ISSN 2410-1915 (Print) • Culture and Arts in the Modern World. Issue 23 • ISSN 2616-423X (Online)

DOI: 10.31866/2410-1915.23.2022.260989
UDC 75:004.8

THE ISSUE OF TECHNOLOGICAL DETERMINISM IN ARTISTIC PRACTICES: CULTURAL REFLECTIONS

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For citations:
Sovhyra, T. (2022). The Issue of Technological Determinism in Artistic Practices: Cultural Reflections. *Culture and Arts in the Modern World*, *23*, 138-144. https://doi.org/10.31866/2410-1915.23.2022.260989.

The purpose of the article is to explore the importance of digital technology in the organisation of the creative process. The article analyses the methods of using digital technologies in cultural practices, highlights theoretical reflections on the meaning of technology in artistic creativity through the prism of the provisions of technological determinism. The research methodology is based on an integrated approach and a combination of several methods: analytical — to consider philosophical, sociological, cultural and art studies literature on the subject of research; theoretical and conceptual method — to analyse the conceptual and terminological system of research and identify the features of the introduction of digital technologies in cultural practices, as well as a comparative typological method — to compare the specifics of human activity and the functioning of mechanised equipment in the process of creating a work of art. The scientific novelty of the work lies in the fact that for the first time the features of using digital technologies, in particular artificial intelligence, in the process of creating artwork are considered, the provisions of the concepts of "technological determinism" and "singularity" are analysed (using examples of creating works of art through the use of digital technologies). Conclusions. As a result of the automation of the creative process, a decrease in human activity is revealed, which actualises the issue of the uniqueness of artistic work. Potential threats related to the misuse of digital technologies, in particular artificial intelligence, and people's excessive trust in automated mechanisms are identified.

Keywords: digital technology; determinism; artificial intelligence; cultural practice; singularity

Introduction

In the course of rapid technological progress, the issues of introducing digital innovations in all spheres of life are being updated. This leads to a change in the specifics of the production process and a growing level of user competence. In particular, the

The article was received by the editorial office: 24.01.2022

ISSN 2410-1915 (Print) • Culture and Arts in the Modern World. Issue 23 • ISSN 2616-423X (Online)

threat of the Covid-19 epidemic quickly influenced the development of remote work tools using modern IT solutions. This led to the emergence of a large number of cultural practices. Digital technologies are becoming a driving factor in the cultural progress of mankind. The need to master new skills in the use of digital devices leads to a number of further social and cultural problems. This idea is based on the "technological determinism" concept, according to which technological development and innovation become the main engine of social, economic, or political change. The followers of technological determinism consider technology as the basis of all human activity.

The term "technological determinism" was proposed by American sociologist and economist T. Veblen (1857–1929) (Heilbroner, 1967). His follower Clarence Ayres, based on the research of his mentor, formulated the concept of "technological resistance", according to which technology is a process that can be generated by itself (Mulberg, 1995). This statement led to a complete revolution in the mirror of scientific criticism. After all, the confirmation of this hypothesis would give the right to consider the functioning of certain digital technologies (including artificial intelligence) as self-sufficient. Since then, many scholars and scientists have begun to pay attention to the impact of cybernetics on modern society. Further studies of the concept are covered in the scientific works of M. Smith and L. Marx (1994), R. Heilbroner (1967), D. Chandler (1995), N. Baym (2010, p. 24) and Cl. Fischer (1992). O. Chubukova (2015) in the article "Cybernetics: from simple systems and technologies to the cyber environment" noted that with the advent of cybernetics, an industrial society was born associated with the mechanisation of production and the development of computer technologies in all areas of management (pp. 33–38).

The issues of introducing technological determinism in artistic culture are considered in the works of B. Winston (1996, 1998), W. J. Ong (1982). In particular, the phenomenon of media determinism is considered in detail in the studies of G. Innis (2003), M. McLuhan (1964) and R. Williams (1975).

The concept of a "packing valley" was also launched in recently released trailer material by J. Burleigh, Jordan R. Schoenherr, and Guy L. Lacroix (2013), Karl F. MacDorman, and D. Chattopadhyay (2017), A. Tinwell, M. Grimshaw, and A. Williams (2011).

Supporters of social determinism E. Durkheim (1982), on the contrary, consider technology as a result of society and see social needs as the main driving factor of progress, for the implementation of which certain technologies are used. These radically different views on technology entail the further course of research and the definition of the main goal of scientific work.

