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ART IN PARTNERSHIP WITH HUMAN AND ARTIFICIAL INTELLIGENCE: CREATIVITY AND ALGORITHM

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ABSTRACT

Art has been the most creative form of humans' self-expression since time immemorial and has taken many different forms over the years. Furthermore, digitalization in all aspects of life has foreshadowed radical changes in art in accordance with the opportunities provided by technology. In this study, the possibility of transferring all the characteristics of an artist defining his art to artificial intelligence (AI) has been discussed, and whether the re-evaluation of art production with the developments in AI and the artist's being alive for the continuity of his art are essential or not has been examined. With the distinguished group study carried out in this scope, it has been aimed to explore beyond traditional approaches, putting people at the centre of the creative process, and has greatly benefited from the expertise of three contemporary artists working at the meeting point of art and AI in Istanbul, Turkey. In this context, the in-depth interview method as a qualitative research method has been conducted in the study, the opinions of the interviewed artists on the topic have been evaluated, and the related questions of the arguments have been analysed. All things considered, two conclusions have been drawn: an artist's work or a particular section of an art movement might be reproduced using possibilities created by digital art, and given the current opportunities and conditions of this age, AI systems are unlikely to replace artists and generate art instead of them.

Keywords: *Artificial intelligence, Algorithm, Digital art, Human and ai partnership, Digitalization.*

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İNSAN VE YAPAY ZEKA ORTAKLIĞINDA SANAT: YARATICILIK VE ALGORİTMA

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ÖZET

Eski çağlardan bu yana, insanın kendisini ifade etme yöntemlerinin en yaratıcı hali olan sanat; yıllar içerisinde çok farklı şekillere bürünmüş, teknolojinin getirdiği imkanlar doğrultusunda, hayatın her alanında yaşanan dijitalleşme sanatta da köklü değişimlerin habercisi olmuştur. Bu çalışma kapsamında, bir sanatçının sanatını tanımlayan tüm özelliklerinin yapay zekaya aktarılma olasılığı tartışılmış, yapay zeka alanındaki gelişmelerle sanat üretiminin yeniden değerlendirilmesi ve sanatçının sanatının devamlılığı için hayatta olmasının gerekli olup olmadığı sorgulanmıştır. Bu kapsamda gerçekleştirilen bu seçkin grup çalışmasıyla birlikte, yaratıcı süreçte insanı merkeze alan geleneksel yaklaşımların ötesini keşfetmek amaçlanmış ve İstanbul'da sanat ile yapay zekanın buluşma noktasında çalışan üç çağdaş sanatçının uzmanlığından yararlanılmıştır. Bu bağlamda, çalışmada nitel bir araştırma yöntemi olan derinlemesine görüşme yöntemine başvurularak, görüşme yapılan sanatçıların konuya ilişkin görüşleri değerlendirilmiş ve söz konusu sorulara ışık tutulmaya çalışılmıştır. Dijital sanatın yarattığı imkanlarla bir sanatçının eserinin ya da bir sanat akımının belirli bir kesitinin yeniden üretilebileceği ancak içinde bulunulan çağın imkan ve koşulları göz önüne alındığında, yapay zeka sistemlerinin sanatçının yerine geçebilme ve onun yerine sanat yapabilme ihtimalinin bulunmadığı sonucuna varılmıştır.

Anahtar Kelimeler: *Yapay zeka, Algoritma, Dijital sanat, İnsan ve yapay zeka işbirliği, Dijitalleşme.*

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1. INTRODUCTION

From the primitive periods of human history to the present, people have tried to express themselves in many ways and regarded the state of action which they have formed through imagination, emotion and creativity as the art. On the one hand, all the things having an impact upon people have shaped their art, on the other hand, the developments in technology and science, especially culture and art have caused to be shaped many different aspects of society. This transformation has emerged not only in the production areas but also in art by the apparent effects and provided the birth of different art movements.

