



Apology of the mind and artificial intelligence in education

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Abstract

The article is based on the teaching experience of the authors. It substantiates the ideas of the objective superiority of natural reason over artificial intelligence and defends the idea of the need to form students' awareness of the validity of the apology of the human mind and the relevance of improving national and international legal norms for the creation and use of artificial intelligence. To clarify the philosophical meaning of their position, the authors conduct a comparative analysis of the relationship between human intelligence and artificial intelligence with the dialectics of "I and not-I" in Fichte's philosophy. In conducting the research, the authors used a historical and philosophical approach, methods of comparative analysis, conceptual synthesis and generalizations, the principles of dialectics, hermeneutics and the system approach. The conclusions of the article are the provisions that the human thinking abilities are continuously improved under the influence of many socio-psychological factors, that the development of artificial intelligence will always be one step behind.

Keywords:

Artificial intelligence
Education
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Psychological factors
Self and non-self
Subjective reality
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1. Introduction

In our era of development of digital technologies and artificial intelligence, in the process of communicating with students in the process of teaching, we encounter both positive and negative aspects of the impact of artificial intelligence on young people. Something pleases us, something worries our teachers very much. Contradictory competition between natural intelligence and artificial intelligence with accelerated development of the latter and the spread of it in almost all areas of social practice, including the sphere of education and science, gives rise in the minds of people, and primarily in the minds of young people, thoughts about the alleged possibility of the domination of artificial intelligence over humanity in the near future, as, for example, in the films "Terminator", "Matrix", "Avatar". In order to understand the essence and appropriate place of artificial intelligence in society, students need to understand the objective relationship between artificial intelligence and human thinking. The current and potential future consequences of AI dynamics also require an apology for human intelligence in order to ensure the socio-psychological and intellectual stability of society, and to help the younger generation understand that the "thinking machine" that is necessary for our daily lives can also be a treacherous weapon in the hands of some people against others. This raises a philosophical question: can a human creation become the master of its creator?

An important issue generated by the widespread and intensive practical use of artificial intelligence achievements in the education system is its active negative impact on the intellectual abilities of the younger generation, which is manifested in a decrease in their intellectual level (Alekseev & Alekseeva, 2025; Alekseeva, 2024). The expansion of the scope of application of various modifications of artificial intelligence also generates urgent moral, ethical, psychological, socio-philosophical problems of a global nature (Chumakov, 2025; Viscusi, Rusu, & Florin, 2020). In the light of the above, the issues of expanding the boundaries of legal regulation of the content of AI programming, subjects of its production and use, which do not hinder the creative development of researchers, are also brought to the fore.

2. Research Methodology

Our research reveals, first of all, the socio-philosophical aspects of artificial intelligence, which is currently relevant in the process of organizing and implementing the educational process. Therefore, it is necessary to use the method of conceptual analysis and synthesis, which leads to going beyond the problems of learning. The analysis of scientific publications in different foreign languages requires the use of the hermeneutical method. To ensure the integrity of the logic of the interconnectedness of the problems of artificial intelligence in education and other aspects of youth's life, a systematic approach and dialectical methods were used. In conducting the research, the authors also used a historical and philosophical approach, methods of conceptual generalization and abstraction.

3. The Discourse on the Limits of Artificial Intelligence Capabilities

In the light of the comparison of the human mind and artificial intelligence, the dialectic of the "I and non-I" of Fichte's philosophy becomes relevant, as it more concretely and easily reveals the philosophical essence of the confrontation between the human mind and artificial intelligence as a product of the human Self.

The continuous evolution of scientific research, the improvement of neural network technologies, equipment, machines, and various aggregates operating on the basis of artificial intelligence are nothing more than a manifestation of the transition of the human I into its non-I, where the Self acts "as an absolute subject" (Fichte, 1993) creating and defining its non-I. In our case, the Fichtean "I" acts as an aggregate subject and its "non-I", in the form of artificial intelligence, is a natural response to the requests of various spheres of public practice.

The intensive development of artificial intelligence and its penetration into all spheres of human life create the problem of protecting citizens' personal data from the possibility of "theft and use for personal gain" related to the ethical aspects of using artificial intelligence, which, admittedly, is of no small importance (Hannas, Chang, Chou, & Fleeger, 2022; Roberts et al., 2021). But it also actualizes a more important socio-philosophical problem, namely the problem of the fundamentals of the essential difference between the human mind and artificial intelligence, which remains a little-explored problem (Chumakov & Ouyang, 2024; Makhamatov, Makhamatov, & Makhamatova, 2021).

