

ARTIFICIAL INTELLIGENCE AND HUMAN THINKING

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Abstract

This article discusses the emergence, history, stages of development of artificial intelligence, the relationship between natural and artificial intelligence. It also describes the role and importance of artificial intelligence at the current level of development, and its relationship to human spiritual and moral censorship.

Keywords: Artificial intelligence, human intelligence, natural intelligence, computer revolution, information, security, cybernetics, neural systems.

Introduction

The emergence and history of artificial intelligence have become a huge global innovation for humanity. The term "artificial intelligence" appeared after the Second World War, but today the technology and capabilities of "artificial intelligence" have diverged from true intelligence in order to increase the information base, the volume of data, improve simple algorithms, optimize computing power and data storage. The first research in the field of "artificial intelligence", which began in the 50s of the last century, was aimed at solving problems and developing symbolic computing systems. In the 60s, the US Department of Defense was one of the first to use information technologies for technogenic simulation of human mental activity. Their research led to the creation of a number of projects of virtual street maps of state importance in the 1970s, and DARPA specialists were able to create intelligent personal assistants not only for the military, but also for ordinary people in the early years of the 21st century. But this scientific research work served as the basis for the cybernetic and formal logical principles used in modern computers, in particular in algorithmic decision support systems and in intelligent search engines designed to expand human capabilities. They were almost completely ignored by moral and ethical censorship. Therefore, emotional feelings and emotional states do not occur in any process in artificial intelligence products. Garchi sun'iy intellekt ko'pincha ilmiy-fantastik filmlar va intuitiv-romanlarida ilmiy qudratli, dunyo miqyosun'iy intellektda o'z ko'lamiga ega robotlar sifatida tasvirlangan bo'lsa-da, sun'iy intellekt texnologiyasi hozirgi innovatsion rivojlanish bosqichida qo'rqinchli va o'ta aqlli emasliklari namoyon bo'lmoqda. Ammo, sun'iy intellect qancha rivoj topmasin tabiiy inson intellektidan ustun bo'la olmaydi. Ba'zi ijtimoiy soha obyektlarida individual shaxslardan ko'ra foydali mehnat unumdorligiga egaligi bilan ajralib turishi haqiqatdir. Masalan, sun'iy intellektni rivojlantirish iqtisodiyotning barcha sohalarida haqiqiy foyda keltiradi.

EMPIRICAL ANALYSIS

Scientific and technological progress and the computer revolution in the mid-20th century formed a stable field of scientific knowledge about artificial intelligence, but efforts in this direction were also made in ancient and medieval times. Even the ancient Egyptians and Romans are reported in historical sources to have been afraid of gesticulating and prophesying statues.

Of course, this was done with the direct help of the clergy. Because such views would have struck at the social primacy of religion and religious views. In the Middle Ages, the concept of artificial intelligence invested the task of creating a mechanical thinking machine that would surpass it in intelligence and perception, similar to a person. However, religious prejudice hindered the scientific development of the concept of artificial intelligence and artificial intelligence in the development of Islamic and Christian theological philosophy in both the East and the West. Information about the ideas of people of that time about "homunculi" - that is, small artificial people capable of receiving information from the surrounding world - is found in the philosophical and exact sciences of the Middle Ages. Although the appearance of the first computer in 1641 was considered a new stage of thinking for humanity, it created some invisible illusions for the scientific, moral, aesthetic, spiritual and axiological way of thinking. Later, the globalization of the Internet created a real moral tragedy in society.

The development of technology in the 18th century, great achievements in the natural and exact sciences, and interest in discoveries and inventions after the 1750s further increased. In the mid-1750s, the Austrian inventor Friedrich von Knaus, who served at the court of Francis I, created a series of machines that could write very long texts with a pen. Advances in 19th-century mechanics gave a new impetus to the invention of modern artificial intelligence. In the 1930s, the English mathematician Charles Babbage came to the conclusion that a complex numerical calculator, the Analytical Engine, could calculate moves in a chess game. Finally, in 1914, Leonardo Torres Quevedo, director of one of the Spanish technical institutes, created an electromechanical device that could be used by both an ordinary person and a simple chess game. Since the mid-1930s, the problems of creating devices capable of independently solving various complex problems have been discussed. Since the publication of Turing's works, the problem of artificial intelligence has been given close attention in the global scientific community. Alan Turing (1912-1954) was an English mathematician, logician, and cryptographer.

He made a significant contribution to the development of computer science. In 1950, he proposed the Turing test, which tests the consciousness of a computer. Turing managed to break the German secret encryption machine "Enigma" during World War II with his artificial intelligence. In his scientific article "Computing Machinery and Artificial Intelligence", published in the journal "Mind" in October 1950, he proposed a series of experiments in artificial intelligence. According to him, a computer can "think" and "communicate" like humans when interacting with humans, that is, a computer can be taught. This experiment was later called the "Turing test" and tested the level of consciousness of computers with artificial intelligence. As a result of the implementation of the "Turing test", the CAPTCHA (a test that

is currently popular on the Internet, which checks whether people are really human) was invented in artificial intelligence. Turing was one of the first to present a scientific paper proving that it was possible to create a computer that could store programs in its memory. Although he was not involved in the creation of the first ancestors of modern computers, he did create the theory. Turing even developed a computer version of chess. He was also interested in mathematics, biology, and chemistry, and conducted research in these areas.