It is possible to expect innovations to transform all the art techniques, and thereby the artistic inventions itself to be influenced by this transformation and, indeed, perhaps to make an astonishing change in our sense of art. As this initially affects the reproduction and transfer of the artworks, it is inevitable that the artworks having an increasing accessibility is going to become widespread (Valéry, 1964, p. 225-228). However, according to Walter Benjamin, the technique of reproduction, which detaches the reproduced object from the traditional forms, creates a number of copies instead of a unique existence by many reproductions and, furthermore, the reproduced artwork is increasingly becoming an artwork designed for the reproducibility (Durham and Kellner, 2005, p. 21-23). Thus, AI and algorithm systems, the leading technologies of digitalization, and the artworks produced by these systems allow to implement the breakthroughs that will reinterrogate the art and the interpretation of art. AI has become a multi-disciplinary study covering many different fields, from academia to politics and from creative industries to art rather than just a digital partnership built on data. Considering the development of AI based on the recent years in terms of the art, the relation between the artwork described through human-specific qualities and AI is changing the traditional codes of artistic DNA by directly affecting the depiction of art and artist and making a new digital art form inevitable. These systems, emerged as the idea of creating machines with generally human-like cognitive and intellectual abilities, bring forward the idea of superintelligence gradually going beyond what human beings might do and having perceptive skills. Moreover, they also encourage the discussions on qualifying a final product created with the help of AI as the art.

Within the scope of this study, the probability of transferring the characteristics of an artist's art such as technique, style and experience to AI has been discussed. Additionally, even if the artist is not alive, the potentiality of AI to continue producing artistic works of art instead of the artist and AI's ability to create a distinct style and from the artist's and develop this style have been interrogated. Within this framework, it has been focused on the future of digital art and the results of the digitalization process and examined

whether the artist's immortality and the sustainability of the artist's art are possible or not. In this context, the in-depth interview method as a qualitative research method has been utilized in the study, the opinions of the interviewed artists on the topic have been evaluated, and the related questions of the arguments have been analyzed. Hence, this study suggests an in-depth examination on the integration of artificial intelligence technology into the art world and the potential of this integration to ensure the immortality of artists' works. Within this context, to understand how artificial intelligence could internalize the artist's style and experience, the in-depth interview technique has been used in the study; the opinions of artists who have used artificial intelligence systems actively or briefly in their art and their views gained from these experiences have been sought to explore. Thus, through the information gathered, it has been intended to comprehend the process at the intersection of art and technology, the general conception on the role of artificial intelligence in the art world and its effects in the near future. In accordance with the findings, two conclusions have been drawn in the study: It is possible to create AI and algorithm systems that might cooperate with people without any problems and imitate all the components oriented to an artist's or an art movement's technique and style, whereas it is impossible to create an AI system that might solve the complexity of human values and preferences and reflect its historical witness to its art consciously.

The study is significant for evaluating the possibility of AI's generating art instead of the artist and interrogating the artist's immortality according to the artists' perspectives who produce their artworks through by using AI and algorithm systems in İstanbul. In recent years, there have been various studies on the relationship between artificial intelligence and art in the academic world: "A Current Evaluation on Artificial Intelligence and Artworks", "Artificial Intelligence, Machine and Art", "Artist's Role and Changing Art Case in Artistic Production Practice with Artificial Intelligence", and "Usage of Artificial Intelligence in Today's Graphic Design" are the primary studies. In these studies, literature review and analyses on the samples from the current studies have been included. In this context, the study has aimed to enable noteworthy findings to the academic field by using the in-depth interview method contrary to the previous studies presented above. Besides, unlike the other studies, several branches of art in which AI is comprehensively used have been included in the study.

2. AI AS A NEW GENERATION ARTIST

The search for developing a machine that might imitate human intelligence is one of the most daring challenges of the humanity. Thus, the diversity of practices for this purpose

has intersected art and science at many points and the studies shaped by their symbiotic relationship have always nourished the thoughts and attempts about the calculability and imitability of human intelligence.