As Fichte's philosophy suggests, in reality, the entire fan of digital and "smart" technologies is, first of all, a materialized form of human thought, i.e., the human non-Self. Like writing, the car, all machinery, production equipment, and state-of-the-art machine tools are products of the creative thinking of the collective human being. This is also the case with artificial intelligence, which can facilitate human activities in various fields of practice and the education system (Semwaiko, Chao, & Yang, 2024). But the machine mind acts by choosing from the programs of action embedded in it by man, and learns itself within the framework of the same program. But he will not be able to think as a person thinks, for whom thinking is the essence of his being. Cogito, ergo Sum – the great French philosopher Rene Descartes argued for a reason. Therefore, the last instance of AI quality control remains man. In the education system, human communication between student and teacher cannot be replaced by artificial intelligence.

The possible pace and scope of the development of artificial intelligence are determined by the needs of the developing practical activities of mankind, the deepening and evolution of both applied and fundamental theoretical knowledge of mankind as a whole, as well as the personnel shortage caused by the aging of the population in developed countries. Since the limits of cognitive capabilities are limited only by the level of development of society at this historical stage, as well as by the physical existence of all mankind, artificial intelligence can develop only within the limits of the achieved level of scientific knowledge of the total person, financial capabilities and the level of development of production technology of society.

It should be recognized that a machine mind can compose music, paint a picture, and surpass a single specific person in some ways, such as artificial intelligence beating the world chess champion. An intelligent machine is strong in calculating chess moves, but it is weak in the psychology of creativity and game strategy, which is the value of human creativity and the entertainment of sports competitions.

A smart machine operates in one, or at best in several related fields of activity. Attempts to create a universal artificial intelligence capable of operating in various fields of practical activity are utopian and meaningless. Every machine created by man is a form of overcoming an urgent task that has arisen in a certain area of practical activity of society. Only a person can simultaneously work as a driver and have the ability to cook delicious food, write poetry, play the guitar, sing and paint pictures. Back in the 80s of the 19th century, Friedrich Nietzsche, noticing the essential difference between human essence and artificial creation, wrote that "there is hardly such a brilliant head that would come up with something other than a machine, and yet every organic process leaves every machine far behind" (Nietzsche, 2025). These thoughts of the German thinker have not lost their relevance in our time.

3.1. The Uniqueness of the Thinking of the "Total Man"

An entire team of scientists participates in the creation and improvement of any technical creation, such as artificial intelligence, as a collective person who replaces each other over time (Cojocaru & Balint, 2023; Made, 2023). In the real life of society in its various spheres, new and new difficulties, problems and tasks constantly arise, solving which the combined person develops his knowledge, invents new technology and improves artificial intelligence based on them. However, the very name "artificial intelligence" demonstrates its limitations compared to human thinking. It is created by an aggregated person using all the information developed by the experience of all mankind for a given period of time in a particular field of practice.

When studying artificial intelligence as a creation of a collective human being, the student should remember the thoughts of I.G. Fichte, pointing out the difference between the actions of the non-Self and the actions of the Self, where "the Self has unconditional and immediate significance" (Fichte, 1993). It is well known that human intelligence is the result of a natural-historical synthesis of many factors of human social existence. Modern Western and Eastern researchers, emphasizing the uniqueness of human intelligence, note that a person has a diverse type of thinking. Due to life experience, family and psychological status, and the social hierarchy in which people find themselves, each individual interprets the same task in different ways, which artificial intelligence lacks. As noted, for example, by a team of Chinese researchers, people "demonstrate cognitive skills in a wide range of tasks, such as visual—spatial processing, quantitative thinking, language use and working memory, not to mention social and emotional intelligence" (Hannas et al., 2022; Wang & Zhang, 2020; Wu, Siu-Yung Jong, & Kwok, 2025; Zeng, 2021).

