Journal of Higher Education and Academic Advancement
Homepage : https://journal.antispublisher.id/index.php/EJHEAA
Email : admin@antispublisher.com

e-ISSN : 3032-1123
JHEAA, Vol. 3, No. 3, March 2026
Page 1-8

The Need to Balance Technogenic and National Consciousness

Avlakulov Aktam Mavlonkulovich
Department of Socio-Political Sciences, Tashkent Institute of Chemical Technology, Uzbekistan

DOI : https://doi.org/10.61796/jheaa.v3i3.1730

Sections Info

Article history:
Submitted: January 25, 2026
Final Revised: February 20, 2026
Accepted: March 13, 2026
Published: March 27, 2026

Keywords:
Technogenic consciousness
National consciousness
Globalization
Technogenic development
Social consciousness
Technology
Artificial intelligence
Automation
Digital society
Technocratic environment
National values
Innovation
Social development
Moral responsibility

ABSTRACT

Objective: *This article presents ideas and reflections on the necessity, methods, and consequences of balancing the relationship between technogenic and national consciousness. Furthermore, it analyzes the social consequences of the erosion of national consciousness under the conditions of a technogenic civilization, based on scientific literature.* ***Method:*** *This article utilizes theoretical analysis, comparative analysis, a systematic approach, and logical generalization to study the issue of ensuring a balance between technogenic and national consciousness.* ***Results:*** *From the views expressed by various scholars on the concept of technogenic consciousness, we can understand that it is: a positive phenomenon; a factor in technological and economic development; a form of social consciousness inherent in people; a set of creative elements associated with human mental activity; and a form of social consciousness that teaches the use of technology and techniques. The advancement of techniques and technologies outpacing people's consciousness and thinking can lead to negative social impacts, dependency on technology, and the formation of a technocratic environment. At the same time, technogenic consciousness contributes to material well-being, labor productivity, intellectual growth, and social development, while globalization, automation, and artificial intelligence accelerate its formation.* ***Novelty:*** *To preserve national consciousness, it is advisable to ensure that technogenic consciousness develops in tandem with national consciousness. It is crucial that this process unfolds not by eroding the national consciousness, but by enhancing it, positioning technogenic consciousness as a key force in aligning human development with technological progress.*

INTRODUCTION

National consciousness is a form of social consciousness that encompasses aspects of life related to the past, present, and future of a nation's people. National consciousness includes a number of elements, such as national self-awareness, national sentiments, customs, traditions, and values, the preservation of national heritage, attitudes toward one's compatriots, and ensuring the cohesion of the nation. National consciousness reflects the national spirit of the members of a particular nation. A nation strives to ensure its development by strengthening its national consciousness. This, in turn, helps it to secure a unique place among other nations. Today, the process of preserving and improving national consciousness is becoming increasingly complex. This is being influenced by the currently developing technogenic consciousness[1].

Furthermore, as the concept of technogenic consciousness is widely used in academic discourse, the need to grasp its content and understand its essence is evolving as rapidly as the pace of technological development.

"A two-sided view of the development of technogenic consciousness is fair from the standpoint of objectivity. First, it helps to create new equipment and technology, thereby increasing the material well-being of people. At the same time, it is extremely important

to consider that the ability to manage equipment and technology can surpass the level of human hands and intellectual potential, which could ultimately condemn humanity to self-destruction". Advanced technical and technological tools bring enormous material benefits to the countries, peoples, and nations that produce them[2]. A high level of material interest has led to the formation of various positive views on technology, and these technologies are also influencing changes in people's consciousness, worldview, and thinking.

Professor Luciano Floridi of Oxford University emphasizes, "Technogenic consciousness is not only a factor of technological or economic development, but also a matter of people's expectations". Therefore, technogenic consciousness is a force and a factor that determines not only the current progress of humanity but also the prospects of development[3].

