KAPITEL 11 / *CHAPTER 11* [13]
ARTIFICIAL INTELLIGENCE: THE FUTURE OF HUMANITY IN SEARCH OF THE MEANING OF LIFE

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Introduction

The relevance of addressing this topic is explained by the fact that today we live in the era of the fourth industrial revolution, where fundamental changes in the world of science and technology are occurring at high speed. It is undeniable that current technologies have a significant impact on the future of humanity. Modern society cannot imagine its life without a continuous flow of information, high speed of interaction and automation of many routine processes: checks, contact plastic cards, contactless cards, mobile payment devices, etc. "Learning machines", "Algorithms", "Deep neural networks", "Robotics", and "Automation" are just some of the terms used to describe the seemingly endless stream of new smart tools, applications and gadgets that are proliferating around the world at a dynamic pace. It appears that the main driving force behind these new technologies Artificial Intelligence or AI as it is commonly called, is already changing almost every aspect of our lives. This covers everything from the way we work, travel and shop, to the ways we receive news and information, and the smart gadgets in our homes. It also has a very significant impact on our human relationships, how we communicate and how we express ourselves.

The American writer, editor-in-chief and founder of Wired magazine Kevin Kelly notes in his famous essay “Call Them Artificial Aliens” (2015) that in the future “we will create “artificial aliens.” By interacting with them, we will receive the same benefits and face the same problems that we expect from contact with intelligent aliens, and the abbreviation “AI” can also be deciphered as “alien intelligence” [5, p. 197]. It should be noted that throughout the history of mankind, the nature of thinking, the secrets of the mind, as well as the possibility of creating artificial beings have caused concern among scientists, philosophers, artists, science fiction writers, and etc.

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Mythology, fine art, music and literature are full of images and stories associated with automatons - mobile mechanical devices created to imitate living beings. The author of the work is focused on briefly revealing what is happening in the world of technology, but at the same time prefers to focus on the positive status of "AI" in all spheres of life, of course, not forgetting the problems created by it.

11.1. Contemporary understanding of Artificial Intelligence

In its modern sense, the term "artificial intelligence" was first used by John McCarthy in 1956, and artificial intelligence was defined as "the science and technology of making machines intelligent." In general, the emergence of modern artificial intelligence coincides with the years 1943-1956. During these years many scientists presented their works, namely McCulloch (1898-1969) and Pitts (1923-1969) "A Logical Calculus of the Ideas Immanent in Nervous Activity" in 1943, A.Turing "Computing machine and intelligence" and K.Shannon (1916-2001) "Programming a Computer for Playing Chess" in 1950 [1, p. 63].

In 1958, the American neurophysiologist Frank Rosenblatt developed the first neural network - a mathematical model of the perception of information by the human brain. There are also such terms as "strong" and "weak" Artificial Intelligence. The term "strong artificial intelligence" was coined by the American philosopher John Searle; such a program is not just a model of the mind; it is the mind itself, in the same sense in which the human mind is the mind. "Weak artificial intelligence" is considered only as a tool that allows solving certain problems that do not require the full range of human cognitive abilities.

Today, the possibilities for applying AI seem limitless, and billions of dollars are invested annually in the development of this area. AI technologies were used, for example, to decipher documents from the Vatican Secret Archives: scientists tried to parse complex handwritten texts from this huge historical collection. AI can also help predict earthquakes, interpret medical images, recognize speech and predict a patient's

time of death based on information from their electronic medical record. With the help of AI, people come up with jokes, games and puzzles, formulate mathematical theorems, create patentable inventions, develop innovative antenna designs, new shades of paint, perfume aromas and much more. Already today, many of us talk to our smartphones and other devices, and in the future our relationships with machines will become even closer and more human-like.

"Artificial intelligence, as a scientific field, is a striking example of the integration of various fields of science. Artificial intelligence is a field of free scientific research, formed as a result of achievements in the field of mathematics and logic and based on the knowledge accumulated by mankind about living and inanimate nature. Although artificial intelligence as an established field of scientific knowledge was formed in the middle of the 20th century, it is known that the first attempts in this area were made both in antiquity and in the Middle Ages" [1, p. 5].

Artificial Intelligence…!!! What associations arise in our minds when we think or come across the word Artificial Intelligence? What is meant by these words? Why is humanity worried about the introduction of artificial intelligence into all aspects of life? What awaits humanity in the future? "Will we control the machines or will they control us? Is technology making all of us more equal or exacerbating social inequality and exclusion? What ethical questions do these technologies raise and how should society act to limit their use?" [7, p. 1]. Also, the novel "Frankenstein" raised important questions about the relationship between man and technology: are we creating a monster that we cannot control? Are we losing humanity, compassion, and the ability to empathize and experience emotions? You see how many questions arise when pronouncing and considering this fantastic word.

