УДК 004.8

5.2.2. Математические, статистические и инструментальные методы в экономике (физико-математические науки, экономические науки)

ТРИ ПОКОЛЕНИЯ РАЗВИТИЯ ИСКУССТВЕННОГО ИНТЕЛЛЕКТА ИЛИ ПУТЬ ОТ ВОПРОСА "МОЖЕТ ЛИ МАШИНА МЫСЛИТЬ?" ДО ВОПРОСА "МОЖЕТ ЛИ МАШИНА ИМЕТЬ СОЗНАНИЕ И ЛИЧНОСТЬ?"

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Кратко рассматриваются 5 прошедших информационных революций, 6-я информационная революция, развивающаяся на наших глазах, и очередная 7-я информационная революция, к которой уже приближается человеческая цивилизация. Анализируются эволюция и специфические особенности 3-х поколений систем искусственного интеллекта. Кратко излагаются представления об информационной сущности процесса труда (Аристотель, 350 год до н.э.) и основные положения и законы информационно-функциональной теории развития техники (Карл Маркс, 1867, Луценко Е.В., 1979-1981). В рамках этой теории обсуждаются вопросы: «могут ли машины мыслить?» и «могут ли машины иметь сознание и личность?». Обосновываются утвердительные ответы на оба эти вопроса. На основе тех же теоретических представлений анализируется 7-я информационная революция, т.е. будущая революция в области сильного искусственного интеллекта, к которой стремительно приближается человеческая цивилизация. На взгляд авторов эта революция будет во многом аналогичной 1-й, т.е. будет иметь более глобальный характер и гораздо более далеко идущие последствия, чем все уже ранее прошедшие информационные революции, за исключением 1-й. Обосновывается гипотеза о том, что сущность и содержание 7-й информационной революции будет состоять в том, что будут созданы и получат массовое распространение роботы, функционально эквивалентные физическому организму человека и имеющие искусственную частичную душу, которые будут управляться человеком в высших формах сознания с помощью дистанционного микро телекинетического интерфейса, т.е. тем же способом, которым душа человека управляет его физическим телом. Людьми в обычной наиболее массовой в настоящее время форме сознания эти роботы будут восприниматься и осознаваться как обладающие чувствами, интеллектом и личностью. Кратко рассматриваются возможные проблемы, связанные с массовым распространением продвинутых систем искусственного интеллекта

Ключевые слова: СИСТЕМЫ ИСКУССТВЕННОГО ИНТЕЛЛЕКТА, ИНФОРМАЦИОННАЯ СУЩНОСТЬ ТРУДА, ИНФОРМАЦИОННО-ФУНКЦИОНАЛЬНАЯ ТЕОРИЯ РАЗВИТИЯ ТЕХНИКИ

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5.2.2. Mathematical, statistical and instrumental methods in economics

THREE GENERATIONS OF ARTIFICIAL INTELLIGENCE DEVELOPMENT OR THE WAY FROM THE QUESTION "CAN A MACHINE THINK?" TO "CAN A MACHINE HAVE CONSCIOUSNESS AND PERSONALITY?"

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The 5 past information revolutions, the 6th information revolution, which is developing before our eyes, and the next 7th information revolution, which human civilization is already approaching, are briefly considered. The evolution and specific features of 3 generations of artificial intelligence systems are analyzed. The ideas about the informational essence of the labor process (Aristotle, 350 BC) and the main provisions and laws of the information and functional theory of the development of technology (Karl Marx, 1867, Lutsenko E.V., 1979-1981) are briefly presented. Within the framework of this theory, the questions are discussed: "can machines think?" and "can machines have consciousness and personality?". The affirmative answers to both questions are substantiated. Based on the same theoretical concepts, the 7th information revolution is analyzed, i.e. the future revolution in the field of strong artificial intelligence, to which human civilization is rapidly approaching. In the opinion of the authors, this revolution will be in many ways similar to the 1st, i.e. it will have a more global character and much more far-reaching consequences than all the previous information revolutions, with the exception of the 1st. The hypothesis is substantiated that the essence and content of the 7th information revolution will consist in the creation and mass distribution of robots that are functionally equivalent to the physical human body and have an artificial partial soul, which will be controlled by a person in higher forms of consciousness using a remote micro telekinetic interface, i.e. in the same way that a person's soul controls his physical body. People in the usual most popular form of consciousness at the present time, these robots will be perceived and realized as having feelings, intelligence and personality. Possible problems associated with the mass distribution of advanced artificial intelligence systems are briefly considered

Keywords: ARTIFICIAL INTELLIGENCE SYSTEMS, INFORMATION ESSENCE OF LABOR, INFORMATION AND FUNCTIONAL THEORY OF TECHNOLOGY DEVELOPMENT, BRAIN-COMPUTER INTERFACE, TELEPATHIC KEYBOARD, NEUROINTERFACE

CONTENT

1. Introduction

1.1. Justification of the relevance of the topic

Humanity is currently facing challenges that represent unique aspects of the information age. With the development of artificial intelligence and advanced technologies, new questions arise about the essence of man, machine and their interaction. The question "Can a machine think?" developed into a deeper dialogue about the possibility of machines having consciousness and personality.

