading of the study object. Speech and action are the materialization of thoughts. The reality that is formed today is the result of the contents of human thoughts. Of course, realizing that the greater the power in a person's hands, the greater their potential in shaping reality. It is very important to be able to understand the ideological orientation of the growth and development of

reality so that the inevitability of this change process does not lead life to extinction, but rather keeps it sustainable for future generations. Therefore, it is very important for ethical discourse to be involved in all discussions related to science and technology, becoming the foundation of values in understanding good and evil, development and destruction, etc.

The object of study in this paper is the phenomenon of art and creative processes that use AI technology in the industrial era 4.0. This phenomenon is analyzed critically to find an ontological explanation which is then linked to ethical/moral discourse so that it can provide ethical considerations in realizing the ideal era of society 5.0.

3.   Discussion and Main Heading of the Analysis or Results

The journey of art and the creative process cannot be separated from the context of human biological and physiological development, the complexity of civilization, and also the environmental factors. If we look back at prehistoric times where cave paintings by ancient humans were inscribed to record daily events such as hunting, modern humans then were wondering and trying to interpret the motifs behind the creations. Was cave incision a way for ancient humans to document things they considered important in their daily life for the sake of knowledge transfer for the next generation, or was this activity infused with some spiritual aspects?

Whichever is correct of the two, the term art itself only began to be heard in the 15th century in England. Derived from Latin, ars, which means to master or have expertise. The word art was first used in scientific degrees (bachelors of art, masters of art). Of course, art is not just about technical ability or rather than just words. According to Robert G. Bednarik, art production is preceded by non-utilitarian behavior patterns, namely behavior that seems to have little practical purpose (Bednarik, 1998). This opinion is based on various forms of art such as dyed hunting equipment and human palm prints in caves which are believed to have no practical function.

Along with the pulse of human civilization, art possesses a practical function. Art has become a medium for human civilization. No longer are groups of people sitting together staring and admiring the incisions on cave walls just to understand the spiritual nature of the work of art itself. Art is no longer just art. The most exploitative use of art in the homo sapiens era began when religion began to emerge. As we know, there is almost no thing that has been dispersed more massive and lasts for a very long period of time on this earth other than religion. It would certainly be impossible for the religion to spread so expansively without the right medium. Holy books with beautiful words, visual works that strengthen the spiritual imagination of religious followers, as well as religious attractions and heart-shaking prayer chants. Whether in written, visual or audio-visual form, art has long been the most important medium for spreading religions and other belief systems.

The ability of art to stir the human mind and feelings is often used to ignite resistance. Art is expected to grow the seeds of resistance and to keep the motivation in fighting unjust authority. The writings of Maxim Gorky, Leo Tolstoy, Albert Camus, and Pramoedya Ananta Toer are a real form of art as a medium of resistance. Likewise, the painting Liberty Leading the People by Eugene Delacroix which heroically depicts the rebellion of the French people and their struggle for freedom. In a letter to his brother, Eugene wrote, "And if I have not fought for my country, I will at least paint for it" (www.worldsbestpaintings.net, NA).

In philosophical debates, art is a study in the field of aesthetics. The study of aesthetics itself emerged in the 18th century introduced by Alexander Gottlieb Baumgarten (1714-1762). Aesthetics comes from the Greek, aisthetikos, which means things related to perception. There are two kinds of perception, sensory perception (aisthesis) and conceptual perception (noesis). Baumgarten explains aesthetics as a philosophical discipline of art related to sensory perception. In fact, philosophers in previous eras studied art as not conceptually separate from other branches of life. Based on that, there should be

no dichotomy between feelings of art and cognition of knowledge, between art and technology. According to Martin Suryajaya, this dichotomy was formed based on modern construction in the context of the social division of labor in academic circles (Suryajaya, 2016, 2).

The characteristic of modernism which always wants to classify science into boxes has caused the sciences to operate in particular ways, as if they have no connections and correlations that influence each other. Problems then increase when branches of science develop themselves autonomously without considering the impacts that might occur on a larger or global scale. For example, the impact of the atomic bomb that was successfully created by quantum physics scientist, Julius Oppenheimer and other physicist colleagues, was able to destroy Hiroshima and Nagasaki in a blink of an eye. The discovery of advanced technology without regard to moral considerations gave birth to destructive discoveries and definite contributors to the realization of doomsday for the world.

