

МІЖДИСЦИПЛІНАРНИЙ ФОРУМ ІЗ СОЦІАЛЬНО-ПСИХОЛОГІЧНОЇ ПРОБЛЕМАТИКИ

УДК 130.2

DOI: [https://doi.org/10.33120/ssj.vi45\(48\).149](https://doi.org/10.33120/ssj.vi45(48).149)

Valerii A. Sivers

Doctor of Sciences in Philosophy, Professor,
Professor of the Department of Cultural Studies
and Informational Communications,
National Academy of Managerial Staff of Culture and Arts,
Kyiv, Ukraine

ORCID 0000-0002-5291-2381

siversval@ukr.net

THE AXIOLOGICAL ASPECTS OF THE RELATIONSHIP BETWEEN THE HUMAN AND ARTIFICIAL INTELLIGENCE IN THE CONTEXT OF FUTURIST CONCEPTIONS OF THE XXI CENTURY'S BEGINNING

The purpose of the article is to determine the idea of artificial intelligence researches' independent development, which will give it the opportunity to develop without any restrictions and investigate itself. In order to this, the man has to create comfortable conditions for such development. This process manifests the stages of the sacrificial movement of a man to the inevitable result of the «loading values» into the imitation system. The methodology of the research consists of the comparative-historical method, the philosophical and dialectical one, and the phenomenological approach. In addition, there are methods of analogy and complex analysis, based on the principle of the unity and synthesis of the certain areas of the natural sciences and philosophical and cultural knowledge, in particular in the ethical and axiological sphere. The scientific novelty of the article is in the analysis of axiological aspects in the relationship between the man and the artificial intelligence in the context of the futurist conceptions of the beginning of the XXI century. For the first time, it is outlined the issue of the victim as the existential concept of human technological development. The article concludes that the cognition is a destructive process and a poison itself. In our opinion, it concerns only the human. This issue is open for the processes that accompany the emergence and formation of the artificial intelligence. Its origins are in the word evolution. At this stage, the world is open to man only externally, because we as its part cannot be both a part of the system and its substructure (K. G udel). This means that the person remains unknown to him- or herself. In the attempts to destroy this state of affairs, we transfer our attention to the external world and destroy it so that it collapses with us. So, we become the creators and objects of the second type of victim. Thus, a person is faced with the choice to change nothing or complete the destruction of the existing one. In our formulation, the prospect of studying this topic is the ethical-axiological and ontological analysis of the «love» category in the context of artificial intelligence development and in its approaches, highlighted in the article, to understand the concept of the victim.

Keywords: artificial intelligence; N. Bostrom; victim; value; axiological sphere.

Сіверс Валерій Анатолійович

доктор філософських наук, професор,
професор кафедри культурології та інформаційних комунікацій,
Національна академія керівних кадрів культури і мистецтв,
Київ, Україна
ORSID 0000-0002-5291-2381
siversval@ukr.net