In their article titled "Technical and Technological Consciousness in the Evolution of Post-Industrialism: From the Information Society to the Science and Digital Society," co-authored by Russian researchers I.S. Baklanov and S.I. Pelevin, the concept of "technogenic consciousness" is defined as follows: "Technogenic consciousness is a holistic, complex phenomenon that includes not only the creative elements related to human activity but also constantly reflects on how to apply techniques and technologies that have a moral and axiological character." The author explains technogenic consciousness as a set of moral and axiological attitudes people have toward technology. "Every scientific innovation and every discovery gives impetus to a new way of thinking and a new worldview." At the same time, the rapid pace of developments in the field of technology is making it difficult to understand which technologies will influence humanity's future development. This alarming possibility also demonstrates how crucial technogenic consciousness is for humanity[4]. It increases the demand for humanity to strengthen its efforts to firmly preserve its national mentality and identity while striving for progress in conjunction with the development of technology. This implies that a person's affiliation with a particular nationality is at risk. In other words, in the process of forming technogenic consciousness, a shallowing of national consciousness may occur. Therefore, to preserve national consciousness, it is advisable to ensure that technogenic consciousness develops in tandem with national consciousness[5].

Professor S. Otamuratov emphasizes that it is "a set of ideas that view technology and engineering as the main factor for achieving a high level of material, social, political, and spiritual-educational development".

RESEARCH METHOD

This article utilizes theoretical analysis, comparative analysis, a systematic approach, and logical generalization to study the issue of ensuring a balance between technogenic and national consciousness.

RESULTS AND DISCUSSION

From the views expressed by various scholars on the concept of technogenic consciousness, we can understand that it is: 1) a positive phenomenon; 2) a factor in technological and economic development; 3) a form of social consciousness inherent in people; 4) a set of creative elements associated with human mental activity; 5) a form of social consciousness that teaches the use of technology and techniques[6].

Technogenic consciousness is a form of social consciousness that serves to improve the skills of discovering and using new techniques and technologies. Its distinctive feature is that it encourages people to use techniques and technologies for good and noble purposes, taking into account their own interests and those of others. The demand and need to form technogenic consciousness arose precisely to establish, shape, and perfect such a general, positive state in all of human thought. "Naturally, the material benefits derived from techniques and technologies had a positive impact on the improvement of views and perceptions about them. As a result of this process, techniques and technology have become an integral part of human consciousness, thinking, and worldview[7]. Today, these views, attitudes, and perceptions have led to the development and functioning of technogenic consciousness as an independent form of consciousness". The formation of technogenic consciousness is one of the conditions for striving to gain significant material benefits from techniques and technologies. The more developed and perfected the technogenic consciousness, the greater the benefits, interest, purposeful use, and improvement of techniques and technologies will be. The formation of technogenic consciousness and its entry into academic use are directly linked to the intensity of today's globalization process[8]. The creation of new technologies, seen as the "sole solution" to all of today's problems, increases people's need to use them and strengthens the desire to utilize their capabilities in their social activities. This implies that people's skills in using modern technical means should proceed in harmony with discoveries. The advancement of techniques and technologies outpacing people's consciousness and thinking can lead to a breakdown in human-technology relationships, an intensification of negative impacts on the social life of individuals and society, or to dangerous situations, such as becoming a tool for malicious individuals to achieve their selfish goals. To be more precise, people may be deprived of the opportunity to effectively use technical and technological tools to find "solutions" to certain problems in their social lives. This, in turn, can lead to people becoming dependent on or addicted to technology, or to the practical establishment of a technocratic environment[9]. It is no exaggeration to say that technogenic consciousness exceeding the level of human intellectual potential can lead to various problems that are difficult to correct. "Over the last hundred years, society has become more dependent on technology than at any other time. New technologies that can improve and simplify life only make us dependent on them".

For example, "in Japan, one of the leading countries in production robotization, 2.4 million Japanese people will lose their jobs by 2030, and their positions will be taken by robots"[10]. This will cause a further increase in the unemployment rate, which is already considered a global social problem today. It is true that, on the one hand, the automation

and robotization of production have led to savings in the use of natural resources (through the use of alternative types of natural resources), an increase in product quantity and quality, the production of more goods in a shorter time, and the development of a healthy competitive environment. However, the other side of the issue is that it has led to a sharp decrease in the demand for labor (the demand for the human factor) in the labor market. As a result, the introduction of early technologies into production was met with opposition from many people. The implementation of the first industrial equipment in production fostered various anxieties among people that the human factor might disappear in the future[11]. This was perceived as a threat to people's chances of survival. Nevertheless, technology has strengthened its position as a means of creating a number of conveniences for people. This has formed a positive impression as a set of tools aimed at creating free time for people, transferring heavy physical labor from humans to machines, increasing labor productivity, and satisfying people's needs to a high degree. Later, people began to feel the need to enhance their intellect to find their place in society. This gave rise to the feeling that a technogenic consciousness needed to be formed to use this equipment and technology. ..."thanks to technogenic progress, not only are unprecedented opportunities and conveniences created to meet human needs, but global crises also arise, and the functional improvement of consciousness and life on Earth began to be determined by the 'laws' of technical activity and the elements. These processes were carried out in connection with the conscious activity of man"[12].