In art, could anything that is considered beautiful be seen as a work of art no matter the aspect of sadism, horror and the degradation of human dignity it contains? Can a serial act of murder that involves "creativity" or intended visual outputs be considered as an art? Perhaps adherents of liberalism will close their eyes to moral discussions. However, whether we like it or not, the products of civilization can have a far-reaching impact on life. This is the reason why it is so important for science, including art, not to focus on its own field, but rather to integrate ethical awareness of a holistic view of life, the interconnectivity, that a good work can give birth to further good things and have a wider good impact.

To reduce the bias of the shallow view of modernism due to the spirit of mass production and exploitation, we can refer to the Greek era when art was understood very differently from the current understanding. Art in that era was conceived as technique. There is the art of fishing, the art of agriculture, the art of animal husbandry, the art of war, etc. Apart from being conceptualized as a technique, the characteristic of art is that it is rational, it is the ability to produce according to rationality. Therefore, a musician must understand mathematics because the relationship between notes is regulated mathematically as well as sculptors who must master the standard technical knowledge of proportional human body visuals. Even in the 17th century, Karl Marx wrote, "really free work, e.g. the composition of music is also the most damnably difficult, demanding the most intensive effort" (Marx & Engels, 1986, 530). Thus, art was not understood as the typical creative process involving merely inspiration and fantasy. Creation means generating something from nothing, and an artist is not a creator that assumes freedom of action, but rather they must submit to rigid mathematical rules just like the physical laws. Beauty was understood as something virtuous and genuine, mimicking the universe as the result of the supreme being.

It is important to understand art in the Greek era as guidance or even a balancer in this modern era where anything goes principle as the effect of capitalism has been ignoring the ethical aspects and the preservation of life. In this century, economic development has become the main focus for all nations in the world, as if the progress of human civilization depends entirely on per capita income. The exploitation of natural and human resources is disguised with sweet promises of economic progress and equal distribution of prosperity. Various non-essential products are appearing day by day. Humans are increasingly inundated with products and services that are believed to improve quality of life. But how do you convince people that they really need all those things? Once again, artistic and creative approaches are used as weapons by capitalists to market their products. The more non-essential the product is, the greater the creative effort involving certain forms of art is exerted to move people to believe in it and ultimately buy the product. Art is a vital tool to connect producers with consumers.

As technological development has been increasing rapidly along with global economic growth ambitions, various forms of artificial intelligence have been created to meet the demand for speed in the modern era. If you can create complex written, visual and audio-visual products in less than half

an hour with artificial intelligence, why do you need to pay extra for human time, effort and expertise? Art seems to be just the final result or product. The creative process of creating works of art is eliminated, as is the reflective process along the way. Beauty standards have been set by the capitalists in order to market their products, and it is facilitated by artificial intelligence.

In the end, works of art are not much different from other commodities which can be easily mass-produced instantly. Art as a holistic process containing observation, contemplation, deposition of feelings, re-embodiment in written, visual and audio-visual forms has been streamlined in order to achieve efficiency to fulfill human ambitions for speed and convenience. Efficiency itself is a vital sign of capitalism. In order to maximize profit, capitalists should calculate all the things in the production and post-production process to achieve efficiency. It is not exaggerating to say that efficiency is a holy grail in capitalism. Now the question would be, can art and creative process get along with capitalism's efficiency without degrading its meaning?

According to Walter Benjamin, even the most perfect work of art still lacks one element: its presence in time and space, its unique existence in the place where it is located. Even traditional works of art are still considered to have shortcomings, what about the AI based-works of art? Benjamin believes that authenticity is the most characteristic of a work of art. There is an aura that makes a work of art have magical value. Advances in reproductive technology have ultimately reduced this unique quality. Art products lose their aura, which is the authority of the object (Benjamin, 2001, 167-168). The works of Van Gogh, Picasso, Leonardo da Vinci, Raden Saleh, etc. are still considered as great works of art to this day because of their auratic elements. This is the missing aspect in today's art and creative production.

