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THE IMPACT OF THE INTERNET AND COMPUTER SYSTEMS ON THE DEVELOPMENT OF TECHNOGENIC CIVILIZATION: A SOCIO-PHILOSOPHICAL ANALYSIS

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INTRODUCTION

The genesis and dynamics of the technogenic civilization are determined by the synergy of accelerating new forms of knowledge and technological innovations against the backdrop of profound structural changes. The process of qualitative growth observed in social and economic systems parallels the complexity of human thought and spiritual needs, ultimately creating conditions for the emergence of new forms of material culture. The improvement and widespread application of technology, particularly computer systems and internet technologies, have become a significant analytical tool in theoretical discourses aimed at explaining the complex nature of civilization development. The rise of computer and internet technologies has become a dominant component of modern technogenic culture as a key catalyst for knowledge production and information processing. This technological revolution has not only led to new methods of production but also resulted in the reformation of intellectual and spiritual structures based on deep knowledge.

Computer technology serves as the transformative power of technogenic development

The expansion of knowledge and the increase in spiritual needs have started to expand new inventions through the improvement of previous inventions, as growth in the economy and social life creates new patterns of material culture. For example, computer technology is one of the main inventions of Western material culture that has propelled the development of technogenic civilization up to the modern era. Although the history of computer technology, combined with the history of computing devices, dates back to the 15th-16th centuries, its advanced development became possible in 1946. Y. Masuda stated that during World War II, the first computer invented by American scientists led to the widespread application of computers in the 1950s, creating an information society [6, p. 31-33].

Researchers N. Ismayilov and S. Yusifova state that, according to Y. Masuda, the subsequent development of technogenic civilization will be determined by computer technologies that will replace or enhance human intellectual labor. With the application of computer technologies in all areas, mass production has expanded, and as a result of increased cooperation opportunities and the emergence of solidarity in solving problems, the development of technogenic civilization has begun to accelerate. [3, p. 5]. New examples of Western material culture have not been discovered over a long historical period. For nearly 100 years, people have been satisfied with using previous technological innovations. Although there were small-scale discoveries from 1800 to 1900, no changes occurred in all areas of life, and computer technology emerged as a more advanced variant of small-scale discoveries in computing devices. Computers are classified into four generations based on their characteristics, and although the size of each subsequent generation has decreased, their power has increased. The first high-speed electronic digital computer was the ENIAC, invented by John Mauchly and J. Presper at the University of Pennsylvania. Starting from the 1960s, the production of computers became widespread in America's military and space programs, and from the 1970s, the application of computers began to increase in many areas of life. Technogenic civilization is marked by the creation of more advanced variants of previously existing technological discoveries. According to philosopher Jeremy Nadler, a civilization that does not govern consciousness with logical thinking has no power to create machines. [8, p. 77]. It can be concluded that in the new era that began with the invention of the computer, the innovations of Western material culture have improved upon previous achievements, and there have been no completely new technological models. This has occurred through the application of machines that are not governed by logical thinking in all areas of life. For example, the invention of the telephone is not a new idea but an expanded variant of the telegraph. In the modern era, the power of computers has also increased with the application of the internet and artificial intelligence.

The Internet technology as a new development component of civilization

Created by J. Licklider, the Internet, presented as a global network in the concept of the 'Galactic Network' in 1962, serves as an advanced version of the telegraph, connecting thousands of computer networks around the world, strengthening social connections among people, and changing the essence of space and time. [2, p. 1].

The emergence of the Internet began with the "DARPA" project, initiated by the U.S. Federal Government's Department of Defense. The project, known as "ARPANET", connected the computer networks of all research institutions, leading to the Internet's influence on all aspects of life within the technogenic civilization, including human thought. The abundance of information and the availability of rapid research opportunities on the Internet have transformed human thinking. The expansion of thought processes and research capabilities enabled the realization of new material discoveries. What changes did the modern innovations of Western material culture characterize for civilization?

