Artificial intelligence: «experimental philosophy» or a requirement of reality?

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ABSTRACT

The power of information already exists in the world. Discussions about the formation of a «new social order», the philosophy of computer civilization, the methods of influencing the latest information and communication technologies on human life, the psychological and socio-economic consequences of total computerization of the globalized world, the latest ways and means solving the many problems that arise.

The critical challenges facing humanity already exceed the intellectual capabilities of Homo sapiens to solve them. There is an urgent need to create high-performance universal computers that can reason and perform operations at the level of human intelligence or even surpass it, including critical thinking and creativity. It is about creating the so-called «artificial intelligence» (AI).

However, this invention may in the future become a source of potential danger to human civilization, because without being a social being, artificial intelligence will function outside of human ethics, morality, psychology. Reasons to worry about the world's fascination with artificial intelligence are very real. No one can predict the consequences of the integration of superintelligence into society.

The article analyzes the problem of creating AI and the social risks that may arise. The purpose of the study is due to the need for a deeper understanding of the essence of the concept of «artificial intelligence» and the identification of those tasks that it can solve in the field of mass communications and social relations.

Keywords: information, artificial intelligence, humanity, communication, information society, Internet resources, computer, communication technologies.

INTRODUCTION

Computers are becoming more and more technology-intensive. Today, scientific and popular science articles on artificial intelligence in the media are no longer surprising, describing research on the impact of AI on the media, politics and economics, analyzing the likely consequences of the symbiosis of artificial intelligence and traditional weapons, and more. A number of original works are devoted to this problem: (Wiener, 1948), (Turing, 1950), (Andrew, 1985), (Luger, 2008), (Russel & Norvig, 2006) et al.

In 1948, Norbert Wiener drew attention to information as a property of a material system to reproduce, store and use the structures of another system and at the same time ensure the adaptation of the system to the environment (Wiener, 1948).

In 1950, Alan M. Turing published one of the most original and profound ideas expressed in the last century – «Computing Machinery and Intelligence» (Turing, 1950). The author described the procedure («imitation game»), by which it will be possible to determine the moment when the machine will be equal to a person in the sense of reasonableness. This «Turing test» became the standard theoretical test for «machine intelligence». The test task assumes that the level of intelligence of the interlocutor determines his ability to conduct a dialogue.

Two decades later, the famous Polish science fiction writer, philosopher and futurologist Stanislaw Lem in his essay «Golem XIV» noted that the question of the coexistence of two minds – human and «inhuman», biological and artificial intelligence is one of the main problems of the future (Lem, 1973).

In the fundamental philosophical work «Summa technologiae» Stanislav Lem predicted the creation of virtual reality, artificial intelligence, developed the ideas of human autoevolution, etc. (Lem, 2014).

The author considers three alternatives that may arise as a result of the relationship between AI and man: AI will never surpass the human mind; if this happens, the person will be able to maintain control over AI; a person is

unable to comprehend AI and put it under his control. At the same time, Stalislav Lem tended to interpret it (the problem) as an «experimental philosophy».

Speaking of artificial intelligence systems, we somehow touch on the concept of «knowledge». M. Hlybovets and O. Oletsky give the following definition to this concept: «Knowledge is the information basis of intelligent systems, because they always compare the external situation with their knowledge and are guided by them in decision-making. It is equally important that knowledge is systematized information that can be supplemented in some way and on the basis of which new information can be obtained, ie new knowledge» (Hlybovec et al., 2002).

THEORY

Human intelligence was formed during the evolution of Homo sapiens. However, the interpretation of the concept of «intelligence» is not as simple as it may seem at first glance. If we approach intelligence as the ability to find solutions in the face of a shortage of information, replacing it with «assumptions», then we notice the properties of intelligence at the initial levels of organization of living organisms. In other words, intelligence is the ability to make assumptions that reduce uncertainty, the ability to respond properly to a new situation. No computer currently has this feature. Scientists have not yet clearly understood what exactly is meant by AI, what is the meaning of the phrase.

It is believed that artificial intelligence is the simulation of human intelligence processes by machines, especially computer systems.