Art is an autonomous way of expressing emotions as well as an act requiring self-awareness and creativity. Since the concept of a traditional art is defined as a tool for a kind of self-expression or a way of communication being people centered and occurring between the people and subjects, the different approaches such as computer art, computational art, and generative art have emerged for this new generation art practice produced with the help of artificial AI and algorithms. AARON is undoubtedly one of these attempts which is the collective name of a series of computer programs written by Harold Cohen in order to make painting possible through an artificial robot arm (Cohen, 1994, p. 1-13). It is also demonstrated as the most prominent and early instance of the algorithmic artworks. In this context, algorithmic art is a broad term created by using programming and signifying any art that might not be accomplished without programming. On the other hand, thanks to the development of GANs (Generative Adversarial Networks) in recent years, AI has also pioneered to a new wave of algorithmic art used to make art.

In the light of all this information, when the AI and its history including deep learning and machine learning are elaborated, John McCarthy is undoubtedly regarded as one of the most important people with his studies in this field and also considered as the father of the AI. It is possible to explain the AI that he defines as the science and engineering of making intelligent machines via intelligent computer programs (http 5) and the critical turning points of artificial intelligence -in terms of the prominent people and their approaches to the field- as in the following: Marvin Minsky (1969) and John McCarthy (1971) based the foundations of this field on representation and reasoning. On the contrary, Ed Feigenbaum and Raj Reddy (1994) formed expert systems encoding human knowledge to solve problems. Judea Pearl (2011) used the AI to develop probabilistic reasoning techniques. Yoshua Bengio, Geoffrey Hinton, and Yann LeCun (2019) made 'deep learning' (multi-layered neural networks) a critical part of modern data processing. Due to these reasons, they were the major contributors in the history of the AI (Russel and Norvig, 2021, p. 17). The invention of the modern computer has also provided us a model about how we ought to think (Bibel, 2014, p. 90-91).

Alan Turing, a British mathematician, designed a code-breaking machine called The Bombe in order to decipher the Enigma code used by the German army during World War II. Right along with this device, considered as a kind of electromechanical computer, Alan Turing began to search about the intelligence of similar machines and introduced the Turing Test, which has still been accepted as a way to determine the intelligence

of a system today. According to this test, if a human being interacts with another human being and a machine and could not distinguish the machine from the human being, then the machine might be considered as intelligent (Turing, 1950, p. 433-460).

Donald Hebb developed a learning theory known as 'Hebbian Learning' which copies the process of neurons in the human brain in the 1940s, then this theory was extens somehow ively debated and led to increase of research on the artificial neural networks. However, after Marvin Minsky and Seymour Papert had demonstrated that computers did not possess enough processing power in order to do what such neural networks was required by the end of 1960, the interest on these studies disappeared. Generally, the AI industry grew from a few million dollars in 1980 to billion dollars in 1988, but after a few years, it entered into the process of a recession known as the 'AI winter'. Although many studies were carried out during this process, the expected interest and the desired breakthrough could not be somehow accomplished. That Deep Blue, a chess-playing supercomputer developed by IBM, defeated Garry Kasparov, the World chess champion on chess, caused a quite splash in 1997. By the early 2000s, different initiatives began to come to the forefront. In 2007, James Hays and Alexei A. Efros devised a clever method that will harmoniously complete the missing parts from the original image by mixing pixels; they discovered that the technique does not appropriately work with a database of a limited number of images, but exceeds the quality threshold with millions of images (Hays and Efros, 2007, p. 1). Soon afterwards, obtaining tens of millions of images in the ImageNet database were headed toward a new revolution in the field of computer vision, and then the availability of big data and the shift to machine learning contributed to the AI to regain its commercial appeal (Havenstein, 2005; Halevy et al., 2009). Starting back to studies on artificial neural networks that had been given up at the end of the 1960s was accelerated in 2010. Through AlphaGo, a program developed by Google, which had defeated the world champion in the board game, Go, in 2015, artificial neural networks came back as "deep learning" and this also underlies the basis of many AI systems used today (Haenlein and Kaplan, 2019, p. 8).