АКСІОЛОГІЧНІ АСПЕКТИ ВІДНОСИН ЛЮДИНИ І ШТУЧНОГО ІНТЕЛЕКТУ В КОНТЕКСТІ ФУТУРИСТИЧНИХ КОНЦЕПЦІЙ ПОЧАТКУ ХХІ СТОЛІТТЯ

Метою статті є обґрунтування ідеї самостійного розвитку досліджень штучного інтелекту, що дасть йому можливість розвиватися без будь-яких обмежень і досліджувати себе. Отож з огляду на об'єктивні обставини людству доводиться створювати комфортні умови для такого розвитку. Цей процес відображає етапи жертвовного руху людини до неминучого результату – «завантаження цінностей» в імітаційну систему. Методологія дослідження передбачає застосування порівняльно-історичного, філософського та діалектичного методів, а також використання феноменологічного підходу. Крім того, використано методи аналогії та комплексного аналізу, що базуються на принципах синтезу певних галузей природничих наук і філософських та культурних знань, зокрема в етичній та аксіологічній сферах. Наукова новизна статті полягає в аналізі аксіологічних аспектів відносин людини із штучним інтелектом у контексті футуристичних концепцій початку ХХІ ст. Уперше розглянуто питання про жертву як екзистенційний концепт людського технологічного розвитку. Зроблено висновок, що пізнання – це деструктивний процес, який стосується лише людини, однак воно залишається актуальним щодо процесів, які супроводжують виникнення і формування штучного інтелекту. Їхні витoki пов'язані з еволюцією слова; на цьому етапі світ відкритий для людини лише зовні, тому що ми як його складник не можемо бути як частиною системи, так і її підструктурою (К. Гедель). Це означає, що людина залишається й досі невідомим для себе феноменом. Намагаючись змінити цей стан речей, ми переносимо нашу увагу на зовнішній світ і руйнуємо його так, щоб він був знищений разом з нами. Отже, ми стаємо творцями та об'єктами другого типу жертви, стикаючись із вибором – нічого не змінювати або завершити знищення того, що існує. У нашій постановці перспектива вивчення цієї теми є етико-аксіологічним та онтологічним аналізом категорії «любов» у контексті проблем розвитку штучного інтелекту та підходів, розглянутих у статті з метою вивчення концепції жертви.

Ключові слова: штучний інтелект; Н. Бостром; жертва; цінність; аксіологічна сфера.

The problem statement. The thesis, which expresses the broad formulation of the researched problem actuality within the materials, is determined by the ontological factors. We can highlight it by the statement that is the key point at this stage of the human cognitive and practical activity. It means the issues of the most general plan, which are considered as the philosophical ones in the previous cognitive tradition. So, they are constantly being reproduced in a new form and formulation in the various historical periods, but they have never been resolved. Thus, such issues receive their radical decision by the ending of the quantitative and qualitative conditions of universal human development. The mentioned «maturation» can be considered in two aspects. The first one is the completed state, which is marked as «singularity» in modern philosophical-cultural and scientific-technical terminology. According to Rey Kurzweil, in the mass culture, the technological singularity means such a hypothetical future (according to various forecasts from 2029 to 2047) when the computational capabilities of the computer will exaggerate the possibilities of the human brain (Hel, 2015). It is believed that after this moment, there is no point in any predictions (there is any prognosis, which means the knowledge of this moment of the history) (Bradshaw, 2015). In our research, the «maturing» is interpreted as a discourse on the artificial intelligence. The theoretical aspect of the researches is interpreted as an attempt to predict, analyze, and simulate the ways and effects of the development of artificial intelligence. However, its practice

is defined by the senses and the meanings of the concept emulation (and the simulation, which is not considered in our article). According to the classical definition of computing engineering, the emulation is a set of software-hardware or their combination, which are intended to copy (or emulate) the functions of one computer system (a guest) to a different one. The latter emulated its behavior as closely as possible to the behavior of the original one. Its goal is to maximally accurately reproduce the behaviour in contrast to the various forms of computer modeling where there is only the simulation of the behavior of the abstract models (Bradshaw, 2015). However, the process of creating and developing artificial intelligence is not purely technical or technological. Considering the deep cultural and philosophical aspects of the problem, we should ask the question: «What does inspire and make humanity try to copy itself?». Moreover, we cannot restrict ourselves to enhance the available means of production and tools of labor for the improvement of welfare. It should be noted that the attempts to create an artificial intelligence differ in the position about the secondary character of human nature and its origin as the result of God's plan and creation or the result of the activities of other supernatural forces. This aspect appears to be the source of the research intentions in the article. In the modern period of our history, the creation of the artificial intelligence is a possible goal, which needs the analysis of its ethical, philosophical and socio-anthropological aspects.

Analysis of recent studies and publications. The first attempt to analyse the issue of the artificial intelligence development was the article «Computing Machinery and Intelligence» by A. Turing (2003). There was a test, which proves the machine thinking skills if a person cannot guess that he or she talks to the machine. During the improvement of the practical aspects of the development and creation of artificial intelligence (mind), the problem has got the socio-cultural, ethical, and philosophical significance. Today it deals with the transhumanism problem and the researches of the global catastrophes' mechanism. There are many Ukrainian and foreign scientists who have studied it. The foreign ones are R. Hansen, G. D. Brin, B. Dainton, W.-N. Joy, E.-Sh. Yudkowsky, V.-S. Vinge. The Russian scholars such as V. Stepin, O. Turchin, M. Medvedev analysed it. D. Gasparian (2017) explores the valuation aspects of the formation of the artificial intelligence. In Ukraine, we can note such a researcher as E. Andros (2010), who has highlighted the problems of the intelligence in the structure of being. V. Zagorodniuk studies the positive and negative dimensions of anthropocultural development. The aspects of the interaction of the meaning and absurdity in the cultural artifacts and the modeling of the neural networks are researched by O. Dovgan. However, there are any scientific works, dedicated to the direct comparison of the technological-functional and ethical-axiological approaches in the researched issue. So, it determines the actuality of our article.