Today, technology is changing our consciousness and behavior faster than ever before. Each new generation has to deal with an ever-increasing pace of technological transformations occurring in society. Nevertheless, in the history of mankind there are many examples when the disruption of foundations by new technologies was accompanied by severe social upheavals. With the advent of the industrial or machine age, society found itself under the continuous influence of new technologies, be it a

steam engine or a selfie stick, etc. Today, humanity measures changes not in decades, but in months. We are people, and our attitude to change is ambiguous. As a species, we strive to develop, expand our capabilities, evolve, create resources, explore the world, make discoveries, accumulate knowledge and improve our lives.

When talking about the future of humanity, it is very important to emphasize in bold that AI has become one of the hottest topics in the world of science and technology. Some people see it as a solution to many of the problems facing humanity, while others fear that AI could have catastrophic consequences. One of the most obvious impacts of AI on the future of humanity is its impact on the labor market. Some professions have become automated, leading to job losses. Swedish researchers have said that AI will replace humans in about 30 popular professions. However, when changes affect our work personally, it will throw us out of our usual rut. If we lose out because a more efficient manufacturing process or an advanced computer algorithm makes our position redundant, we are unlikely to be happy about it. Perhaps we will even go to a demonstration demanding a ban or restriction of such technology. Anything to keep an outdated business model competitive in a world where traditional approaches no longer have a place. But, despite the negative aspects, at the same time, AI creates new opportunities for work in its field. Artificial Intelligence is already actively used in scientific research. For example, AI systems can analyze large amounts of data, identify hidden patterns, and make predictions. This could significantly speed up the research process and lead to new discoveries in various fields, from medicine to space exploration. Artificial intelligence can also have a big impact on healthcare. AI systems can help diagnose diseases, determine the effectiveness of drugs and predict treatment outcomes. Moreover, it could provide impetus for the development of new drugs and therapies. For example, AI systems can help develop personalized treatments based on a patient's genetic data and, at the same time, can significantly change the field of education, and also play a leading role in creating more effective learning systems that adapt to the individual needs of each student. Such systems can contribute to the development of better skills of students and will allow them to achieve better learning results. However, some researchers believe that this advanced system could

become a threat to human security and freedom. In addition, AI may exacerbate the problem of inequality in society. Such systems may be designed with certain biases in mind, which can lead to discrimination and inequality.

Artificial Intelligence changes the nature of management, as systems are better than humans at performing everyday tasks such as driving, healthcare and basic services. While many fear that super-intelligent robots or artificial intelligence will take over the world, it is much more likely that in the next 30 years, these systems will be specialized, designed for specific tasks and not necessarily equivalent to human intelligence. "Hereditary diseases such as Parkinsonism, Alzheimer's disease, breast cancer, anemia, and color blindness will be eliminated in the next 20 years. Artificial intelligence-assisted diagnostics and other technologies will radically change the way we think about heart disease and other preventable diseases. Algorithms and sensors will diagnose illnesses more reliably than doctors. The triumph of inventions and innovations, robotization, the Internet of things, neural networks and the development of Artificial Intelligence make us wonder: what will happen to us?" [4, p.73-75]

The concept of Artificial Intelligence has been examined in many ways in the works of many researchers. In particular, today there is no clear definition of this phenomenon. Based on everything, there are many different definitions of artificial intelligence. There is still no universal, internationally accepted definition of AI. Therefore, we will simply limit ourselves to presenting a number of well-known definitions and statements about intelligence that will allow us to imagine the "volume" of this fantastic concept. These definitions can be summarized as follows: "Artificial intelligence is a system of scientific research carried out in the field of creating technical systems that work with human logic. Artificial Intelligence is a special branch of computer science, an area of research based on computer science, psychology, philosophy, linguistics, economics, optimization, logical theory and several other areas. Artificial Intelligence is aimed at creating a technical device capable of thinking like a person and making decisions like a person" [1, p. 61].

"Artificial Intelligence started with calendars and abacus," says engineer and author Jeff Krimmel. Artificial Intelligence is any technology that helps a person

perform a mental task. In this sense, the calendar is also Artificial Intelligence: it complements or replaces our memory. In the same way, the abacus is Artificial Intelligence: it saves us from having to perform complex arithmetic calculations in our heads." [5, p. 21]. Researchers from the Future of Humanity Institute at Oxford University believe that in 120 years all jobs will be taken over by computers. Scientists have predicted that Artificial Intelligence will surpass human intelligence in 2024. First of all, the computer will be able to better translate from foreign languages. "In principle, Artificial Intelligence includes computer systems and all phenomena associated with processing and obtaining results based on fuzzy and non-specific information, ideas associated with the use of knowledge and its collection, that is, processes called replacing the functions of human intelligence" [2, p. 22].