Purpose of the article

The purpose of the article is to explore the importance of digital technology in the organisation of the creative process. The research methodology is based on an integrated approach and relies on a combination of several methods: analytical — to consider philosophical, sociological, cultural and art history literature on the subject of research; theoretical and conceptual method — to analyse the conceptual and terminological system of research and identify the features of the introduction of digital technologies in cultural practices, as well as a comparative typological method — to

ISSN 2410-1915 (Print) • Culture and Arts in the Modern World. Issue 23 • ISSN 2616-423X (Online)

compare the specifics of human activity and the functioning of mechanised equipment in the process of creating a work of art.

Main research material

The mechanisation and automation of the creative process greatly simplify the production of cultural consumption products. At the same time, human activity is decreasing. The creativity of human thinking and action is based on the ability of independent choice. Therefore, in the process of gradual automation of artistic creativity, the problem arises of diminishing the creativity of performance, the uniqueness of new inventions. Instead, creative imitation, adaptation, and the search for more and more convenient ways to use digital tools are being introduced.

According to concept uncanny valley by Japanese robotics scientist and engineer Masahiro Mori (2012), robots are attractive until the moment they are not able to completely imitate a person. Scientists Karl F. MacDorman and Hiroshi Ishiguro (2006) point out that "the valley means the level of kinship of a human observer to a similar copy — a copy of a person" (p. 302). In the contest of the article under study, a copy of a person is a robot. Francesco Ferrari, Maria Paola Paladino, and Jolanda Jetten (2016) found that the humanoid creation led to an increased sense of threat to human identity. The more a robot resembles a real person, the more it "challenges" (the author's expression) human identity. Frédéric Kaplan (2004) stated that these new machines challenge human uniqueness.

Attributing human qualities to intelligent work breeds fear of technological progress.

The technological perspective focuses on a creative and constructive approach to the use of artifacts. The purpose of this reflection is to look for ways to complement human action.

So, artificial intelligence is the result of human creation and can be considered in terms of its proper or improper use. Fears about the loss of the dominant position of man in the world are not unfounded.

Consider the activity of "artificial intelligence" on the example of creating a virtual picture.

Indicative in the context of the study is the work of Kandinsky by Microsoft, created through an algorithmic analysis of Kandinsky's paintings, the musical work of Richard Wagner (the opera Lohengrin, 1916), the atonal work of Arnold Schoenberg, as well as works of modern music.

Due to the generative neural network, the algorithmic construction of the works of the artist and the musical works of R. Wagner, A. Schoenberg was analysed, a certain ratio of visual and sound series was revealed. For example, each color shade corresponds to a certain sound, especially the combination of dots and strokes corresponds to a certain leitmotif.

By changing the melodic pattern, the image changes accordingly. If random combinations are added to the sound series, the visual content begins to change. there is an internal creative improvisation in the development of a picturesque series. Works of modern musical trends are also subjected to comparative algorithmic analysis and are

ISSN 2410-1915 (Print) • Culture and Arts in the Modern World. Issue 23 • ISSN 2616-423X (Online)

accompanied by pictorial visualisation in accordance with the algorithms for creating a drawing by the artist Kandinsky.

Thus, artificial intelligence shows us how the artist Kandinsky would paint a picture today — if he listened to modern music, and not the artwork of famous expressionists.

"Generative-competitive neural networks are created in a similar way — two networks compete with each other — one, relying on its stock of samples, creates new images, and the second evaluates them. This method is used to solve a variety of problems, but it was the example of art that turned out to be the most obvious. The picture allows not only to better understand how modern methods of artificial intelligence work, but also to get closer to understanding the very process of creativity," said Vladislav Shershulsky, Director of Advanced Technologies at Microsoft.

The example of this project shows how, due to algorithmic analysis and modeling, a certain correlation of sign systems of musical and pictorial works is clarified.

A person cannot foresee how the image will change and, in the end, what the final result of the work will be.

So we are talking about the peculiarities of the singularity of the AI technology in the process of organising artistic creativity.

The author of the term "artificial intelligence" John McCarthy pointed out that the capabilities of modern technologies exceed human ones. The original version (according to J. McCarthy) refers to the creation of mathematical and logical models that can be used in computer programs, and the extended version refers to the creation of self-learning programs based on models of neural and associative networks that allow machine learning to be carried out without assistance. human (Rich & Knight, 1991).