On the contrary, AI, substantially shaped by today's technical opportunities, has acquired a new mission as being an intelligent and helpful agent doing things faster and easier. In this context, Dr. Rodney Brooks, the former director of Computer Science and Artificial Intelligence Laboratory of MIT stated that AI holds its same place as in the PC industry in 1978; within thirty years, we will possess the intelligence templates to create a powerful AI and our lives will also be surrounded by the intelligent robots by 2050 (Banko, 2009, p. 1760). In fact, the long-term goal for AI is to focus on developing the human intelligence rather than simulating it. This attempt, which was initiated made by

John von Neumann in 1958, but was popularized by Vernor Vinge, has introduced us the concept of 'singularity' which have strong supporters such as Raymond Kurzweil from Google. Thus, it is possible to talk about two poles, optimists and pessimists (Boden, 2016, p. 147-153). There have been many concerns and expectations about the process: On the one hand, Kurzweil's approach has been quite optimistic about the process considering from whether AI will allow us to develop our intelligence to the transhumanism. On the other hand, Elon Musk has had some predictions about the process and its potential to drag the humanity into World War III.

Consequently, the history of AI is a field including a wide range of disciplines as linguistics, mechanical engineering, mathematics, statistics, psychology, neuroscience, economics, cybernetics and philosophy and is a comprehensive field that it might not only be limited to the history of mechanical enterprises (Tecuci, 2012, p. 168-169).

3. AIM AND METHODOLOGY

In the study, the probability of transferring an artist's experiences and style to AI, the potentiality of AI to continue producing instead of an artist even if the artist is not alive, the possibility of an artist's immortality and the sustainability of his or her art will be discussed by conducting the semi-structured in-depth interview method which is one of the qualitative research methods and benefiting from AI and the artistic examples in which AI is used. The approaches and opinions on this topic will be argued in accordance with the artists' considerations who produce with AI and algorithms.

Within the scope of this study, it is mainly aimed at examining the possibility of transferring the characteristics which define the artist and his or her art to AI by benefiting from AI and the artistic examples in which AI is used. Additionally, the secondary aim of the study is also to expose the artist's the immortality, and the sustainability of his or her art are.

In this context, answers to the following questions will be sought:

-Can artificial intelligence produce a work of art, and what would be its advantages and disadvantages?

- Is it possible to transfer an artist's works which he or she produced throughout his or her life, experiences, styles and briefly characteristics which define the artist and the art which he or she has created to artificial intelligence? Is the artist's the immortality, and the sustainability of his or her art probable?

- How should human-artificial intelligence cooperation be?

-Can inspiration be considered as equivalent to algorithm?

The in-depth interview method, which is one of the qualitative research methods and is widely applicable to data collection, was used in this study. Since this method is based on the speech, which is a common form of verbal communication, it provides a short-cut to reveal people's views, feelings and thoughts compared to written communication. Therefore, it is obvious that it removes the limitations and artificiality in the tests and questionnaires based on writing and filling-in (Karasar, 1995, p. 165; Yıldırım and Şimşek, 2018, p. 127).

The data collected through the interviews has been recorded and then deciphered. The development of AI within the context of art has been discussed and the use of AI in the different branches of art has also been examined. In this respect, the information which has been obtained also assisted to arrange the interviews with the artists.

Researchers use exploratory research method when they have limited scientific knowledge about the process, activity, or situation they want to study or there is no pre-existing scientific knowledge before. Additionally, when they have motives to consider that it includes elements worth exploring, this research method is used by researchers. The main purpose of exploratory research is to provide inductively derived generalizations about the group, process, activity or situation being studied. It is clear that that exploratory approach is adopted in three circumstances. If there has been little or no systematic study on the topic to be studied, if the relevant topic has not been studied with a flexible description and has only been searched based on prediction and control about the topic, if the relevant topic has been changed substantially and, hence the findings of previous studies on the topic have become invalid (Stebbins, 2001, p.5-7). The topic examined in this study is included under the type of exploratory research. The study, which is the first research suggested on this topic by this approach in the national context, aims to create a new field of discussion and form a basis for interpreting international developments in the field. As it explores the role of AI in the art production, in this context it will guide to future studies to be examined in the field. In the study, the role of AI in the art production along with the developments in the field of AI is examined in general terms. It is aimed to discuss how the artists are affected by the developments in the field of AI in Istanbul, Turkey and their perspectives about the topic within the framework of art production through AI.