In our opinion, the expansion of computer technologies logically ensured the acquaintance of the aristocratic society, which controls new material innovations, with people, and a group of individuals began to govern people through "virtual power." Since technological innovations like half-watch, half-calculation, etc., have already merged within computers and the Internet, these examples represent an advanced form of the material-technical innovations of Western material culture. With the expansion of the Internet, the scope of technogenic civilization began to spread across the entire world, with the emergence of new shades of social connections once created by the telegraph. Previously, each technological material example was used in its own specific field. For example, the first printing press dealt only with issues such as book printing, whereas computers and the Internet have now concentrated all spiritual desires into a single object. With the digitization of knowledge, connections between civilizations have expanded, and the development of technogenic civilization in the field of unified social relations and knowledge exchange has encouraged all societies to advance at the same level. Since the development of civilization is made possible by the role of people, despite the change in the nature of connections due to Internet technology, it does not negatively impact the broad spread of civilization. Philosopher N. Postman noted that machines instill in people the idea that they are "thinking machines." The computer realizes its sovereignty over all aspects of human experience, and as it demonstrates that people think better, it increases the role of technology-based management in the development of civilization. For example: "Medicine deals not with the patient, but with the disease, and we can trust machines, not patients" [9, p. 117]. The development of technogenic civilization cannot be sustained without human society. This is because existing technological capabilities, like humans, can encounter certain problems. For example, in 1988, as "Arpanet" began to slow down, it caused major computer issues in many countries, including the United States. The initial hypothesis was that computers had been infected by a virus. As a result, strong counter-programs started to be developed [9, pp. 131-132]. Just like humans, computers can become infected with viruses, losing their ability to make decisions and process information. However, if a computer is healthy, it can handle a range of processes. From this, we conclude that in a technogenic civilization, the solidarity between computers and humans is a key feature. If computers become infected with a virus, humans lose control and strive to create stronger examples of technological material culture to achieve their goals. We believe that computer-internet technology, one of the most important examples of Western material culture, which is the genesis of technogenic civilization, creates a stable environment for the development of civilization until the moment it loses its connection with humans. The dynamism of civilization's development depends on how much control humans have over technological innovations. No matter how much computer-internet technology advances, the role of human intelligence in its management maintains its superiority. For example, when philosopher Ray Kurzweil analyzes the development of computer technology in civilization, he refers to Moore's Law. According to this law, technological innovation, and the production of computer technology, doubles every 18 months [5, pp. 67-68]. The main catalyst for this development is also humans. As a result of this development, people have begun to change the essence of philosophical terms such as space, time, and reality. "Virtual reality," a technology that enables limitless movement by utilizing the senses of people connected to computer and Internet technology, is an example of how a new civilization changes reality. Powerful computer technology, along with virtual reality, has altered the concepts of space and time in civilization and accelerated the transition to subsequent stages of development. For example,

when R. Kurzweil compares the power of computers from 1999 to 2006, we can arrive at an interesting conclusion [4, p. 114]. If the existence of computers had been restricted during these years, the strong-level changes would not have been felt; however, their effects in later years would have been inevitable. If any innovation is eliminated, one cannot speak of the development of civilization. In our opinion, technogenic civilization is, in fact, a product of the 20th century, beginning with the emergence of computer technology. If computers were completely restricted, Internet connections would be severed, and people would return to the early stages of civilization's development. Since technogenic civilization is formed based on electric energy, it is realized in parallel with the development of technology and the solidarity with humans. For example, researcher P. Rogavey notes that, according to M. McLuhan, computer and Internet technology unites humanity by enabling the translation of any language or code, creating a collective consciousness by forming a continuous collective harmony and universal understanding [10, p. 17].

The Internet capabilities stimulate new technological discoveries. For example, Kris Anderson, editor of the "Wired" magazine and founder of the "Maker Movement," known as the "Creatives Movement," characterizes the third industrial revolution as a stage in the development of technogenic civilization with the advancement of 3D technology. The Internet and technology, being significant inventions of the third industrial revolution, are the main development directions of a new type of civilization. The essence of the "Maker Movement" lies in the idea that people can search for any product they need using Internet search engines and easily produce it through 3D printers. Therefore, Kris Anderson sees the development of this type of industrial revolution in the convergence of the Internet and technology. According to K. Anderson, computers enhance human potential, allowing for the rapid spread of ideas and thoughts. K. Anderson justifies this by stating: “Computers empower human potential: they not only give people the power to create but also enable them to quickly disseminate their ideas and create communities, markets, and even movements” [1, p. 14].