11.2. The impact of Artificial Intelligence on humanity

Today, the term Artificial Intelligence (AI) often refers to systems designed to learn, solve problems, and interact with people through natural language processing. Such systems are capable of recognizing images, voice, text, making decisions and even learning. One of the most famous examples of Artificial Intelligence is voice-activated smart assistants such as Amazon's Alexa, Apple's Siri, Microsoft's Cortana, etc. For several decades, experts have expressed concern about the possible threats that AI poses to human beings, professions, safety, dignity, privacy and much more. For example, the American scientist and specialist in the field of Artificial Intelligence Joseph Weizenbaum, in his book "The Capabilities of Computing Machines and the Human Mind" (1976), wrote that AI should not be used to replace people in those professions that require human understanding, love, sympathy and care (this applies, for example, to doctors and judges)" [5, p. 147]. D.Weizenbaum believed that although AI can be fairer and more efficient than people, who are sometimes biased and tired at work, you should not rely on it too much, as this will destroy human values and morals. After all, we will gradually begin to feel like insensitive computerized devices. Such

global shifts often provide enormous opportunities for society. They lead to a transformation of the social structure. It is clear that returning to the past is impossible. But one thing that is surprising is the stubborn reluctance of most people to recognize the ongoing technological changes and new trends. But it's not difficult to realize that the real world does not stand still. The more high-tech new products, the higher our inventive potential - and the more mobile even more advanced technologies appear.

A well-known Australian futurist Brett King in his book "The Age of Augmented Reality" notes: "Yes, it is true that people are constantly adapting to technological innovations. But it is also true that in the next two to three decades more changes will befall humanity than in the last thousand years. We will get acquainted with machine intelligence, which is at least as good as human intelligence. We'll adopt self-driving cars and see the first humans land on Mars. And most importantly, a technology will finally be created that will ensure the sustainable maintenance of human life in conditions of energy abundance and freedom of creativity." [4, p. 13].

If we look at history, we can find several fantastic ideas about Artificial Intelligence at different times. The famous science fiction scientist Isaac Asimov, in his work "I, Robot," "Round Dance," put forward certain ideas about Artificial Intelligence and at the same time formulated the basic principles associated with the creation and functioning of robots. In the collection of short stories "I, Robot", which brought the writer worldwide fame, Asimov dispels widespread fears associated with the creation of artificial intelligent beings. In his story, which tells about the relationship between a smart robot and people, he formulated the famous three laws of robotics: 1) a robot cannot harm a person or, through inaction, allow a person to be harmed; 2) a robot must obey all orders given by a person, except in cases where these orders contradict the first law; 3) a robot must take care of its safety to the extent that this does not contradict the first or second law. Asimov's laws have had a great influence not only on science fiction writers but also on experts in the field of AI. The ideas put forward by A.Azimov are still relevant today. After the 40s of the last century, a real scientific, theoretical and technological platform began to form for the implementation of these fantastic ideas. Thus, the rapid development of science and

technology led to the emergence of the computer. Scientists already have this idea that if a computer performs calculations and logical operations, then can this device think, perceive and make decisions? Such considerations created the impetus for the emergence of Artificial Intelligence. Here it is appropriate to recall the famous scientist Alan Turing. Turing's paper "Computing Machines and Intelligence" was an important contribution to the theory of Artificial Intelligence.

The American scientist in the field of Artificial Intelligence Marvin Lee Minsky, after becoming acquainted with the laws of robotics, noted that he "never stopped thinking about how consciousness could work. Someday we will create thinking robots. But how and what will they think about? Logic is enough to achieve some goals, but it is not enough for others. How to create robots with common sense, intuition, consciousness and emotions? And how does our brain cope with all this?" [5, p.85].

The British and Canadian scientist Geoffrey Hinton, known as the "godfather of AI," shared his concerns about the uncontrolled development of new AI tools and asked in an interview with MIT Technology Review: "I suddenly changed my views on whether they are more intelligent than us. I think they are very close now, and in the future, they will be much smarter than us. How will we survive this? What will smarter-than-human AI systems do? One frightening possibility is that bad actors, groups or entire nations could simply use them to achieve their own goals". Geoffrey Hinton is particularly concerned that AI tools could be trained to rig elections and even start wars. And this may just be the beginning. In addition to all of this, other famous scientists have also put forward fundamental ideas about Artificial Intelligence. The world-famous scientist prof. Lotfi Zadeh also paid attention to the problems of Artificial Intelligence. One of his first scientific works related to the theory of Artificial Intelligence was published in 1950 at Columbia University, USA. While still a student at Columbia University, he put forward not fantastic, but real ideas about the ability of computers to think.