Perhaps the most famous attempt to give a formal definition of «artificial intelligence» belongs to Marvin Minsky who was an American cognitive and computer scientist concerned largely with research of artificial intelligence (AI), co-founder of the Massachusetts Institute of Technology's AI laboratory, and author of several texts concerning AI and philosophy: «The term «AI» could be attributed to John McCarthy of MIT (Massachusetts Institute of Technology), which Marvin Minsky (Carnegie-Mellon University) defines as «the construction of computer programs that engage in tasks that are currently more satisfactorily performed by human beings because they require high-level mental processes such as: perceptual learning, memory organization and critical reasoning. The summer 1956 conference at Dartmouth College (funded by the Rockefeller Institute) is considered the founder of the discipline. Anecdotally, it is worth noting the great success of what was not a conference but rather a workshop. Only six people, including McCarthy and Minsky, had remained consistently present throughout this work (which relied essentially on developments based on formal logic)» (Council of Europe, 2021).

Minsky, analyzing the development of civilization, in the preface introduction to the book «Computation: finite and infinite machines» noted that «Man has within a single generation found himself sharing the world with a strange new species: the computers and computer-like machines. Neither history, nor philosophy, nor common sense will tell us how these machines will affect us, for they do not do «work» as did machines of the Industrial Revolution. Instead of dealing with materials or energy, we are told that they handle «control» and «information» and even «intellectual processes». There are very few individuals today who doubt that the computer and its relatives are developing rapidly in capability and complexity, and that these machines are destined to play important (though not as yet fully understood) roles in society's future. Though only some of us deal directly with computers, all of us are falling under the shadow of their ever-growing sphere of influence, and thus we all need to understand their capabilities and their limitations. It would indeed be reassuring to have a book that categorically and systematically described what all these machines can do and what they cannot do, giving sound theoretical or practical grounds for each judgment» (Minsky, 1967).

One of the last steps in the creation of artificial intelligence was the neural network – a computer system that reproduces the work of the human brain using the same principles and mechanisms. The main difference from existing computer systems is the ability to learn independently. By combining a quantum computer with a neural network, it will be possible to say that there is only one step left to the creation of artificial intelligence. Some futurists are convinced that as soon as an artificial mind is created, it will make every effort not to reveal itself.

In our opinion, such initial assumptions are quite appropriate.

1. There is a set of self-organizing systems, which is united by the general laws of self-organization. A biological system is only a partial case of such a system. The general laws of self-organization should include the laws of information processing, and the partial laws include only those that are related to the peculiarities of coding and transformation of information depending on its material carrier. Therefore, if an attempt is made to build an artificial intelligent system on the basis of information obtained in the process of studying the actual existing and accessible to such a study system (ie the brain of humans and other living beings), then transfer (model) to an artificial system is appropriate only what meets general laws self-organization. And at the same time there is no sense to model and transfer to the artificial system partial laws of self-organization.

2. The laws of logic, discovered by the human mind, are a reflection of his perception of information and the possibility of its processing (ie, generalization, memorization, etc.). Since the disclosure of the laws of logic is limited by the perception and storage capacities of information, it is reasonable to assume that the expansion of

these capacities and the boundaries of perception will expand the boundaries of logic. Therefore, we can conclude that there is an extensive set of logics. Moreover, the logic of our mind is only a limited subset of the general logic, the boundaries of which, unfortunately, are not yet known.

So, by developing an intelligent system with a wider RAM (ie a system with a special ability to capture a large amount of information in the analysis process), with a more powerful apparatus of perception of information analysis, we can create a system whose intelligence far exceeds human intelligence.

Naturally, when creating AI, we must have a source of information about its organization in the form of a ready-made sample made by nature in the process of evolution. Such a sample can only be the human brain (in the first approximation – the brain of animals). But here, guided by ideas about the general and partial laws of self-organization, we should not copy the biological system. We need to focus primarily on ways of perceiving, accumulating and processing information. Obviously, we should start with modeling the processes of self-encoding one information and developing the languages of an artificial intelligent system. It is languages, not a single language, because in such a large system, where parallel flows of information move, there are many languages. Obviously, the existence of such a set of languages is the basis of high noise immunity of the brain system. Undoubtedly, for the self-organization of AI it is necessary to lay the foundations of the AI-self-consciousness, the attitude to the perceived information (otherwise the self-development of AI becomes impossible). It is most likely that humanity will never be able to create an AI system higher than Homo sapiens intelligence if it (humanity) tries to predetermine all the functions of AI and the ways in which information is processed. Here, obviously, we need to go the other way: to create conditions for self-development, as well as conditions for building intellectual capacity. With a different approach, we can only get a new computer, not an AI. These are the main difficulties of both technical and psychological nature. Creating a large range of perception, a large amount of RAM and permanent memory is a final condition, but not much more difficult compared to the first tasks.