Philosopher M. McLuhan, in his 1962 book 'The Gutenberg Galaxy,' explains the unity of the collective and the essence of the computer as follows: 'The world has turned into a giant electronic brain instead of leaning towards the great Library of Alexandria [7, p. 32]. We think, that by adopting the technological innovations of Western material culture, society transforms itself into a servomechanism, which signifies an additional source of energy that enhances the initial kinetic energy of technology's automatic systems. Humans are the servomechanism of the computer. From this, we conclude that the development of technogenic civilization depends on humans' relationship with Western material technological culture as a servomechanism. Although the human attitude towards computers and new technological innovations in the 20th century differs from that of previous eras, in the modern age, computer technology is comprehensive and all-encompassing, combining several functions. Therefore, humans' relationship with these innovations results in the expansion of their capabilities. Despite this expansion being characterized by the development of automation, problems are inevitable due to its specificity in certain fields.

CONCLUCION

Computer and internet technologies serve as central determinant factors in the development of modern technogenic civilization. The genesis of technogenic culture is closely related to the emergence of computer technologies and their wide range of applications, especially in the 20th century. Since the creation of the first electronic digital computer, these technologies have been continuously improved to optimize or completely replace human intellectual labor. Overall, the integration of computer technologies into various fields has deepened collaboration structures and led to the transformation of social and economic processes.

The mass application of these technologies has led to the acceleration of integration and knowledge exchange on a global scale, as well as the emergence of new cultural and social realities. The expansion of internet technologies has necessitated a re-evaluation of the classical definitions of space and time. In other words, the systematization and dissemination of knowledge in digital format have facilitated the dynamic development of technogenic civilization and the establishment of harmonious relations between global societies. In this context, the impact of modern technological tools on human thought has stimulated the transformation of consciousness at both individual and collective levels.

The rapid development of technology, including the widespread adoption of artificial intelligence and virtual reality concepts, has accelerated the transition to the next stages of civilization. According to philosophers' analyses, the encompassing power of computer and internet technologies has significantly ex-

panded human potential, maximizing access to new knowledge and innovation.

However, alongside the development of computer technologies, a number of fundamental problems have also emerged. Issues such as computer viruses, technological malfunctions, and the instability of internet infrastructure pose serious threats to the sustainability of technogenic civilization. These problems create the risk of disrupting the developmental flow of civilization in the event of failures in technological systems. Nevertheless, people continue to adapt to such obstacles and guide the development of technogenic culture

Thus, the genesis and development of technogenic civilization have been shaped directly by the technological heritage of Western material culture, and the sustainability of this developmental process depends on humanity's relationship with technologies and the level of their effective management. Computer and internet technologies continue to play a decisive role in the transformation of the cultural, economic, and social structures of modern societies.

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SUMMARY

The article thoroughly explores the central role of computer and internet technologies in the development of modern technogenic civilization. It highlights how changes in social and economic systems have led to the emergence of new forms of material culture. The article examines the history of the development of computer technology, while also discussing the impact of computers on the progress of civilization. With the advancement of computers, new material discoveries have been realized, and earlier technological innovations have been further improved. One of the examples of this improvement is internet technology. The emergence of the internet has strengthened social connections, altering the concepts of space and time. The internet, which began as a global network through the DARPA project, has encompassed human thoughts and all spheres of life. The article emphasizes how the internet, by providing an abundance of information and fast research opportunities, has spurred new material discoveries. The modern innovations of Western material culture are noted as an important factor in stimulating the development of civilization. The article also presents the fundamental problems that have emerged alongside the development of computer technologies. Computer viruses, technological failures, and the instability of internet infrastructure pose serious threats to the sustainability of technogenic civilization. Nonetheless, the ability of humans to adapt to these challenges enables them to lead the development of technogenic culture. Thus, computer and internet technologies are crucial factors ensuring the advancement of civilization by deeply impacting various aspects of human life in the modern world.