The relevance of this topic is due not only to technical advances in the field of artificial intelligence, but also to their potential impact on society. The development of systems capable of thinking and having partial consciousness opens new horizons in the fields of education, medicine, manufacturing and other fields.

Existing artificial intelligence technologies are already embedded in our everyday experiences, and questions related to their ethical and social implications require in-depth analysis. Understanding how machines can interact with humans on a deeper level is key to developing appropriate regulations and standards to govern the use of artificial intelligence.

Thus, the article on three generations of artificial intelligence aims not only to provide a technical analysis of the evolution of systems, but also to discuss important ethical, social and philosophical issues related to the development of modern technologies.

1.2. Statement of the purpose of the study

The purpose of our study is to comprehensively analyze the evolution of artificial intelligence over three generations, as well as to discuss promising trends associated with the seventh information revolution. We strive to achieve the following specific goals:

Studying the history of information revolutions: Review five previous information revolutions, identifying the key stages leading to the development of artificial intelligence.

Analysis of three generations of artificial intelligence: Consider in detail the evolution of artificial intelligence systems, highlighting the characteristics and features of each generation and their impact on human society.

Consideration of the informational essence of the labor process: Analyze ideas about the informational essence of the labor process, starting from ancient times (according to Aristotle) and moving forward in the history of the development of technology (according to Karl Marx and E.V. Lutsenko).

Discussion of questions about thinking and consciousness of machines: Justify affirmative answers to the questions “Can machines think?” and “Can machines have consciousness and personality?” using information-functional theory.

Analysis of the future seventh information revolution: Provide a view of the future, considering the seventh information revolution and its expected consequences, in particular the creation of robots with artificial partial souls.

Justification of the hypothesis about the mass distribution of advanced artificial intelligence systems: Analyze possible scenarios for the mass proliferation of human-equivalent robots and substantiate the hypothesis that these systems will be perceived as having feelings, intelligence and personality.

The goal of our research is to provide a comprehensive view of the development of artificial intelligence and its impact on society, and to provide a fundamental framework for understanding the future challenges and opportunities facing humanity.

1.3. A brief introduction to the history of information revolutions and their impact on human society

The modern period, which falls on 2020-2023, has witnessed a real revolution in the field of artificial intelligence, being the 6th information revolution. This era includes online access to a variety of artificial intelligence systems capable of performing various tasks in natural language, using all the resources of the Internet.

Each of the previous information revolutions played a key role in the evolution of humanity:

1st Information Revolution: The emergence of sound language and object consciousness, marking the very emergence of humanity.

2nd information revolution: The emergence of writing, embodied in text form.

3rd Information Revolution: The rise of printing, which provided a new way of copying and distributing texts.

4th information revolution: The emergence of computers and electronic forms of storing information in files.

5th information revolution: Development of an electronic form of information transmission through various computer networks, primarily through the Internet.

6th information revolution: The emergence of online artificial intelligence systems with the ability to perform a variety of tasks.

Currently, the 6th information revolution is leading to the Internet being transformed from a data warehouse into a knowledge space. This transition marks the main direction of modern information technology.

Artificial intelligence systems play a key role in this evolution, transforming data into information, then into knowledge, which is accumulated in databases. This knowledge is used to solve a variety of problems, such as identification, decision making and study of modeling objects.

The next stage that human civilization is striving for is the 7th information revolution. In our opinion, it will be comparable to the 1st revolution in its global nature and profound consequences. In this article we substantiate the hypothesis that within the framework of this revolution, robots will be created and widely distributed, functionally equivalent to the human body and possessing a partial soul, first sensory, and then in a more distant future, intelligent, and will have not only feelings, emotions and intelligence, but also artificial consciousness and personality. These robots will be controlled by a person using a remote micro telekinetic interface, i.e. in the same way that a person's Soul controls his physical body.

2. Methodology

2.1. Brief overview of information revolutions (five past, current and future)

This section examines key aspects of the five previous information revolutions and the current 6th revolution, and also puts forward hypotheses regarding the future, 7th revolution.