In reality, technogenic consciousness has developed gradually, step by step, alongside human evolutionary progress and has been regarded as an integral part of national consciousness. The development of technogenic consciousness spans a long period, from the creation of the earliest simple tools to the production of today's most complex, high-level technologies. Initially, technogenic consciousness evolved as a form of awareness that satisfied the needs of people living in a particular area, such as the crafting and use of tools and household utensils. In traditional civilizations, technogenic consciousness was considered a component of national consciousness[13]. This is why simple technical implements (hunting tools, labor tools, household items) differed in form among people living in different regions, and people used these varied implements for many years. In other words, the invention and adoption of new technical means proceeded very slowly. In short, within the context of traditional civilizations, technogenic consciousness did not possess enough influence to give rise to a new civilization (a technogenic civilization). Today, however, technogenic consciousness is expanding its sphere of influence and fully manifesting its universal human character. It is developing as a form of social consciousness that encompasses the skills of creating, producing, and utilizing modern technical means. Now, the need to ensure national development by directing technogenic consciousness toward strengthening national consciousness is also taking shape[14].

Professor S. Otamuratov emphasizes that the development of a technogenic consciousness among the nation's people has led to the following positive results: "a) the creation of new technological and technical developments; b) the material well-being of

people; c) the growth of the nation's intellectual potential; d) the improvement of the nation's living conditions; e) the employment of the nation's people; f) the improvement of working conditions; j) the increase of labor productivity." In our view, in addition to these, the development of a technogenic consciousness also leads to several other conveniences that serve universal human interests: 1) the facilitation of the social lifestyle of all humankind, that is, an increase in the scope of mutual humanitarian aid to countries with high levels of poverty and destitution; 2) an increase in the quantity and quality of manufactured products as a result of competition in the global market, which in turn improves product quality and lowers prices; 3) the mechanization of production reduces the demand for labor and increases labor productivity, as a few machines can perform the work of hundreds of people quickly and flawlessly; 4) growing interest from members of society, especially young people, in new types of equipment and technologies leads to their popularization; 5) an increase in people's intellectual potential (an increase in aid provided by volunteers from developed countries to nations with low literacy rates); 6) the free movement of the workforce (today, almost all professions require technical knowledge. Therefore, it will become easier for people seeking work in other countries to find suitable jobs without worry, or they can quickly and easily find relevant jobs in their specialty online); 7) an increase in material well-being (new equipment, technologies, or technical developments bring great benefits to manufacturers. This interest leads to the further improvement of various types of equipment, which guarantees the material well-being of manufacturing entities); 8) it serves processes such as clarifying that it is becoming a means of satisfying the growing needs of people[15].

Today, several factors influence the formation of technogenic consciousness. According to Professor S. Otamuratov, this is impacted by the process of globalization, the growth of humanity's intellectual potential, the civilization that has formed today and radically changed the life of all humankind, the application of technocratic views in development, the leading role of economic, technical, and technological cooperation in interstate relations, and educational factors.

Without denying the above factors, in our opinion, the following also influence the formation of technogenic consciousness:

Firstly, the formation process of technogenic consciousness is also closely linked to the evolution of human consciousness, worldview, and thought. As human thought and intellect develop, the process of creating complex technologies also improves. The ability to master, manage, and utilize these created complex technologies for one's own needs and interests will also grow. Depending on the degree to which technogenic consciousness has formed, the skills for using newly created technologies, mastering them, or producing new types of equipment also increase. In this way, human thought exerts its influence on the development of technogenic consciousness;