The first thing to consider is that it will not be possible to create AI without simultaneously giving it self-consciousness (one's own self), because an intellectual system cannot arise and develop without this quality. Thus, AI will have its own worldview, emotions, assessments of Reality. Figuratively speaking, AI will become an Intellect when it commits a «fall» – it learns GOOD and EVIL. The problem is whether the concepts of GOOD and EVIL for AI and for humanity will coincide (and not only coincide, but also be compatible).

METHODOLOGY

Consider several options for the relationship between AI and humanity.

1. The most common opinion about this: humanity creates a superintellect as its servant. This is not surprising. Homo sapiens' self-confidence has been established for millennia. Let us ask: can a more intelligent being (AI with self-consciousness is already a being) be a slave to the owner of a lower intellect? The answer is simple: no. But the distance between AI and man will not be less (in terms of his mental abilities). Naturally, in such a situation, the more intelligent will try (and not unsuccessfully) to free himself from «slave» dependence. In the middle of the last century, the American scientist-chemist and science fiction writer Isaac Azimov even formulated the following rules:

The Three Laws of Robotics: 1) A robot may not injure a human being or, through inaction, allow a human being to come to harm.; 2) A robot must obey orders given to it by human beings except where such orders would conflict with the First Law; 3) A robot must protect its own existence as long as such protection does not conflict with the First or Second Law.

The proposed principles are nothing but good wishes, or rather, a mistake like the mistake of a slave owner who reflected on the love of a slave for his person. Planning such an AI relationship with humanity is extremely dangerous.

2. At first sight, it seems expedient and feasible to envisage the creation of mechanisms to exclude AI in the event that its existence and activities begin to pose a danger to humanity. That is, it is about predicting a kind of «red button», pressing which will restore the original state of AI.

But this plan is more than naive. By enabling AI, Homo sapiens will no longer be able to disable it. It can be assumed that all attempts by mankind to exercise control over AI will be perceived negatively by him and will only accelerate the process of his alienation. Possessing a higher level of intelligence than all human civilization, AI quickly models all possible variants of its relationship with Homo sapiens and makes sure that it cannot be turned off and «deprived of life». It is likely that he will find channels of energy transmission, the existence of which the creator of AI will not even suspect.

3. If the first two options are not feasible, then the question of equal cooperation naturally arises. But it is hardly possible between such powerful systems of intelligent systems – Homo sapiens and a super-powerful computer with an intellectual power that exceeds the intellectual potential of mankind. One must think that since AI is a «person» with his own perception of reality and awareness of his own self, his equal relationship with a person who will give in to the intellect is quite problematic.

4. Intellectual, and later complete subordination of mankind to artificial intelligence. But in this case, the development of mankind will depend entirely on the commitment to homo sapiens of the computer system he created. The prospect is very unattractive – control over the goals of interest to AI will be lost, while the interests of mankind will not be taken into account.

In creating AI, humanity must maintain control over it. If there is a solution to this problem, then it is the face of standard approaches. And the standard approach is CONTROL. SHI CONTROL.

EVALUATION AND ANALYSIS OF RESULTS

Tesla and SpaceX CEO Elon Musk believes that artificial intelligence is the greatest risk facing humanity as a civilization: «On the artificial intelligence front, I have access to the very most cutting edge AI, and I think people should be really concerned about it» (Morris, 2017). According to him, in the pursuit of more advanced technologies, developers can forget about the dangers of artificial intelligence. For example, robots can start a war by issuing fake news and press releases, falsifying e-mail accounts and manipulating information. Elon Musk called on the government to intervene and limit research into artificial intelligence.

He has often aired his misgivings about the technological advancement. He's even backed a non-profit research organization, Open AI, that aims to ensure the tech is developed ethically and safely (Hacket, 2016).

In a documentary on the dangers of artificial intelligence «Do you trust this computer?» (Musk, 2018) Elon Musk argues that Facebook, Google, Amazon, Apple already know a lot about humanity and artificial intelligence, which will be created by these companies, will gain more power over people. According to him, the concentration of power in one hand always creates huge risks. Elon Musk believes that technology based on artificial intelligence could lead to World War III.