The weak side of artificial intelligence as machine thinking is also due to its lack of a living soul, psychological reactions, feelings, and emotionality. Artificial intelligence does not know fatigue, drowsiness, fear, jealousy and envy, which is its superiority over humans, but not over human thinking. A person suffers from existence, which hinders and at the same time gives an impulse to the creative mental activity of the individual (Makhmatov, Ganiyev, Pulatova, & Makhmatov, 2024). Although human thinking is mainly rational, it is inextricably linked to the psychological and biological nature of man, the presence of irrational and subconscious elements in his thinking. In the inner world of each individual human personality, along with social moral imperatives, there are individual moral, aesthetic, religious, emotional and irrational attitudes towards the outside world, to loved ones and distant ones, to familiar and unfamiliar people. These relationships and their content and dynamics also have an impact on a person's thinking abilities and creative potential. In principle, even the most modern future types of artificial intelligence cannot have such nuances of the human mind.

We agree with the position of Russian researchers Kanaev and Dryaeva (2024) that "experiencing any experience (feelings, emotions, excitement, etc.) forms a subjective reality and thereby changes the adaptive fitness of the body. At the same time, even the presence of a specialized information preservation system is not necessary, since any act of interaction with the environment can change the structure of the body and subjective reality, thereby influencing future behavior" (Kanaev & Dryaeva, 2024). The conclusions of their research once again confirm our concept of the qualitative and insurmountable superiority of human mental activity.

The concept of another Russian research team, consisting of scientists such as Nikolaeva, Nikolaev, and Vasilyeva (2024) is also of some interest. Based on the results of their research, these scientists note that "such characteristics as uncertainty, originality, emotionality, and spontaneity distinguish human communication, in

this sense, it is quite difficult for an algorithm to surpass a human. For a neural network, these tasks are impossible, because it is impossible to teach a computer something that a person himself cannot yet explain, and it is not known whether he will be able to." (Nikolaeva et al., 2024).

Dutch scientist Peter van der Made, analyzing the distinctive features of the human brain and thinking from artificial intelligence, comes to the conclusion that the neural network is only an imitation of a very high level of functioning of the human brain. However, according to the concept of this scientist, the objective truth is that the human brain is many times more complex and efficient than the most advanced neural networks. The functioning of the human brain includes factors of awareness, imagination, spontaneous ingenuity and creativity, like Archimedes' eureka, which is not and cannot be found in neural networks, although the maximum approximation of neural networks to the natural human brain cannot be excluded. But again, there is only an approximation here. "Programs like ChatGPT," writes Peter van der Made, "can create compelling stories and answer complex questions. However, the neural networks responsible for all these impressive results are unaware of what they are doing. There is no awareness here, only calculations" (Made, 2023). However, it should be noted that in response to the needs of public practice in its various fields, research work in the field of neural networks and the improvement of artificial intelligence models continues. Sooner or later, specialists will be able to incorporate some of the repetitive features of the human brain related to its cognitive functions into an artificial intelligence program, but it is impossible to surpass the essence of human thinking. Brain functioning in people of different cultures, nationalities, civilizations, and ages may be identical, but thinking is different (Makhamatov & Mamedzade, 2022). After all, human thinking, as noted by the famous Soviet philosopher of the 60s and 70s, Ilyenkov (1991) is influenced by moral, ethical, cultural, aesthetic, socio-historical and other factors of his social existence Ilyenkov (1991). If we conduct a serious comparative analysis of the qualitative feature of human thinking, the influence of socio-psychological factors on it, which determine the boundlessness of the qualitative development of human thinking abilities with the peculiarities of the evolution of artificial intelligence, it will be found that the development of neural networks and artificial intelligence will follow the development of thinking and cognition of the total person. In the philosophical study of artificial intelligence, one should keep in mind the importance of the social factor in the formation and development of human properties, which a thinking machine cannot have. In many ways, it is the collective nature of human thinking that has a significant impact on the productivity and originality of an individual's creative nature. The social environment for machine thinking does not matter until it is introduced into a machine program. Artificial intelligence is unable to formulate either a scientific hypothesis or a theoretical idea as a substantial basis for a new theory.

3.2. Is the Dominance of Artificial Intelligence Over Humanity Real?

The concepts that have formed in the public consciousness about the possibility of artificial intelligence dominating humanity in the near future are based on several factors that actually exist in modern society. Such factors include, firstly, the economic paradigm of man. According to this paradigm, which narrows the essence of the individual, a person is, first of all, the creator of a surplus product, a source of intellectual capital, a consumer, in a word, an economic being (Rezaev & Tregubova, 2022). Such a paradigm not only narrows, but also distorts the human essence as a socio-historical being, as the highest value of society (Chumakov, 2025).