On the other hand, the ideology of art for art's sake makes a work lose its function and usefulness. Art was actually used as a medium, whether for religion, education, or politics, because of the ability of art to touch the deepest aspects of human consciousness. Art, which basically contains elements of beauty, can easily function as a means of conveying views and ideology. Art then has an impact in changing the way people think and behave. Beautiful art is good art. The beautyness is closely related to trueness because beautiful thoughts mean good thoughts. That was the view of people in the Greek era.

Nowadays, the development of technology is unstoppable. The technology that is intertwined with capitalism causes a maximum profit-oriented production system, making the situation even more destructive. The absence of sacredness and respect for nature makes humans destroy the environment in the name of civilization and development. Mass production may also cause humans to be alienated from the real world and become more consumptive. Objects/goods are just objects (an sich) without having the dimension of sacredness. In the art field, art will only be a supporting part of the production process, which is to attract consumers. Art is simply understood as technique, only it is more banal than in the Greek era because it ignores the aspects of rationality, purpose, and submission to the universal good values.

The era of society 5.0 is a terminology created to indicate a paradigm of civilization where life is massively integrated with technology. Previously, in the industrial era 4.0, technology was used as a tool to assist human work processes, but in the era of society 5.0 technology is not only a tool but has become something that cannot be separated from life, a necessity, even in the most private moments. The era of society 5.0 assumes that good and well-implemented technology aims to create a better life for humans and the environment.

However, even though the Society 5.0 era offers many benefits, it turns out that this condition still poses very serious problems for humans. In the field of art, modern humans adapt themselves to the use of AI machines. The convenience that comes with AI technology does not necessarily provide benefits for humans, in fact it causes paralysis in creativity, taste and initiative. Ultimately, humans

as thinking creatures can potentially lose their ability to give meaning and value to a work because they are trapped within the framework of understanding art for art's sake or work for work's sake.

AI softwares which stores a large amount of data on artworks can process this data easily, making it possible to create complex patterns and shapes just in seconds. Finally, the issue of plagiarism has become a fierce and difficult epistemological debate, because it is difficult to determine the boundaries between the concepts of originality and imitation. Is there anything truly original on this earth? Some people think that there is nothing original on earth, everything is imitation (mimesis), more or less. What is the limit then?

Letting AI technologies take over the roles of human creativity on a massive scale will degrade the meaning and value in various aspects of human life, things that are inherent in humans. Humans need a certain amount of time to reflect and contemplate in order to form meaning as part of their efforts to find their authenticity. Humans should be masters of themselves, the ones who always develop their consciousness and thoughts to understand their existential meaning in the universe.

Because AI is a necessity, ethical discussions are certainly needed in order to produce preventive action against its potency of destructive impacts. Adi Ophir encourages a negative version of utilitarianism (Aaisyah, 2022), which is preventing as much evil as possible to give birth to greater good. Generally, utilitarianism is understood as an ideology that encourages the greatest good for the good of many people. However, for Ophir, the condition of goodness can only be realized if there is a lack or absence of evil. Crime is the main focus when talking about morals. Suffering, loss and damage are a series of forms of crime. When neglect or indifference to trivial crimes is carried out, reality will lead to an order full of errors, resulting in a crime order marked by a lot of injustice. For this reason, instead of talking about what good is, Ophir encourages talking about things that have the potential to form evil, things that cause humans to suffer and lose, and damages the reality, so that evil can be eliminated, and humans can experience greater goodness.

We have previously discussed the negative impact of AI technology that potentially diminishes human creativity, feelings and intentions. Apart from that, the case examples presented at the beginning of the article also show how the reality of using AI has given rise to many complex problems. However, any novelty always generates polemics at the community level and among experts. Of course, we don't want to be like medieval society which persecuted visionaries such as Copernicus and Galileo Galilei. Innovation, whatever form it takes in the fields of science, belief systems, or culture and lifestyle, tends to be responded with rejection and defensiveness by the majority of society members.