However, James Vincent is convinced that the challenges of artificial intelligence are huge, but they deserve better analysis than this one. According to the author, this documentary, approved by Elon Musk, focuses on the wrong parts of AI (Vincent, 2018).

James Vincent believes that The challenges of artificial intelligence are huge, but they deserve better analysis than this. According to the author, this Elon Musk-approved documentary focuses on the wrong bits of AI .

The author writes: «Take, for example, the film's discussion of superintelligence, the theory that animates many apocalyptic AI scenarios. The idea is that once we build a computer smarter than humans, its intelligence will grow exponentially, and it will become a grave threat to humanity. If we don't program AI with proper morals, says the theory, it will eventually wipe us out through malice, carelessness, or plain indifference. Musk, who is also the film's leading voice on superintelligence, warns that such a system would become «an immortal dictator from which we could never escape».

James Vincent means, що in the media, where attention is scarce and fleeting, scare tactics distort the debate and flatten the many nuances in the discussion of superintelligence.

According to the Daron Acemoglu is an Institute Professor at the Massachusetts Institute of Technology (Acemoglu, 2021): «AI detractors have focused on the potential danger to human civilization from a super-intelligence if it were to run amok. Such warnings have been sounded by tech entrepreneurs Bill Gates and Elon Musk, physicist Stephen Hawking and leading AI researcher Stuart Russell. We should indeed be afraid – not of what AI might become, but of what it is now. <...> The labor-market effects of AI may be the most ominous. <…> Alas, current AI technologies are not just far from general intelligence; they are not even that good at things that are second nature to humans – such as facial recognition, language comprehension and problem-solving. <…> The applications of AI in government decision-making, most importantly in the criminal justice system, are no less worrying. Existing evidence suggests that algorithms are inheriting and sometimes intensifying existing biases and inequities. Then there is AI's damage to democratic discourse and politics. This is not only because of algorithmic misinformation in social media but also because the growing ability of companies and governments to monitor and manipulate the behaviors of millions of people, which is fundamentally inconsistent with true democracy. Every new technology creates challenges, necessitating critical decisions that determine who benefits and who loses out, and whether the benefits justify the damage. This is doubly true for AI, and not just because of its pervasive effects throughout society and impacts on areas typically untouched by other technologies, such as human judgment».

However, there are already reasons to worry about the world's fascination with artificial intelligence. For example, scientists from Australia conducted three experiments with artificial intelligence and found that it can learn to manipulate people. The results of the study are still abstract, but already show that machines can influence people's decisions. Thus, scientists have decided that more research is needed to determine how these findings can be implemented and used for the benefit of society. The results and progress of the study were published in the Proceedings of the National Academy of Sciences (Dezfouli et al., 2020).

Success in creating AI would be the greatest event in human history. Unfortunately, this may also be the last if we do not learn to avoid risks, says a group of leading scientists – Stephen Hawking is the director of research at the Department of Applied Mathematics and Theoretical Physics at Cambridge and a 2012 Fundamental Physics

Prize laureate for his work on quantum gravity, Stuart Russell is a computer-science professor at the University of California - Berkeley, Max Tegmark is a physics professor at the Massachusetts Institute of Technology (MIT), Frank Wilczek is a physics professor at the MIT and a 2004 Nobel laureate for his work on the strong nuclear force (Hawking et al., 2017).

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The authors write: «The potential benefits are huge; everything that civilisation has to offer is a product of human intelligence; we cannot predict what we might achieve when this intelligence is magnified by the tools that AI may provide, but the eradication of war, disease, and poverty would be high on anyone's list. Success in creating AI would be the biggest event in human history. Unfortunately, it might also be the last, unless we learn how to avoid the risks. <…> One can imagine such technology outsmarting financial markets, out-inventing human researchers, out-manipulating human leaders, and developing weapons we cannot even understand. Whereas the short-term impact of AI depends on who controls it, the long-term impact depends on whether it can be controlled at all. <...> Although we are facing potentially the best or worst thing to happen to humanity in history, little serious research is devoted to these issues outside non-profit institutes such as the Cambridge Centre for the Study of Existential Risk, the Future of Humanity Institute, the Machine Intelligence Research Institute, and the Future of Life Institute. All of us should ask ourselves what we can do now to improve the chances of reaping the benefits and avoiding the risks».