The purpose of the article is to determine the idea of the independent development of artificial intelligence researches, which will give it the opportunity to develop without any restrictions and investigate itself. In order to this, the man has to create comfortable conditions for such development. This process manifests the stages of the sacrificial movement of a man to the inevitable result of the «loading values» into the imitation system.

The statement of the main research material. The methodology of the research consists of the comparative-historical method, the philosophical and dialectical one, and the phenomenological approach. In addition, there are methods of analogy and complex analysis, based on the principle of the unity and synthesis of the certain areas of the natural sciences and philosophical and cultural knowledge, in particular in the ethical and axiological sphere.

In order to find and legitimize the common axiological, philosophical, and scientific coordinates in the study of the problem of the comprehension and priority of a man in relation to artificial intelligence, we should underline the main obstacle to their implementation today. In our opinion, this is the fact that a man has not reached the final understanding of his goals and values of his existence. That is why, the emergence of the artificial intelligence is considered as the most serious threat and challenge to humanity (I. Musk, S. Hawking, etc.) (Bradshaw, 2015) or as an opportunity to create a universal system to empower the human abilities and to help people in their activities (Hel, 2015). We can find some positive moments in artificial intelligence. For example, it

need not any social insurance and the protection of the rights of its «agents». A man likes it due to the opportunity to be free from forced labor. It seems that this is the way to the ideals of the Enlightenment and social theories of the 19th and 20th centuries to build the kingdom of reason and freedom. However, they have already been successfully destroyed by the social practice of the 20th century. What is the problem with artificial intelligence, which appears to be contained in «maturation» processes? Not focusing on the predicting of prospects for artificial intelligence development as a system that should be controlled (in terms of the safety of its application and the enormous opportunities), arisen from the prospects of achieving highly intelligent simulation-emulation systems to solve social and economic problems of humanity, we consider that the generic component for both versions of artificial intelligence creation is the imitation. It leads to the consideration of the problem of the origin and essence of the human socio-historical formation (anthropogenesis). Taking into account the above-mentioned information, the actual problem field of our study is not the discussion of «maturation» consequences in the above-stated limits of socio-cultural and philosophical discourse, but the introduction of the axiological vector in the research field, which is understood and defined as the «victim» concept in the context of the article.

In the context of the dissemination and actualization of the above-mentioned discourse, we pay our attention to the position of N. Bostrom, a Swedish philosopher from Oxford. Analyzing the processes of artificial intelligence creating and developing, he writes about the problem of the «loading of values» (Bostrom, 2016). In his model, this issue concerns the ensuring of the utility function, acceptable to a person. So, it is a formula that allows the agent to evaluate the usefulness of each «possible worlds», taking into account what would be the result of the actions for the chosen world. Within the reaching of the goal, we consider a number of the versions in the following passage, which are accompanied by our brief criticism:

a) A formalized approach to «natural selection». It means the algorithm of evolution, is divided into two stages. The first one involves a significant increase in the «evolutionary material». The agents grow according to some criteria. The second one is its reduction due to the «withdrawal» of candidates by the evaluation function, which has not shown satisfactory test results. This approach requires a precise description of the goal, moreover, it is actually a problem that the natural selection solves through the destruction of one being by others, accompanied by suffering, which we try to avoid.

b) Training with reinforcement is an area of the machine studying, where agents can learn to maximize the accumulated rewards. In this case, the reward becomes the goal itself, and we only improve the ways and methods to achieve or increase it.

c) An associative model of value increment-under means the presence of the agent's anthropocentric coordinate system, which deviates from the norm in a strictly defined positive direction. The critics note that artificial intelligence may simply switch off this mechanism of increment.

d) The steps of the motivational system are the original installation of a simplified system of values, which over time is being replaced by the developed one in the correspondingly developed over the mind. So, artificial intelligence does not know about the temporality of the purposes and perceives them as ultimate. Therefore, it can object to their changes.