"In any case, our future is robots. This was made clear to me by the transhumanists I spoke with and the future predictions I heard. According to Randall Kuhne, Natasha Vita-Mohr, and Nate Soares, "we will become robots ourselves; our minds will be

loaded into machines far more powerful and efficient than our animal bodies. Or we will live among an increasing number of robots, increasingly putting our work and our lives at their mercy. Or we will become obsolete as technologies, and robots will replace us as a species" [6, p. 123].

It is no coincidence that in modern times when assessing the strategic potential of countries around the world, special attention is paid to the state of development of Artificial Intelligence technologies. Currently, such issues are considered one of the priorities and problems facing developed countries. Thus, the leading countries of the world are already adopting national strategies related to the development of Artificial Intelligence. Currently, work is underway in Azerbaijan to prepare an Artificial Intelligence Strategy, a map is being prepared, comprehensive measures are being implemented in response to the challenges of the IV Industrial Revolution, and targeted scientific research is being conducted. "On the other hand, a "green society" is being formed in our country, and "green transformations" are taken into account in the development of all areas. Currently, the formation of "green thinking" in society, the transition from traditional energy sources to alternative, "green" energy carriers, the modernization and intellectualization of technological infrastructure in our country are among the important priorities of state policy" [8, web].

The current national strategy of Azerbaijan, "Strategy for the socio-economic development of the Republic of Azerbaijan for 2022-2026", approved by President Ilham Aliyev, focuses most of all on the digital technologies, especially Artificial Intelligence technologies. From this position, Azerbaijan is creating smart cities/villages on ancestral lands liberated from Armenian occupation. It is worth noting that most of the modern weapons used by Azerbaijan in the Second Karabakh War are based on Artificial Intelligence technologies. "Azerbaijan ranks 64th in the Global Artificial Intelligence index. According to the data, Azerbaijan is ahead of Georgia (76th place), Armenia (81st) and Iran (72nd) in terms of the level of application of Artificial Intelligence" [9, web].

It must be emphasized that today there are active discussions about the use of autonomous lethal weapons in the future, which will be able to identify and attack

military targets without human intervention. Of course, automatic defense systems already exist, including machines that independently identify and destroy incoming missiles. Military robots have many advantages: they do not get tired and do not experience fear; they are capable of quickly performing maneuvers that are dangerous for living pilots; in theory, they can save soldiers' lives and reduce damage and civilian casualties. You can include a number of rules in the robot's program, for example, a ban on shooting unless it is definitely determined whether the target is an enemy fighter and not a civilian. Curious to what extend independent robots should be? Who will be blamed if a robot accidentally attacks a school, residential premises, kindergarten or clinic, etc. For this reason, in the future, it is necessary to monitor AI so that they do not commit illegal or immoral actions. After all, AI will also likely be capable of carrying out harassment on the Internet: fraud on social networks, fraud related to antivirus protection, fraud related to charity, stock market fraud, etc. “The policy of technological control will cause intense conflict in the coming days. But conflict or not, technology must be tamed if the accelerating surge is to be brought under control. And the accelerating spurt must be brought under control if the shock of the future is to be prevented.” [3, p. 226].

Conclusion

Thus, the author of this work, arguing his point of view on the given issue, believes that the history of AI is a story not only about how we create our future but also about how people will live in conditions of rapid development of intelligence and creative possibilities. The history of the development of Artificial Intelligence is not over, as it is being dynamically improved, significant algorithms are created, and new areas of application are opened. And this system constantly opens up acceptable possibilities for researchers and raises important questions. It should be noted that sometimes the changes seem minor, such as the transition from reading a paper book to reading from a tablet. And this is clear, modern technologies, such as email or

smartphones, radically change everyday life. If we think of the era of augmented reality, Artificial Intelligence and advanced technology as a threat to humanity, then the biggest problem that can be faced is that the generation that is comfortable with all this will take away our choice whether to participate in the technological world or not. For them, it's not a matter of novelty - it's just their way of life. The age of augmented reality is a celebration of the constant change brought about by technology, and those who resist change stand to lose the most. When talking about the future of humanity, we usually focus on innovative technologies and ideas that change our lives. But people are at the center of all transformations. Although some experts with other leading figures in the field of AI development have suggested that increased dependence on Artificial Intelligence could lead to new types of catastrophic errors, AI in the future could provoke one of the nuclear powers to launch a pre-emptive strike against another nation, could also lead to to the extinction of humanity, and in parallel to this in the field of education, Artificial Intelligence can become "the best and the most patient tutor if someone has difficulty making friends: in this regard, a friend in the person of Artificial Intelligence can be an excellent solution for him, etc., but in any case, changes are essential for a person, just as changes are life itself! Regardless of rhesus, all of the above are just assumptions. As they say – we will wait and see!