Secondly, the growing realization that the future development of all sectors is inextricably linked with technology is elevating the necessity of forming a technogenic consciousness in people to the level of an essential need. In our current century, there are

no sectors developing without the influence of technology. The prospects of all sectors are becoming increasingly dependent on technological progress. Therefore, individuals who want to become professionals in any field must also acquire technical knowledge. This is achieved through the understanding that it happens by means of forming a technogenic consciousness in people;

Thirdly, the ongoing automation of production processes, the application of artificial intelligence, the increased involvement of machinery, technology, and robotics, and the growing demand for smart technologies have all accelerated the formation of a technogenic consciousness in people. Whether we like it or not, in the subsequent stages of development, all types of production will strive for progress through automation and robotization. The first steps in this process have already been taken. A number of developed countries are utilizing artificial intelligence technologies in various consumer service locations, security operations, airports, and public facilities. It is inevitable that this practice will encompass all sectors in the near future. To give another simple example, the presence of smart technologies (smart TVs, smartphones, robotic vacuum cleaners) in every person's home is clear evidence of this process's imminent arrival.

The integration of artificial intelligence systems into smart devices and technologies is also raising serious concerns among people. This is confirmed by the fact that there are now more people who think like robots than there are robots that think like people. That is, a number of problems are emerging, such as rigid thinking, a lack of reading, a fading interest in acquiring knowledge, and difficulty in making firm decisions;

Fourthly, there is a growing need to ensure mutual cooperation among world nations to solve global problems. The solution to a number of global problems depends on global cooperation between the countries of the world. In the process of such cooperation, developed countries try to find a solution to the problem by providing high-level equipment and technologies to less-developed countries as gratuitous aid. As a result, on the one hand, a partial solution to the global problem is found, and on the other hand, the socio-economic life of a less-developed country may be partially improved through the "aid" received from the world's leading nations. For example, countries with impoverished populations but rich in natural resources face limited material capacity to exploit their natural resources, which is the main obstacle to their utilization. As a result of the equipment and technologies provided by developed countries to master the natural resources of resource-rich countries, new jobs are created, the social condition of the population improves, and the state also sees material benefits. To acquire the skills to use the newly introduced equipment and technologies, there is also a need to form a technogenic consciousness[16]. This, in turn, is an important factor in the formation of a technogenic consciousness;

Fifth, the development of modern technology and its capabilities has outpaced human consciousness and worldview. As a result, the development of technogenic consciousness has lagged behind technological progress. Considering that technology arises as a product of human consciousness, worldview, and intellect, developing technogenic consciousness in people has now become a necessary human need. The daily

creation of new technologies is also fostering people's interest in using them. That is why people are striving to form a technogenic consciousness, viewing it as a matter of necessity. Indeed, the formation of a technogenic consciousness has become a need for the current generation, manifesting itself as an important factor in their lives;

Sixthly, consider the ever-increasing volume of large investments allocated for the development of technology. These investments are made by world-renowned billionaires who possess significant economic opportunities and lead huge manufacturing corporations in countries around the world, such as Apple founder Steve Jobs, Microsoft founder Bill Gates, Google founders Sergey Brin and Larry Page, and StarLink project founder Elon Musk. As we know, those who consistently support discoveries and research in the field of technology are globally recognized as high-income individuals. The success of the technical developments created through the actions of such people is leading to an extremely rapid evolution of public demand for new equipment and technology. Consequently, this fuels the desire to acquire newly invented technical devices. For example, Apple began accepting pre-orders for the iPhone 7 and 7 Plus in first-wave countries on September 9, 2016, but people started waiting in line all night to buy the new smartphone as early as September 8. This, in turn, ensures the further development of a technogenic consciousness in people.