Secondly. It is well known that by many representatives of the theory of artificial intelligence, human consciousness and thinking are reduced only to the neurophysiological functioning of the brain, and the task of further improving neural networks and artificial intelligence is seen only in a deeper study of the neuro- and psychophysiological features of the human brain (Kanaev & Dryaeva, 2024). Although there are also Ilyenkov (1991) in his studies of human thinking revealed the socio-historical, socio-cultural and specifically personal essence of human mental activity (Ilyenkov, 1991; Leontiev, 1975). The uniqueness, concreteness and uniqueness of the creative nature of human thinking make it impossible for artificial intelligence, no matter how perfect, to fully reproduce its depth, flexibility and versatility. Any advanced artificial intelligence is always only a product of human skillful hands, a human non-I and only an excellent tool in its mental activity. Third. The concept of the possibility of artificial intelligence dominating humanity is based on a misunderstanding of the uniqueness of human thinking, which lies in the objective dialectic of the process of forming human thinking, as written by Jean Piaget, Carl Jung, S. Vygotsky, P. Halperin and other classics of psychological science. Even in the most advanced machine, it is basically impossible to reproduce the fact that human thinking is formed and functions in a collective, socio-historical environment, has a dynamic, constantly changing character (Alekseev & Alekseeva, 2025; Makhamatov, 2019).

4. Issues of Legal Regulation of the Process of Creating and Using AI

The concept of the likelihood of artificial intelligence dominating humans points to a real problem arising from the widespread use of advances in neural networks and intelligent machine systems. The content and purpose of an artificial intelligence program for various equipment may have different directions – economic, social, pedagogical, military, and others. Consequently, the programmer's activities should be carried out within a certain legal framework that does not limit his creativity, but at the same time determines the extent of his responsibility for creating programs that may pose a threat to the security of society, lead to a violation

of public order, etc. Another individual whose actions should be under legal control is the subject who uses the equipment. with artificial intelligence (Filipova & Koroteev, 2023).

After all, what is the psychology of the subject of management, such is the result of his control of the action of machines with artificial intelligence. Awareness and facing the problems arising from the weakness of the legal foundations of artificial intelligence practice force international organizations and individual countries to develop the foundations for legislative regulation of programming practices and the practical use of artificial intelligence (Ruscheimer, 2023). For example, in 2021 UNESCO adopted the "Recommendation on the Ethical Aspects of Artificial Intelligence". The document is advisory in nature, but lays down key principles: transparency, fairness, and data protection. In 2024, the Council of Europe adopted the Framework Convention on Artificial Intelligence and Human rights, democracy and the Rule of law. This is the first legally binding international act in the field of practical use of artificial intelligence. In 2024, the UN General Assembly adopted two resolutions on AI: "Using the capabilities of safe, secure and reliable artificial intelligence systems for sustainable development" and "On strengthening international cooperation in the field of artificial intelligence capacity building". They call for cooperation, knowledge sharing, the creation of risk assessment mechanisms and other measures. In China, "Temporary measures for the management of generative AI services" have been in effect since 2023. They require generative model providers to conduct a security assessment before launch, ensure that the generated content conforms to socialist values, and label AI content (Wu et al., 2025).

These and other similar legislative measures taken by international organizations and individual countries indicate that threats to humanity do not come from artificial intelligence, but from people themselves, politicians, military, businessmen and criminal groups (Mecaj, 2022). Further steps in this direction, in our opinion, should include stricter criminal liability of people for creating programs and practical use of artificial intelligence for purposes that threaten human life, property, and the integrity and stability of society.