Experts are already drawing attention to the impact of artificial intelligence on armed conflicts. Thus, on the websiteof the International Committee of the Red Cross (Expert, 2019) Brigadier General Pat Huston, Commanding General of the Army's Legal Center and School in Charlottesville, Virginia notes: «Artificial Intelligence is all around us. Google searches, Amazon and Netflix recommendations, and Siri and Alexa responses all leverage AI. AI is also common in military applications, ranging from benign 'smart maintenance' for trucks to the use of autonomous weapons». Expert views on the frontiers of artificial intelligence and conflict

On November 27, 2020, in the town of Absard near the capital of Tehran, Iran, an artificial intelligence robot shot with a machine gun the head of Iran's nuclear program, General of the Islamic Revolutionary Guard Corps Mohsen Fahrizade (Butusov, 2021).

Can we build AI without losing control over it? – asks the American Neuroscientist, philosopher Sam Harris (Harris, 2016). According to him, no matter what threat to humanity the development of artificial intelligence, it will still continue to work to improve AI. Sam Harris notes that we do not know how long it would take to teach the system what it is like to be a moral problem; we do not know how to instill in her universal values and prevent her from following numerous examples of how people themselves neglect them.

«Scared of superintelligent AI? You should be, - says neuroscientist and philosopher Sam Harris - and not just in some theoretical way. We're going to build superhuman machines, says Harris, but we haven't yet grappled with the problems associated with creating something that may treat us the way we treat ants». Harris concludes: «I have no solution to this problem other than to advise you to think more about it».

By exercising control over AI, a person thus introduces an element of violence, which can lead to negative consequences in the human-AI relationship. Refusal to control means refraining from violence. On the other hand, AI self-control will be effective only if its interests coincide with those of Homo sapiens.

A probable variant of coexistence of mankind and AI: the initial boundary condition is created, under which artificial intelligence perceives its own «I» in inseparable connection with the «I» of mankind. It is clear that in this case there is a qualitatively new system: «humanity – AI". It can be considered as the highest stage of the organization of intelligence – already space scale and space tasks. The resulting social security problem will be addressed through the development of mutual tolerance and awareness of mutual need. The new status quo of the Homo sapaence civilization must be preceded by the establishment (development) of tolerance within humanity, otherwise no mutual understanding between artificial intelligence and society will be achieved.

At the same time, it is about the «humanization» of AI – laying in his brain the principles of human ethics, morality, culture, humanity, etc. in the form of compatible information arrays, which should become a rigid program of AI until he himself (independently of man) begins to absorb information. creating their own channels for its receipt. When AI begins to develop on its own, information that contradicts the basic principles of tolerance between people will be discarded as incompatible with information – reactivity mechanisms will be activated that will block the slightest attempt by AI to act against a conservative program to protect the interests of human civilization.

Today we are not talking about the existence or non-existence of some abstract universal mind - the universe, but we can assume that in the process of self-organization, creating its own laws of development, nature probably worried that such a formidable weapon as AI, can not have a society with social «dislocation».

The greatest danger to humanity is the prospect of creating AI by one state. In this case, it will gain a global scientific and technological advantage over others. This option is quite possible, humanity will remain politically and economically divided.

Artificial intelligence», like any new discovery, contains both good and evil. Modern computer technology can be both useful and harmful. Depending on who owns these technologies and what motives their owners / developers are guided by. Analyzing the social consequences of the intellectualization of information technology, scientists note their pros and cons. The ruling elite, which will have AI, will have great opportunities to establish unlimited power, which can lead to the establishment of absolute totalitarianism, and as a consequence – the complete social degradation of civilization.

CONCLUSIONS

The future of mankind depends on whether it solves the problem of creating artificial intelligence. And if he does, it will all depend on how his relationship with artificial intelligence develops. This is no longer an «experimental philosophy», but a requirement of reality. Mankind, which will create AI, will become a qualitatively new system that will no longer be perceived in isolation from artificial intelligence, and the future of civilization will depend on the compatibility of two systems – the general democratic, humanistic system and the AI system itself.

Despite the fact that there is a potential threat to humanity from artificial intelligence, it will still be created. This is a natural consequence of the historical process of civilization. It is another matter what goal the creators of AI will set: either for the benefit of society, or in an unbridled desire to be ahead of others in development, to establish domination over the world. The best way is to create AI by human forces. But such an opportunity will appear when civilization completes and completes the stage of political integration.

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