Key words: *civilization, technological civilization, technology, computer, internet.*

ВЛИЯНИЕ ИНТЕРНЕТА И КОМПЬЮТЕРНЫХ СИСТЕМ НА РАЗВИТИЕ ТЕХНОГЕННОЙ ЦИВИЛИЗАЦИИ: СОЦИАЛЬНО-ФИЛОСОФСКИЙ АНАЛИЗ

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РЕЗЮМЕ

Статья всесторонне исследует центральную роль компьютерных и интернет-технологий в развитии современной техногенной цивилизации. Подчеркивается, как изменения в социальных и экономических системах привели к появлению новых форм материальной культуры. В статье рассматривается история развития компьютерных технологий, а также обсуждается влияние компьютеров на прогресс цивилизации. С развитием компьютеров были реализованы новые материальные открытия, а более ранние технологические инновации были усовершенствованы. Одним из примеров такого усовершенствования являются интернет-технологии. Появление интернета укрепило социальные связи, изменив представления о пространстве и времени. Интернет, который начался как глобальная сеть через проект DARPA, охватил человеческие мысли и все сферы жизни. В статье подчеркивается, как интернет, предоставляя обилие информации и возможности для быстрого исследования, стимулировал новые материальные открытия. Современные новшества западной материальной культуры отмечаются как важный фактор, способствующий развитию цивилизации. Также в статье рассматриваются фундаментальные проблемы, которые возникли наряду с развитием компьютерных технологий. Компьютерные вирусы, технологические сбои и нестабильность интернет-инфраструктуры представляют серьезные угрозы для устойчивости техногенной цивилизации. Тем не менее, способность людей адаптироваться к этим вызовам позволяет им направлять развитие техногенной культуры. Таким образом, компьютерные и интернет-технологии являются важнейшими факторами, обеспечивающими прогресс цивилизации, оказывая глубокое влияние на различные аспекты человеческой жизни в современном мире.

Ключевые слова: *цивилизация, технологическая цивилизация, технология, компьютер, интернет*

İNTERNET VƏ KOMPÜTER SİSTEMLƏRİNİN TEXNOGEN SİVİLİZASİYANIN İNKİŞAFINA TƏSİRİ: SOSİAL-FƏLSƏFİ TƏHLİL

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XÜLASƏ

Məqalə müasir texnogen sivilizasiyanın inkişafında kompüter və internet texnologiyalarının mərkəzi rolunu hərtərəfli araşdırır. O, sosial və iqtisadi sistemlərdə baş verən dəyişikliklərin maddi mədəniyyətin yeni formalarının yaranmasına necə səbəb olduğunu vurğulayır. Məqalədə kompüter texnologiyasının inkişaf tarixi araşdırılır, eyni zamanda kompüterlərin sivilizasiyanın tərəqqisinə təsiri müzakirə edilir. Kompüterlərin inkişafı ilə yeni maddi kəşflər həyata keçirildi və əvvəlki texnoloji yeniliklər daha da təkmilləşdirildi. Bu təkmilləşdirmənin nümunələrindən biri də internet texnologiyasıdır. İnternetin yaranması məkan və zaman anlayışlarını dəyişdirərək sosial əlaqələri gücləndirdi. DARPA layihəsi ilə qlobal şəbəkə kimi başlayan internet insan düşüncələrini və həyatın bütün sahələrini əhatə edib. Məqalədə internetin çoxlu məlumat və sürətli araşdırma imkanları təmin etməklə yeni maddi kəşflərə necə təkan verdiyi vurğulanır. Qərbin maddi mədəniyyətinin müasir yenilikləri sivilizasiyanın inkişafına təkan verən mühüm amil kimi qeyd olunur. Məqalədə kompüter texnologiyalarının inkişafı ilə yanaşı ortaya çıxan fundamental problemlər də təqdim olunur. Kompüter virusları, texnoloji uğursuzluqlar və internet infrastrukturunun qeyri-sabitliyi texnogen sivilizasiyanın davamlılığına ciddi təhlükələr yaradır. Buna baxmayaraq, insanların bu çağırışlara uyğunlaşma qabiliyyəti onlara texnogen mədəniyyətin inkişafına rəhbərlik etməyə imkan verir. Beləliklə, kompüter və internet texnologiyaları müasir dünyada insan həyatının müxtəlif sahələrinə dərindən təsir göstərməklə sivilizasiyanın tərəqqisini təmin edən həlledici amillərdir.

Açar sözlər: *sivilizasiya, texnogen sivilizasiya, texnologiya, kompüter, internet.*