The mentioned approaches to the problem of the «loading of values», as well as the proper author's counterarguments, have a wide field for further deepening of their discourse. At the same time, we can say that there is a common feature. They are anthropocentric. Moreover, they exploit the human symbols of those characteristics of the simulation system in latent or open ways. These characteristics are still developing, but they have been already considered as the steady carriers of the traditional historically formed total system of human perception and evaluation. In particular, it is manifested as the need to use a combination of «function of utility», which immediately determines the analyzing of the goal as well as the coordinate of the imitation system and the using of the human features, used to describe the system (suffering, believes, perception, motivation, etc.). Finally, there is the main idea, which shows the appearance of the unsolved contradictions: the use of anthropic characteristics, dealt with the imitation system, without any explanation of the

appearing of the reflection in the imitation system as a basis of the transformation of the external in the internal. Taking into account the above-mentioned suggestion that the full emulation of brains or its digital simulation serves as the synonym of the revival of the complex of psychological and socio-cultural characteristics of a person. It hides the main question in the creation of artificial intelligence. Whether a man can control his wishes and skills at the individual level of all philosophical and religious theories since the beginning of its own conscious human history or a man as an animal is seized to the destruction under the action of external forces. In this case, the man cannot transform within the other paradigm of self-perception. All in all, the artificial intelligence is a new mirror of a person. It replaces the natural mirror and can turn a person into an element as well as the tool or a method of the own reflection and formation. So, we say about the value instead of its downloading.

Thus, the problem of «loading of values», considered in the logic of the development and their solution in artificial intelligence, becomes a problem of their conscious loss, which can be marked as «loading of the victim». It can be understood as the «other side» of the creation of artificial intelligence. The issue of the price of a simulation project comes to the fore. It is not connected with the calculation of the effectiveness of Moore's law, which outlines the prospects for achieving the point of the state of singularity as a strange example of the human mind ability to be in the state of transcendental apperception (I. Kant). So, we should understand the prospects and threats of the human as a generic phenomenon that can realize his own existence as his essential characteristic. So, in the prospects for achieving a singularity point, the human can view his own history as the mechanism of production and loss of value, and define his preservation and development or loss as the conscious and last sacrifice, which is the peak of the previous sacrificial path and corresponds to his logic.

In our opinion, the concept of «victim» is as the essential link in the logic of thinking about the theoretical foundations of the construction of artificial intelligence. It has been missed not by chance. It differs the items such as freedom, democracy, justice, and universal prosperity that must be a basis of the function of utility, discussed in N. Bostrom's concept (2016). It is their opposite, but it does not counterbalance. The victim as a procedural clarification, embodiment, and loss of value is the single mechanism to maintain the existence of the value, taking into account that the ontological circumstance that its existence is possible only in the transformed form. The transformed form of the existence of value means that the real existence is embodied by the permanent process of the extinction of its existence and the embodiment of the methods of transferring them into a new real form. We can see the peculiarity of the human form of the value existence in its description of the sacrifice, where the transformation of the latter into a new one is the act of the man's conscious and voluntary choice.

How should we understand the victim? The ancient Indian mythological religious heritage states that the world was created by the victim of the first man (Purusha). However, in Enuma Elish, the god Marduk killed Tiamat and formed heaven and earth from its divided body. In the first case, the victim is a victim as a conscious transformation of the value of existence, whereas, in the second one, the victim is the result of a violent transformation. The creation of the world in the Old Testament and the mission of Christ in the New Testament, create a precedent for the expansion and formation of a new meaning, associated with the appearance of a man, the understanding of his pre-historical state of «virginity», the violation of the prohibition and the subsequent history of sin and redemption. Christ has to correct such a situation by the self-sacrifice. The senses of the mythological and religious stories about the sacrifice, which are the basis of the most important narratives of the humankind, have an integral value core. So, they demonstrate an example of an effective loading of value. In addition, they have to be rejected in terms of their perception in the context of the scientific worldview. However, their rejection does not eliminate the problem of the emulation. According to this conception, the parameters need to be changed. Finally, the deep essence of the value, represented by the reference to the above-mentioned narratives is the concept of a victim, in particular its first sense.