The artists selected as the sample were determined by the purposive sampling method included in one of the non-random sampling types. Purposeful sampling is a sampling

method with the assumption which will represent the target audience. It is determined on which samples might represent the target audience with the experts' and experienced people's opinions (İslamoğlu, 2011, p.174). As creating a sample in this method of sampling, the most appropriate units which are considered to best serve the purpose of the research are taken into account (Baştürk and Taştepe, 2013, p.144).

Therefore, the artists who had explored AI technology and had used AI in their studies were selected as the interviewers and were included in the sample for the research. Although several specific artists in Istanbul, Turkey approximately integrated AI systems into their artworks, three artists were interviewed within the scope of this study. Thus, three different opinions, which approach the potentiality of AI to produce art on its own positively, criticizes this approach, and considers AI systems as a creative partner, but cautiously approaching the identity of AI as an artist, were represented in the study.

An in-depth interview method was used in the data collection phase. Initially, the questions were prepared for the interview in accordance with the purpose of the study and the artists' opinions were tried to be learned. The questions asked were open-ended, and the interviewer was asked to elaborate his answers regarding what he wanted to express. According to the interview process, sub-questions related to the main questions or additional questions were asked as well. From this point of view, it might be assumed that the semi-structured interview method, which is one of the interview types, is more appropriate for the study. The interviews were recorded for the further analysis with the participants' consent. During the interview, the essential points were also noted apart from the audio recording.

Two of the interviews were conducted face-to-face in the artists' offices while the other one was conducted online via the zoom platform. The recordings from the interviews lasting three and a half hours totally were analyzed, and the participants' thoughts were conveyed successfully to the readers in line with the data obtained.

4. FINDINGS

In this section, the issues such as the use of AI in the art production, the perspectives of artists about AI in the art production, and the differences between digital art production and traditional production are argued. Moreover, human-AI collaboration, whether AI might produce instead of an artist, and by this means the possibility of the artist's immortality are also elaborated. The first subsection, "Artificial intelligence in the art production" examines whether artificial intelligence could produce a work of art. In the second subsection, an answer to this problem is sought by focusing on the possibility of

artificial intelligence ensuring the immortality of the artist. In the other subsection, the potential of artificial intelligence to be a creative partner for humans is explained and the dimensions of cooperation between humans and artificial intelligence are demonstrated. The last subsection deals with inspiration and algorithm similarity. Is it possible to create an algorithm of inspiration? The answer to the question is discussed based on the opinions of the artists.

4.1. Artificial Intelligence in the Art Production

Concerning AI and art, perhaps one of the most critical problems is the possibility of regarding the work of AI as a work of art. Considering art from different perspectives is the main issue which needs to be emphasized here. Since the concept is not described clearly and precisely, it might vary from person to person whether it is defined or not accepted as the art or not. The opinions of the three participants about the topic differ from one another.

P2 stated his opinions that, "Since 'artificial' and 'art' derive from the same origin, art is essentially man-made and that is how it is by definition. Besides, each thing can produce a work of art; for example, water can even produce a work of art, so each form can produce a work," stated his opinions." P1, one of the other participants; regarding the art production of algorithms, he considers it somewhat depends on how art is defined. He also explains his views that algorithms or computers are only tools and, just as every artist's work cannot be called as art, any work produced with every coding cannot be called as art. Consequently, according to P1, art might be produced with an algorithm and with the same algorithm, another man might produce something different by changing the variables. P3's point of view is slightly different from the others. P3 especially focuses on the originality of the works by AI. He points out that "AI is actually in the first phase of a utopia imagined in the future. It is currently in the phase called narrow AI. In this phase, it is a statistical model working very well and using data well. To call that AI would be too much. There is still a large amount of time and effort for AI to co-exist with human intelligence. Today, the works created by AI do not possess any originality. They only own a structure to the degree that we do not perceive their sophistication." It is obvious that machine learning and artificial intelligence cannot replicate a man's lived experience and so, AI cannot create art as human artists do (Mazzone and Elgammal, 2019, p. 8). Although AI cannot create art as men do, the created works can be regarded as art considering in this context. Undoubtedly, AI has contributed a lot to the artist in terms of art production: it may offer much more options and speed up some production processes. P3 claims that the positive side of AI in this regard is related to the aesthetic stance of the work after it emerges as an artistic object. On the other hand, there is a structure that