RESULTS

In 1956, the founders of cybernetics gathered in the USA to discuss the possibilities of implementing the "Artificial Intelligence" project. Among the participants of the conference were McCarthy, Minsky, Shannon, Turing and others. Initially, this concept was devoted to the properties of machines that perform individual human functions, for example, translating from one language to another, recognizing objects, and making optimal decisions.

In our country, the direction of "Artificial Intelligence" appeared with a delay of about 10 years and replaced the cybernetic and bionic boom of the first half of the 60s of the 20th century (a direction in biology and cybernetics that studies the structure and vital activity of organisms in order to create more perfect technical and artificial intelligences or devices).

The most actively developed methods of artificial intelligence are listed below:

- artificial neural networks;
- evolutionary artificial intelligence;
- fuzzy logic and fuzzy set theory artificial intelligence;
- expert systems;
- cellular automation;
- multi-agent systems.

This is the age of nanotechnology. Usually, when people think of robots, they think of assistants who can talk like humans and do all the work for them. But this is a relatively broad concept. In fact, the programs on your mobile device: Google Translate, dictionaries, various games, etc., can also be a clear example of artificial intelligence. Only their scope is smaller and they can only help you in a certain direction. That is, depending on the type of action you want to perform, you use the appropriate program.

Currently, artificial intelligence consists of algorithms and software systems designed to perform various tasks and can perform many of the tasks that the human mind can perform. A new page was opened in the development of artificial intelligence in the 1990s. In 1997, the IBM computer Deep Blue became the first computer in history to defeat world chess champion Garry Kasparov. Another bright example of artificial intelligence is the IBM Watson supercomputer, which, based on its database, answers questions asked in a specific language. Also, programs such as the mobile assistant Secret, which has become a constant companion for many, and the photo processing app Prisma, can be noted as one of the achievements of artificial intelligence. Today, artificial intelligence has become widely popular and covers almost all aspects of our daily lives. For example, residents of the city of Yinchuan in China

do not need bank cards. All processes related to calculations are carried out by artificial intelligence by identifying the human face.

The question arises: are artificial intelligence thinking machines or conscious robots? The issue of automating the thinking process is also inextricably linked to the concept of artificial intelligence. Machine thinking is a somewhat unusual idea. The capabilities of machines that are currently called "intelligent", that is, the "owners" of artificial intelligence, are not at the level of human thinking. The maximum result that can be obtained from them is simply to quickly test scientific hypotheses, mainly mathematical theorems and the like, which are currently complex, time-consuming and require the analysis of several thousand special and general cases, based on certain conditions, and announce the result. The intellectual potential of robot-androids, which are sometimes hyped up by various media, is not even comparable to the level of knowledge of, say, a high school graduate with an average level of education.

Nevertheless, there is no doubt that intelligent systems are already becoming our close assistants in relieving human burdens, facilitating and, most importantly, making work that is mentally difficult and requires strong mental effort safer. A vivid example is information and analytical systems that serve to coordinate flights at airports. They monitor the general situation, generalizing the current meteorological situation, aircraft arrival and departure schedules, distance, speed and hundreds of similar parameters, and provide information to a person - an engineer - about the most optimal mode. The autopilot capabilities of the aircraft themselves can also be added to this list. It can easily replace the pilot during the flight and control a huge airliner. Such systems are also usually called expert systems. But in any case, they work only within the framework of a specific algorithm that is predetermined by programmers and written into the machine's memory. For example, in emergency situations not provided for by the algorithm, it cannot make an independent creative (creative) unconventional decision. Anyway, the pilot abandons the autopilot and relies on his own knowledge and experience.

Consciousness and thinking are the basis of intelligence. Accordingly, the term artificial intelligence, in my opinion, seems to be a bit exaggerated. After all, machines that perform artificial reasoning, or rather, automatic analysis, may perform analysis faster than us, but their error rate is lower than ours. But they do not have a creative approach, emotions, or the ability to act with something in mind in advance. Moreover, such artificial intelligence was created by a person like you and us! Now I would like to draw your attention to an interesting fact. As you know, any computer, that is, a machine with artificial intelligence, works on the basis of the binary number system. Enough information is given about this in the school computer science course. However, in a number system consisting of only two digits, there are certain limitations and boundaries when performing certain algorithms. However, when working with real numbers or in approximate calculations, there are situations where the binary number system is not suitable. In 1991, mathematician David Stoutmayer performed 18 different calculations using a computer program and proved that the result was incorrect in all of them, that is, the computer (artificial intelligence) was malfunctioning.

So, there is a serious scientific basis for the fact that artificial intelligence-computers cannot solve all problems correctly. Based on this, we can safely say that artificial intelligence is still not on a par with natural intelligence. And its surpassing of humans in some special cases (mainly in mathematics) is only at the expense of speed... A thinking machine, or artificial intelligence, remains for now the dream of science fiction writers and enthusiastic (Enthusiasm (Greek *énthosíasos* "inspiration ← hidden desire, inspiration") - strong inspiration, passion, amazement, attraction, as well as the perfection of actions under the influence of these moods, based on certain goals) programmers.

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