Life is full of sacrifices. If this is true, the sacrifice can be highlighted by all forms of life activity. This aspect of the sacrifice has been consistently developed by the study of the forms of mythological consciousness from M. Mauss and G. Bataille to the entire Postmodern project in general. The problem, traced in the first part of the article, concerns the division of the scientific and vital understanding of sacrifice, emulation of the victim, and its sacrifice. However, the study of sacrifices by means of science destroys its sacred meaning. There is the peculiar «sacrificial transferring» in the science. The victim (as the object of the latent violent action) in science is a certain subject. As a result, another consciousness becomes it. The initiator of the victim (emulsion) transformation interacts with it. However, in this case, we are talking about impersonal and universal knowledge. There are no victims in scientific games with artificial intelligence. The experimenter does not realize that the second type of victim is already brought by human historical progress. So, the human becomes the victim. So, what can we say about the «live victim»? The cognitive paradigm of D. Hume and G. Berkeley states that the logic and the cause-effect relationship does not exist, whereas there is only our perception of it, which allows us to understand each other. In our opinion, the above-mentioned statement correlates with the following one: the victim is a voluntary refusal to stay in a certain value, accompanied by suffering. The «living» nature of the victim is embodied in the concept of «suffering». Moreover, it directly leads us to another notion of «experience». We can list up the following interpretations of the experience: a) the activity; b) the activity, associated with the forms of satisfaction or dissatisfaction (suffering); c) the activity, aimed at the establishing a semantic consistency between consciousness and being; d) the result, which is called «event» by the subject (Whitehead, 1990). We should note that the transition from the reflection processes, simulated during the creation of the artificial intelligence to the concept of «event» as an activity field and the axiological core of the concept of «experience», has the mystery of the victim. Finally, in the axiological-cultural context, the experience is the event, which means the act or the transition from the external to the internal. The latter becomes the basis and the beginning of the value perception, individualization, and personal history.

According to the scientific point of view (in this case, it is about the possibilities of simulation and emulation of the system) there is a very broad field for criticism, whereas it is not absolute. It resembles the situation of the search of the ether to solve the problems of Physics at the turn of the XIX-XXth centuries. In this case, the problem is the concept of experience. This is a common element of psychological, axiological studies. In addition, it is the issue of researches in the development of artificial intelligence systems. This is the crucial point in attempting to «load values» by N. Bostrom (2016). The concept of sense is the common basis of the ordinary human logic and developers of the computer systems machines. It would be ideal to formalize and download it in the emulation program. The problem of downloading value depends on the matter of technology and time. At the same time, the meaning-experience-sacrifice-victim maintains itself. Here is a quotation that can be considered as a direct indication that the denotatum is meaningful in the text (M. Heidegger), whereas it is not material. It looks like C. Jung's archetype, which manifests itself in certain conditions. The following passage is intended to show the fact that we can understand the value only by experiencing it: «In general, we can distinguish the sense-essence, sense-purpose, and sense-value. The first meaning is associated with the problem of knowing the essence of things (the typical embodiment of this approach is the Platonic idea as the sense of things, the embodiment of its essence as the first image, model, and sample). As usual, in researches, dedicated to artificial intelligence, this idea of sense is identified with the meaning (denotative part of the sign). It is insufficient. In the second meaning, the sense is the subordination, devoted to any particular purpose or a motive to act. In the third meaning, the sense is understood as something valuable (important, expensive), which is possible only within the limits of the axiological system of the world (so the world without values is absurd). We can imagine that a man can understand anything because he has some difficult-to-explain intuition or the experience, which manifests itself in such constructions as the meaning of the world (in L. Wittgenstein, «the meaning of the world should be outside of the world (L. Wittgenstein), «the meaning of life», «the meaning of a certain story»). The axiological interpretation of meaning demands the definition of the figure of

the subject (M. Bakhtin) (Bostrom, 2016). However, the issue of the subjectivity and morality of computers is a great one. Most of all, the meaning can belong to the special metaphysical intuitions or human experiences. Their precise origin and mechanism are still unclear. The general principle of such intuitions is the fact that we can successfully use them, whereas we cannot explain them. Such fundamental intuitions are analyzed within the various transcendental philosophies and approaches (Whitehead, 1990, p. 335) and require a separate consideration (Gasparyan, 2017).