uses artificial intelligence as a form and does not notice anything in the content of the artwork; he finds all of them very decorative. According to P3, art is a thought supposed to be expanded in a sequence of thoughts entailing to be explained in layers. For this reason, there is a distinction in terms of their opinions between the artists with access to AI and those without access. P2, on the other hand, emphasizes that AI has positive aspects and has broadened his horizons. According to him, "Once you learn its techniques, you also understand how to relate yourself with it. However, some works can be produced when you start pushing its limits." On the contrary, P1 considers the vital advantage of AI as saving time in this context. Nevertheless, right along with this, he also thinks that the limitlessness of options by AI is, in fact, a giant vortex.

4.2. Artist's Immortality

AI systems, which we observe in many areas of life, have become an incontrovertible tool considering art. As the partnership between AI and the artists demonstrate itself with new initiatives every day, the ability of AI to generate art has also become one of the most controversial issues. When it comes to the work of art, P2 remarks that the work is a structure which is seen, but not produced. Furthermore, he also states that he does not believe in man and a man's own creativity. As claiming that, "A work can be produced by itself so that each thing can produce art", he also emphasizes that AI, which is not capable of producing functionally under technological circumstances, does things such as cataloguing, listing, sorting and distributing. According to P3 who defines AI as a statistical model that works well and uses data well and that has stemmed from all the patterns of human civilization existing till now, AI totally lacks originality. On the other hand, P3 also underlines that to design the decision mechanism for an autonomous system, it is not a correct approach to develop an acceptance by relying just on data, and stresses that this circumstance will lead to ethical problems due to the decisions made by AI.

The living being is a structure that might vary depending on its environment, hence the artist is also affected by the circumstances he lives in and creates his art with the effect of those circumstances, but current AI systems perceive the artist as a fixed form. Thus, they only simulate a particular moment in the artist's life. In other words, they produce the formula of a particular point of view, so that is not essentially art but design, and it is impossible to qualify the works of the artist as an adaptation to the present (P2). When the topic is considered in the context of the artist's immortality, P2 points out that "photograph was used to immortalize a moment as AI can immortalize a situation" and adds that: All of an artist's works can be transferred to AI. Thus, it is possible to create a mechanism that can imitate the artist's style and simulate a particular moment in the artist's life. Nonetheless, this merely helps to repeatedly simulate only a particular moment in

the artist's life, rather than the artist himself, because it is currently impossible to transfer the artist's personal experiences and consciousness into - transferable- data that could actively function in his art. For instance, even if all of Rembrandt's works are transferred into AI and taught how to paint (http2; http 1), it is impossible to be sure what and how Rembrandt will paint, for Rembrandt is no longer alive and cannot experience today's world; This uncertainty will create a complex environment for us that cannot be modelled or simulated. According to P3, since AI is a system structured through statistical data, each thing that cannot be converted into countable values would be meaningless. For instance, the note has a mathematical equivalent, yet it is impossible to mention such a response for a door creaking or birds chirping". Furthermore, when it comes to concepts such as consciousness and experience that have no expected equivalents, it is still a utopian idea to create a mechanism that can behave like an artist, make decisions, and comment. In this context, by signifying examples from Can Yücel's poems, P3 considers that those poems could not be rewritten through AI and asserts that it is a betrayal to the artist. On the other hand, P2's approach to the topic is as follows; "Attempting to simulate a self-aware and highly flexible system (human) is both very chaotic and mathematically impossible."

4.3. The Potential of AI as a Creative Partner

P2, who considers AI as a creative partner, states that the cooperation with AI in this context might be very useful if we know what we demand from the tool in terms of technology and engineering. Similarly, P3 approving the partnership as long as it might be questioned and controlled suggests that AI also assists in eliminating some elements that suppress human creativity in all this technological complexity. On the other hand, P3 describes algorithms as a functional tool and simultaneously defines them as a collection of processes that support creativity and make the process more practical. In addition, P3 underlines that it is benefited from AI itself even to criticize AI and maintains that, "I do not think much about what technology I will use while producing my works. If I need to use a technology, I integrate it into my work later. Frankly, I start to produce with an idea, and I prefer to use whatever serves that idea – it might be either AI or a hammer and nails."