In contradiction to the concept of singularity, the idea of a mechanism that, in addition to self-learning, can generate human desires, a sense of work (anger, suspicion, and the need to control others) is unacceptable within the framework of the anthropological concept of culture. So far, people should not be afraid of smart robots, but only the irresponsible use of these machines by people. Work-machines can only be threatened if there are technological errors or in case of improper operation (or a desire to harm humanity). Therefore, the ethics of "artificial intelligence" users remains a serious problem (Bostrom, 2014). Appropriate legal regulations must be created here to prevent the misuse of robots.

In films such as "Blade Runner" (1982, directed by Ridley Scott), "Blade Runner 2049" (2017, directed by Danis Villeneuve), "Ex Machina" (2014, directed by Alex Garland), "I, Robot" (2004, directed by Alex Proyas), it can be seen a futuristic vision of a world in which people and works work side by side. In cinematic images, humanoid robots have a desire to be born with humans, a desire for freedom, a sense of human emotions, the right to individual difference, or the dominance of some people over others. This assignment of human properties to things is an erroneous attempt at anthropomorphisation. Indeed, as experience shows, a humanoid species that is too close to a person causes a feeling of fear and hostility in a person.

So, stories about threats from cybertech are part of the movie narrative, but real robotisation has little to do with them. Today it is difficult to stop the development of technology, fearing that someone will abuse the artifacts of "cyber technology". We now perceive robots as useful tools with more information processing power (a large

ISSN 2410-1915 (Print) • Culture and Arts in the Modern World. Issue 23 • ISSN 2616-423X (Online)

amount of data), predominantly more accurate and reliable work (medical work) compared to human activities (Nawrat, 2012).

Conclusions

The dynamic development of technology gives humanity the opportunity to make many improvements in everyday life. The level of technological difficulty has a social significance, transforms into the latest types of interpersonal relationships, the latest social phenomena, dangers and directions for subsequent changes. Some of them are still difficult to predict. This raises a lot of controversy and questions. Relationships and correlations imply further new themes that can be touched upon in cultural studies, in particular, in the development of further provisions of "technological determinism" and "singularity".

As a result of the automation of the creative process, a decrease in human activity is revealed, which actualises the issue of the uniqueness of artistic work.

Potential threats associated with the misuse of digital technologies, in particular artificial intelligence, and people's excessive trust in automated mechanisms have been identified.

A technological singularity in art is quite possible. But we exclude the uniqueness of human activity and artistic creativity. Moreover, we emphasise the need to develop a symbiosis between man and digital technologies in art: combining the capabilities of "artificial intelligence" and the aesthetic sensitivity of people.

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ПИТАННЯ ТЕХНОЛОГІЧНОГО ДЕТЕРМІНІЗМУ В ХУДОЖНІХ ПРАКТИКАХ: КУЛЬТУРОЛОГІЧНІ РЕФЛЕКСІЇ

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Мета статті — дослідити значення цифрових технологій в організації творчого процесу. У статті проаналізовано методи використання цифрових технологій в культурних

ISSN 2410-1915 (Print) • Culture and Arts in the Modern World. Issue 23 • ISSN 2616-423X (Online)

практиках, висвітлено теоретичні міркування значення технології в художній творчості через призму положень технологічного детермінізму. Методологія дослідження базується на комплексному підході та поєднанні кількох методів: аналітичного — для розгляду філософської, соціологічної, культурологічної та мистецтвознавчої літератури з предмета дослідження; теоретично-концептуального методу — для аналізу понятійно-термінологічної системи дослідження та виявлення особливостей впровадження цифрових технологій у культурні практики, а також порівняльно-типологічного — для порівняння специфіки людської діяльності та функціонування механізованої техніки у процесі створення художнього твору. Наукова новизна роботи полягає в тому, що вперше розглядається специфіка використання цифрових технологій, зокрема штучного інтелекту, в процесі створення художнього твору, аналізуються положення концепцій «технологічного детермінізму» та «сингулярності» на прикладах створення художніх творів через використання цифрових технологій. Висновки. Унаслідок автоматизації творчого процесу виявлено применшення людської діяльності, що актуалізує питання унікальності художніх творів. Виявлені потенційні загрози, пов'язані з нецільовим використанням цифрових технологій, зокрема штучного інтелекту, та надмірною довірою людей до автоматизованих механізмів.

Ключові слова: цифрова технологія; детермінізм; штучний інтелект; культурна практика; сингулярність