Before continuing our analysis of the transformation of the victim into value, and the value into the sense, we should answer the question: why have people actually chosen such a way to know? In our opinion, the answer is determined by two considerations. The first one belongs to A. Whitehead (1990, p. 334): «The holistic structure restricts the independence of its parts. However, the above-mentioned is no use without pointing out the basis of the experience, which is emotional and analytical. There is the holistic structure within it». The second one means that life begins where the material acquires the ability to copy itself (Glick, 2013, p. 256). We can add to this statement the words of C. Dawkins (1993), who noted that the gene replicator appeared before the cell. Consequently, if integrity is the condition of the existence of a certain structure and the experience is the basis of the form, which contains the meaning of this experience, we must emulate ourselves to be preserved. Thus, we unexpectedly discover that we always talk about the instinct of self-preservation and its external and internal aspects. However, the preservation deals with the loss. So, the victim is the awareness of this loss and its adoption. The general indication of the reason for such a state may be the recourse to the concepts of recursion and recursion nature. It is specified for the purposes of this consideration in the following link: »... regardless of the form - the material thing, myth, image, concept, lexeme, category, fetish, language, man, the whole Universe, etc., may be adopted as the basic condition of the creation, which has already contained its future image and deployment script (archetype) according to the law of further events. The archetype and the mechanism of the URRN (the unity of recursion and recursion nature) are proposed to be considered as the primary key unit of sense, which ontologically has two essential properties: to repeat itself and to repeat itself not completely, but not to be complete (that is, not identical to the primary key unit of sense)» (Sivers, 2016, p. 11). So, there is no point in the hope of full emulation in the process of artificial intelligence development. We can get only the victim. There are the following steps of the victim:

- the consciousness in the classical context, which can be represented as the ability to reflect;
- the development of such an idea means that the copying takes place, whereas it not absolute and based on the different fundamentals;
- the fact of the second copying means the difference between the two variants (copies) and outlines the possibility of introducing the concept of the «victim»;
- the intervention of the victim as a living condition means the possibility of its loss as a value as a result of the copying process as well as its unnecessary as simultaneous loss and its maintenance;
- the conscious nets copying is the loss of the information that includes value, whereas the new value creates intent or only be «attracted» (in the traditions of the Phenomenology) by the future;
- the new value only «burdens» the form and the future way of value existence, but its victim is some or somewhat different, unknown carriers of the existing form of value;
- the loss of life as the first way of copying is the interruption of the graduality. The emergence of a new copying method (emulation or imitation) means the implementation of the function of being a victim. However, the values do not become victims and sacrifice their purpose. They sacrifice themselves in order to achieve an understanding of the transition to it. This is the visible way of existence of the converted value.

The scientific novelty of the article is in the analysis of axiological aspects in the relationship between the man and the artificial intelligence in the context of the futurist conceptions

of the beginning of the XXI century. For the first time, the issue of the victim is outlined as the existential concept of human technological development.

Conclusions. The cognition is a destructive process and a poison itself. In our opinion, it concerns only the man. This issue is open to the processes that accompany the emergence and formation of artificial intelligence. Its origins are in the word evolution. At this stage, the world is open to man only externally, because we as its part cannot be both a part of the system and its substructure (K. Gцdel). This means that the person remains unknown to himself. In the attempts to destroy this state of affairs, we transfer our attention to the external world and destroy it so that it collapses with us. So, we become the creators and objects of the second type of victim. Thus, a person is faced with the choice to change nothing or complete the destruction of the existing one. In our formulation, the prospect of studying this topic is the ethical-axiological and ontological analysis of the category of «love» in the context of the problems of the development of artificial intelligence and in the approaches, highlighted in the article, to understand the concept of the victim.