It is possible to analyse many structures with mathematical formulas. In this context, P1 claims that even natural life has a mathematical model and discusses the possibility of creating an algorithm that might apply precisely in the digital environment, for example, formulating the growth of vegetation. Furthermore, according to P2, "the fiction that makes you cry also has a math," just as in the method of Propp's Structural Narrative Analysis—like a formula that does not enable one to write a creative story but prevents

one from writing a bad story.

4.4. The Similarity of Inspiration and Algorithm

Is it probable to develop a mathematical formula from an abstract concept like inspiration, or, in other words, to create an algorithm for inspiration? First, it is essential to reach a common understanding or consensus on what inspiration is in order to answer this question. An artist working with traditional methods might perceive inspiration as an element in his creations. Is the algorithm also equivalent to this for an artist working with AI? Another issue to be discussed in this context is whether inspiration might be considered equivalent to an algorithm.

Considering the rate of AI use in the participants' studies, it might be inferred that these rates reflect their perspectives on AI. None of the participants claims that AI has completely produced the work. In general, the determining factor is, again, the human. For instance, P3 suggests that this rate of AI use is around 10 % due to the popularization of AI and his preference in staying away from popular concepts. He even claims that there are works that criticize AI among his works that he has generated with AI. P2, on the other hand, states that it actually has a variable structure depending on his works and the periods of the works. For instance, the character, Deniz Yılmaz, (the robot poet), which P2 created, can be considered an example of AI. While AI use is quite widespread in the context of poetry, it is limited in the context of Deniz Yılmaz's career. The highest rate of AI use belongs to P1. P1 prefers to use algorithms instead of AI and states that this rate is half and half in his studies. He also points out that he determines the rules within the framework of particular aesthetic concerns and enables the machine to act within the framework of these rules.

The main problems here are how inspiration is defined and where inspiration comes from for the artists. According to P2, "Inspiration is not a thing to come, but to remove obstacles." At the same time, the source of inspiration appears to be an uncertain and highly ambiguous concept. On the other hand, P2 considers inspiration an umbrella term. He also thinks that the majority of the inspiration is to nourish well, and a well-nourished system will reflect well, so good results will come if we nourish AI well. "We have to first compromise on inspiration, then deconstruct it, and afterwards define the moments we might define. We also have to take some qualitative notes on what we could not define so that we might provide an algorithm to look for them and model them as well." Human artists spend a lot of time and effort on computer-generated artworks, from the formation of the idea to patiently supervising the execution to choosing among the outputs (Hertzmann, 2018, p. 15).

All three artists state that there is no obvious understanding about inspiration and where it comes from for the artists. P3, on the other hand, says that the description of inspiration concerning the topic is not easy. Therefore, he believes that the algorithm remains highly deterministic in this regard. "At this point, consciousness is important. If what brings that to you does not know what it is doing, if that consciousness lacks, that creates a rather artificial feeling in me, so what we call inspiration does not coincide with this artificiality. Therefore, it is not possible to express that with algorithms. It may be possible to deduce the algorithm of how inspiration is generated. However, it is impossible to create inspiration with algorithms." He states that he does not perceive algorithm and inspiration as equivalent. A typical statement by those who criticise computational creativity is that "simulating artistic techniques also means simulating human thought and reasoning, especially creative thinking. It is difficult to do that by using algorithms or information processing systems" (http 4). The issue that P1 focuses on is mistakes. He considers that spelling mistakes made while coding might lead to quite different opinions, and these are, indeed, inspiring ultimately. It refers to the fact that this code emerges as in a form that we can perceive either audibly or visually by sharing information in this inspiration or somehow sensorily. Consequently, it is likely to be consider inspiration as an abstract output because: its existence is controversial; it may vary depending on the person; its source and duration are uncertain; it is independent of time; and it comes through creativity and consciousness. It is challenging to determine what inspiration is with so many variables and to analyse it as numerical data. Only then will it be possible to discuss the algorithm of inspiration.