5. Results: Positive and Negative Aspects of Artificial Intelligence

Entering the world of artificial intelligence and neural networks, individuals using artificial intelligence equipment need to understand the dialectical unity of their positive and negative aspects. At the same time, it is important to know that the insurmountable superiority of human thinking and the possible use of artificial intelligence for criminal and anti-state purposes can in no way hinder its continuous improvement, development and expansion of its scope of application. The accelerating development of artificial intelligence and its penetration into all spheres of human activity facilitates his work and gives a quick and effective result of his practical activities (Makhmatov et al., 2021). But at the same time, the multidimensional use of artificial intelligence is beginning to negatively affect the quality of thinking and lifestyle not only of young people – schoolchildren and students, but also of older people. The involvement of a person of any age in the virtual world imperceptibly strengthens and deepens the psychology of loneliness in him, he begins to identify the real with the virtual world (Makhmatov et al., 2024).

Under the influence of the widespread and regular use of artificial intelligence, there is a sharp narrowing of the human social space, which has a global character. From the moment a child gets his hands on a gadget, the process of his loneliness begins. As a result of the intensive introduction of intelligent information technologies into people's lives, the consciousness of the younger generation is becoming dependent on smart laptops, gadgets, etc. There is a sharp distortion of the human essence, a drop in the level of the individual's search and creative thinking, a decrease in intelligence, and a distortion of moral values among most of the younger generation (Alekseeva, 2024).

The widespread use of artificial intelligence in the field of creative activity not only accelerates the process of creating new works of art, but also begins to overshadow the creative essence of the individual, the personal factor in art. The creation of feature films and other types of creativity with the help of artificial intelligence belittles the essence of art, which consists primarily in expressing the spirit of individuality, in its uniqueness, in the dynamics and features of the existentiality and impressiveness of the subject of creativity.

It should be noted that as a result of the widespread and intensive use of artificial intelligence tools by students and other young people, it leads to both positive and negative changes in their psychology and cognitive abilities, which can definitely affect the future of society.

The development of artificial intelligence technologies and the expansion of their practical use leads to social and intellectual stratification in society. It is still not very noticeable, but the formation of a narrow stratum of people who create programs for artificial intelligence equipment and deal with the problems of improving neural networks and managing them is inexorably taking place. This social stratum consists of highly educated people who have the ability to control the main directions in the economic, political and military spheres of their country and other countries. Such social stratification in technologically advanced countries leads to the formation of passive, manageable and obedient, highly educated performers with underdeveloped and limited creative thinking. Such a trend in the social structure of society means the transformation of the class structure of society into a different color, into a different image. Such a process also has a philosophical meaning, because there is a kind of self-denial of a person, self-limitation, one might even

say, depriving oneself of the ability to think critically (Duckworth, Taxer, Eskreis-Winkler, Galla, & Gross, 2019).

It is not for nothing that currently in some developed countries, for example, in China, much attention has been paid to the moral and ethical aspects of creating and using artificial intelligence in areas affecting the confidential data of citizens of the country. Researchers of China's policy in the field of modern high-tech technologies note that the country's leadership in this area, along with the task of achieving high success in the field of production, also sets the task for China to become a world leader in defining ethical norms and standards in the application of artificial intelligence (Wang & Zhang, 2020).

6. Conclusion

Modern real-world practice shows that the development of scientific research on the problems of neural networks and the practice of improving equipment based on artificial intelligence is an objectively necessary process. Sooner or later, a competitive and in-depth study of the subtleties and yet undiscovered nuances of artificial intelligence will lead to the creation of its types for a broader purpose (artificial general intelligence, AGI). If humanity uses artificial intelligence of an even more advanced type under public control, society will only benefit. The invention of artificial general intelligence (AGI) will give an impetus to the further development of all spheres of public life where it will be used. The level of human ingenuity and safety will also increase (Hannas et al., 2022; Made, 2023). However, our research leads to the conclusion that the objectively necessary process of development and widespread use of artificial intelligence in society should be harmonized with the further humanization of society, the logic of this process should be combined with a program of intellectual, moral, ethical and humane education of the younger generation. As Plato also wrote in his work "The State", the perfection of the state depends on a high level of social, humanitarian and technical education and high morals of young citizens.

Another conclusion of our research is that reliable success and sustainable development in the field of neural networks and artificial intelligence technologies largely depend on understanding the objective uniqueness of each person's thinking. We tried to substantiate the thesis that scientific and technological development, no matter how it pursues the human mind, no matter how it tries to completely reproduce and replace the human mind, it will always remain one step behind the mind of the total human. Along with understanding the objective superiority of the human mind over artificial intelligence, it is necessary to recognize and strive to put into practice the need for its use within the framework of legislation.

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