CONCLUSION

Fundamental Finding : Another important factor is the increasing activity of IT parks, IT courses, IT technology training centers, and technoparks, all designed to impart knowledge and skills in the field of technology and engineering. This indicates a growing desire, need, and demand among people to develop a technogenic consciousness. When parents enroll their school-aged children in various technical courses, it reflects this rising demand for technical knowledge. This very trend is an action that signifies the formation of a technogenic consciousness. Today, people in countries worldwide are divided by whether or not they have developed a technogenic consciousness. This technogenic consciousness is developing primarily among young people, while it is not as prevalent in the older generation. **Implication :** The uniform development of technology on a global scale is perhaps an inconceivable phenomenon, but every country, nation, and people must strive to achieve specific results in this field by effectively utilizing all their available resources. To achieve results in technology and engineering, elevating the technogenic consciousness of citizens to the level of national consciousness will yield effective outcomes. It is crucial that this process unfolds not by eroding the national consciousness, but by enhancing it. Thus, in the context of today's globalization, technogenic consciousness has already become a great force that helps people live in step with technological progress and fully utilize its potential. **Limitation :** This has its own unique aspects: it is somewhat difficult for people with an underdeveloped technogenic consciousness to understand members of a society accustomed to technology. In the eyes of adults, young people using technical devices appear to be a dependent generation, addicted to technology. It is true that dependence on technology is increasing over time,

but for today's generation, becoming a specialist in any field without technology is an unimaginable process. An underdeveloped technogenic consciousness leads to an inability to make sufficient use of the possibilities offered by technology. As a result, this can lead to a negative attitude towards technical devices or an inability to properly appreciate the positive outcomes of technology. **Future Research :** Future research should focus on examining the relationship between technogenic consciousness and national consciousness in different social and cultural contexts. Further studies are also needed to analyze the impact of technogenic consciousness on education systems, workforce development, and social behavior across generations. In addition, future research can explore strategies for developing technogenic consciousness without reducing national identity and cultural values. Comparative studies between countries with different levels of technological development would also provide deeper insights into the formation and development of technogenic consciousness in the era of globalization.

REFERENCES

[1] L. Floridi, "Mature Information Societies – A Matter of Expectations," *Philosophy & Technology*, vol. 29, no. 1, 2016.
[2] I. A. Karimov, *High Spirituality is an Invincible Force*. Tashkent: Ma'naviyat, 2008.
[3] A. M. Avlakulov, "Technogenic Civilization and Human Ethics," *Academic Research in Educational Sciences*, no. 1, pp. 73–77, 2022.
[4] I. S. Baklanov and S. I. Pelevin, "Technologies and Technological Consciousness in the Evolution of Post-Industrialism: From Information Society to Knowledge and Digital Society," *Bulletin of Moscow Region State University. Series: Philosophy*, no. 1, 2022.
[5] D. Muratova, *Philosophical Analysis of the Transformation of Human Consciousness in the Era of Technogenic Civilization*, PhD dissertation, National University of Uzbekistan, Tashkent, 2020.
[6] S. Otamuratov, *Globalization: The Responsibility of Preserving the Nation (Socio-Philosophical Aspects)*. Tashkent: Uzbekistan NMIU, 2018.
[7] S. Otamuratov, "Factors of the Development of Technogenic Consciousness," in *Ideas and Innovative Development: Proceedings of the Republican Scientific Seminar*, Urgench: UrSU, 2013.
[8] K. Schwab, *The Fourth Industrial Revolution*. Tashkent: Nihol, 2022.
[9] A. Hasanov, *Geopolitics*. Tashkent: Tamaddun, 2016.
[10] V. G. Gorokhov, *The Evolution of Engineering: From Simplicity to Complexity*. Moscow: IFRAN, 2015.
[11] I. Prigogine, *Science, Civilization and Democracy: The Human World as a Challenge of Uncertainty*. Moscow: LENAND, 2019.
[12] K. Jaspers, *The Origin and Goal of History*. Moscow: Respublika, 1994.
[13] L. Floridi, "Mature Information Societies – A Matter of Expectations," *Philosophy & Technology*, vol. 29, no. 1, 2016.
[14] A. M. Avlakulov, "Evolution of Views on 'Technogenic Civilization'," *International Journal of Social Science Research and Review*, vol. 6, no. 1, pp. 441–446, 2023.
[15] D. A. Krylov, "Technogenic Civilization and Culture: Main Trends in Modern Development," *Modern Problems of Science and Education*, no. 6, 2014.
[16] N. R. Ochilova, *The Impact of Modern Civilization on the Spiritual Image of the Individual*, PhD dissertation, National University of Uzbekistan, Tashkent, 2010.

***Avlakulov Aktam Mavlonkulovich (Corresponding Author)**
Department of Socio-Political Sciences, Tashkent Institute of Chemical Technology, Uzbekistan
Email: aktam.avlakulov@gmail.com