Список використаних джерел

- Андрос, Є. І. (2010). *Интеллект у структурі людського буття*. Київ: Стилос.
- Бостром, Н. (2016). *«Искусственный интеллект». Этапы. Угрозы. Стратегии. Книга о будущем искусственного интеллекта и его опасностях*. Москва: Манн, Иванов и Фербер. Взято из https://elementy.ru/bookclub/chapters/433044/Iskusstvennyu_intelekt_Glava_iz_knigi (15.04.2019)
- Брэдшо, Т. (2015). *Известные ученые и инвесторы предупредили об угрозах искусственного интеллекта*. Взято из <https://www.vedomosti.ru/technology/articles/2015/01/13/ugrozy-iskusstvennogo-razuma> (23.05.2019).
- Гаспарян, Д. Э. (2017). Тайнство естественной семантики: трансцендентальное измерение смысла и проблема искусственного интеллекта. *Вопросы философии*, 4, 81–94.
- Глик, Дж. (2013). *Информация. История. Теория. Поток*. Москва: АСТ, Corpus.
- Докинз, Р. Эгоистичный ген. Взято из <https://bit.ly/2ZAYLNF> (15.04.2019)
- Сіверс, В. (2016). Проблема «третьої людини» у Аристотеля в аспекті імплементації принципу рекурсивності. *Культура і сучасність: альманах* (с. 8–15). Київ: Міленіум.
- Тьюринг, А. М. (2003). Вычислительные машины и разум. В Д. Хофштадер, Д. Деннет (Ред.), *Глаз разума* (с. 47–59). Самара: Бахрах-М.
- Уайтхед, А. (1990). *Избранные работы*. Москва: Прогресс.
- Хель, И. (2019). *Прогнозы Рэя Курцвейла на ближайшие 25 лет*. Взято из <https://hi-news.ru/technology/prognozy-reya-kurcvejla-na-blizhajshie-25-let.html> (24.03.2019)

References

- Andros, Ye. I. (2010). *Intelekt u strukturi liudskoho buttia* [Intelligence in the Structure of Human Being]. Kyiv: Stilos. (in Ukrainian)
- Bostrom, N. (2016). *«Iskusstvennyy intellekt»: Etapy. Ugrozy. Strategii*. [Artificial Intelligence: Paths, Dangers, Strategies]. Moscow: Mann, Ivanov and Ferber. Retrieved from <https://bit.ly/3fEG5lZ>. (in Russian)
- Bradshow, T. (2015). *Izvestnyye uchenyye i investory predupredili ob ugrozakh iskusstvennogo intellekta* [Famous Scientists and Researchers Warned of the Threats of the Artificial Intelligence]. Retrieved from <https://bit.ly/392Sg9G>. (in Russian)
- Dawkins, R. (1993). *Egoistichnyy gen* [The Selfish Gene]. Retrieved from <https://bit.ly/2ZAYLNF>. (in Russian)
- Gasparyan, D. E. (2017). Tainstvo yestestvennoy semantiki: transtsendentalnoye izmereniye smysla i problema iskusstvennogo intellekta [The Sacrament of Natural Semantics: Transcendental Measurement of Meaning and the Problem of Artificial Intelligence]. *Voprosy filosofii*, 4, 81–94. Retrieved from <https://bit.ly/2OANB5u>. (in Russian).

Glick, J. (2013). *Informatsiya. Istoriya. Teoriya. Potok* [Information. History. Theory. Flow]. Moscow: AST, Corpus. (in Russian)

Hel, I. (2015). *Prognozy Reya Kurtsweyla na blizhayshiye 25 let* [The Predictions of Ray Kurzweil for the Next 25 Years]. Retrieved from <https://bit.ly/3fJInjS>. (in Russian)

Sivers, V. (2016). Problema «tretioi liudyny» u Arystotelia v aspekti implementatsii pryntsypu rekursyvnosti [The Problem of the Third Person in Aristotle in the Aspect of the Implementation of the Principle of Recursive Nature]. *Kultura i suchasnist* (pp. 8–15). Kyiv: Millenium. (in Ukrainian)

Turing, A. (2003). *Vychislitelnyye mashiny i razum* [Computing Machinery and Intelligence]. In Hofstader, D., & Denet, D. (Ed.), *Glaz razuma* [Eye of the Mind]. Samara: Bakhrakh-M. (in Russian)

Whitehead, A. (1990). *Izbrannyye raboty* [Selected Works]. Moscow: Progress. (in Russian)