CONCLUSION

In the context of the relationship between AI and art, this study has begun to discuss whether AI productions could be accepted as works of art. Thus, the research questions has been deliberated such as the possible effects of AI on shaping artistic works, the advantages and disadvantages of using AI and algorithm systems in the field of art, the probable consequences of AI and human cooperation, the likelihood of transferring an artist's experiences and techniques to AI, the potential for AI to continue producing instead of an artist, the possibility of an artist's immortality, and the probability of AI to create a style instead of an artist. All of these arguments have been examined in light of the comments of the artists from Istanbul, Turkey who work with AI and algorithms.

Since the study has been conducted through the artists who produce artworks with AI and algorithm systems in Istanbul and has been based on those artists' perspectives, the

potential for AI to replace the artists and produce as an artist is crucial in terms of questioning the possibility of transferring the artists' experiences to AI. This study is the first research suggested on this topic in the national context, and it has attempted to create a new field of discussion and bring a unique perspective to the topic.

Digital transformation brought about by the technological revolution has also lit the blue touchpaper of a radical shift from traditional to digital. In many types of art, the human hand has been replaced by the metal parts of autonomous systems. On the other hand, it is possible to discuss many possibilities that this new digital fictional universe released from the limitations of the physical world has brought along.

There are contrasting views about whether AI productions have the characteristics of artwork. For instance, Coeckelbergh contends that AI-generated products may be associated with both art and objective and subjective criteria (Ballı, 2020, p. 286). On the contrary, there are various works generated and exhibited by many artists today through AI. However, the issue to be studied, especially in cases where AI generates works by itself, is whether these works have an original quality.

The originality of these works might be questioned in the current circumstances of AI. In this context, AI-supported creative software might be used for autonomous creative tasks including writing poems, painting, and composing music. Similar collaborations with AI in artistic production could also be conducted (http 4). Undoubtedly, the most important thing that AI has provided in this collaboration is the opportunity to save time. It is also likely to consider similar situations for the previous technological developments. The use of the computer in artistic works could be demonstrated as a similar example. Following the industrial revolution, some artists even reacted against the development of technique and technology and their use in artistic production. The Art movements such as 'Art and Crafts' and 'Art Nouveau' emerged in response to the industrial revolution at the time. Considering the negative aspects, it might be remarked that only AI with the identity of being stylistically generated can prevent the content of the studies.

The artistic productions, which rapidly change and transform from traditional to digital, have made art more participatory and democratic. On the other hand, the acceptance of technology has also revealed the potential for collaboration between computers and creative men. AI systems and algorithms are unquestionably regarded as important tools in digital art by a variety of artists. In addition to being highly functional, they have been increasingly becoming an indispensable member in the process and have been considered a creative partner in view of providing a more accessible environment and

opportunities. Regarding the relationship between AI and digital art, the unpredictable nature of these systems has been scrutinised favourably. The sententious outputs of this random environment without intellectualizing, on the other hand, have been continued to astound humanity.

All known AI systems are based on references from living organisms. In this context, AI generally works by making suggestions to people according to the preferences they have previously given, and this is accepted as a type of use (http 3). On the other hand, AI and algorithmic systems responding to the different needs of people make it possible to make inferences about the near future of humanity. Although the capabilities of AI are getting increasingly impressive with each passing day, most researchers accept the impossibility of a complete digital transformation in the complex system of a living organism capable of making conscious decisions, such as a human. Accordingly, anything that cannot be converted into digital data creates gaps in the whole system, reinforcing the feeling of artificiality even more. Regarding the possibilities offered by the techniques and technology of today, the issue of the artist's immortality versus the humanity existential pain (for the time being), cannot go beyond a utopia expected to occur. As a result, a widely used method is for an artist or an art movement to create a surprisingly successful imitation with the appropriate conditions provided by digital art. Constructing a system that can make inferences about the present of a past-living artist and transfer them into his art by evaluating current conditions from the artist's point of view is by far the most challenging thing. Thus, making a replica or a reproduction of an artwork with the capabilities of digital art is quite rapid and relatively effortless; the artist's idea of creating a conscious machine, blended with his experiences, slightly opens the doors to an unknown chaotic environment and increasingly converges to the impossibilities.

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