Referring to Merton's theory of social change, there are five modes of adaptation in society: conformity, innovation, ritualism, retreatism, and rebellion (Merton, 1968, 673-682). Innovation itself often occurs when opportunities are closed for some members of society, especially marginalized groups or those who do not have access to certain abilities or opportunities. If you look at it from the perspective of Merton's adaptation theory, the presence of AI programs in the arts sector is enabling common people to become creators, even though they do not have specific artistic skills such as painting, playing musical instruments, or composing words. Art that was once looked up to and accessible only to talented humans can now be done by anyone who is able to operate related AI programs. No need to be excellent at drawing to be able to make comics or produce visual work. No longer need to master a musical instrument to be able to compose songs. AI technologies indeed enable people to do lots of things that were previously accessible only to a few people.

In its correlation to art and creativity, changes in tools and methods influenced by AI technology can be seen as a solution for equality in terms of access and opportunity, although this is still considered relative equality because not literally everyone has access to hardware and software. At least the

opportunity to access hardware and software is still much greater than the opportunity to master conventional artistic skills.

4. Conclussion

Considering the two sides of AI technology in art and creativity, hope and threat aspects possess almost equal portions. On the one hand, we can obviously see a spirit of innovation and equality of access, while on the other hand, equality of access could potentially threaten the sacred meaning of art and human existence in the work of art itself. Based on this muse, the presence of AI in art and creativity needs to be addressed carefully and critically. Studies related to the AI implementation issues and its impact on various aspects of human life need to be intensified so that mitigation efforts for adverse impacts can be prepared and the big potency of AI can be utilized better, more balanced and can be applied ethically.

References

Aaisyah, S. (2022). Adi Ophir'in Ahlak Felsefesinde Kötülük Sistemi, Turkey, Ankara University. Council of Higher Education, Thesis Center: https://tez.yok.gov.tr/UlusalTezMerkezi/tezSorguSonucYeni.jsp (accessed on February 11th, 2024).

Bednarik, R. G. (1998, April). The First Stirrings of Creations. Primeval Art: Rock Painting and Engraving, pp. 4-9.

Benjamin, W. (2001). The Work of Art in the Age of Mechanical Roproduction. In Continental Aesthetics Romanticism to Postmodernism: An Anthology. Oxford: Blackwell Publishers.

Haron, N. H., Mahmood, R., Amin, N. M., Ahmad, A., & Jantan, S. R. (2024). An Artificial Intelligence Approach to Monitor and Predict Student Academic Performance. Journal of Advanced Research in Applied Sciences and Engineering Technology, 44(1), 105-119. doi:https://doi.org/10.37934/araset.44.1.105119

Marx, K., & Engels, F. (1986). Marx & Engels Collected Works (Vol. 28). London: Lawrence & Wishart.

Merton, R. K. (1968). Social Structure and Anomie. New York: American Sociological Review.

Suryajaya, M. (2016). Sejarah Estetika: Era Klasik sampai Kontemporer. Yogyakarta: Gang Kabel & Indie Book Corner.

Syahrizal, S., Yasmi, F., & Mary, T. (2024). AI-Enhanced Teaching Materials for Education: A Shift Towards Digitalization. International Journal of Religion, 5(1), 203-217.

Syahrizal S., Yasmi, Fifi., Mary, Thomson.: AI-Enhanced Teaching Materials for Education: A Shift Towards Digitalization, https://doi.org/10.61707/j6sa1w36

Vundela, S. R., & M, K. (2024). Virtual Reality Technology and Artificial Intelligence for Television and Film Animation. Journal of Advanced Research in Applied Sciences and Engineering Technology, 43(1), 263-273. doi:https://doi.org/10.37934/araset.43.1.263273

Internet:

NA. (n.d.). Worlds Best Paintings. http://www.worldsbestpaintings.net/artistsandpaintings/painting/226/ (accessed on February 3rd, 2024)

The top 10 AI tools of 2023 and how to use them to make more money. (2023, December 24). CNBC. https://www.cnbc.com/2023/12/24/the-top-10-ai-tools-of-2023-and-how-to-use-them-to-make-more-money.html (accessed on February 3rd, 2024).