2.1.1. 1st Information Revolution: The Emergence of Humanity

The first revolution, covering the moment of the emergence of humanity, was the time when sound language, verbalization and object consciousness became the first steps towards the formation of culture and society.

2.1.2. 2nd Information Revolution: Writing and textual verbalization

The second revolution, presumably occurring with the development of writing, marked the transition from oral tradition to the textual recording of knowledge, facilitating the preservation and transmission of information.

2.1.3. 3rd Information Revolution: Printing and new ways to distribute texts

The third printing revolution changed the dynamics of knowledge, making it more accessible and actively influencing scientific and cultural movements.

2.1.4. 4th information revolution: The emergence of computers and electronic forms of information storage

The fourth revolution, occurring in the 20th century, is characterized by the advent of computers and electronic forms of information storage, which became a key moment in the information evolution.

2.1.5. 5th information revolution: Development of electronic networks and the Internet

The fifth revolution, beginning at the end of the 20th and beginning of the 21st centuries, represents the development of electronic networks, including the Internet, and the transition to an electronic form of information transmission, transforming communication and access to knowledge.

2.1.6. 6th information revolution: Artificial intelligence systems in online access

The sixth revolution, taking place in 2020-2023, is characterized by the emergence of mass online access to a wide variety of artificial intelligence systems, ensuring high-quality execution of a wide variety of tasks posed in natural language (Figure 1):

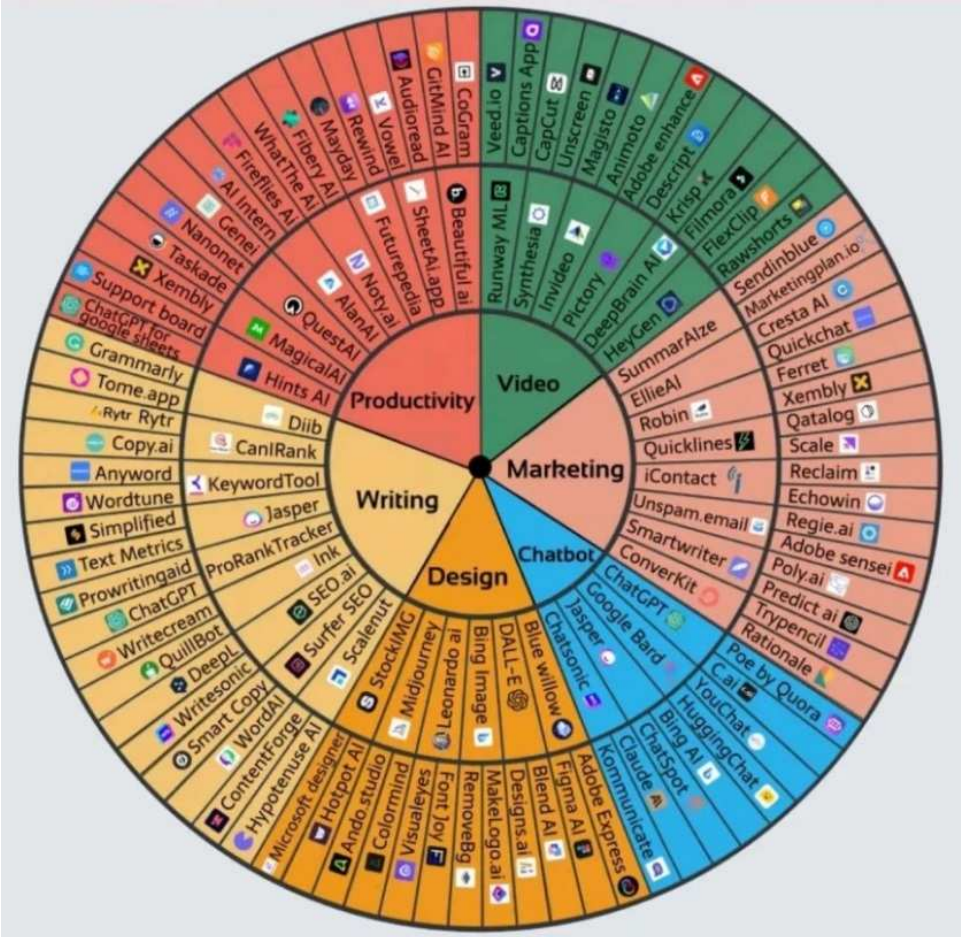


Figure 1. Some online artificial intelligence systems

Source: *https://www.reddit.com/r/ChatGPT/comments/14wkb9s/ai_tools_list_sorted_by_category_in_one_place/?rdt=48857*

2.1.7. 7th information revolution: The future with the creation of robots with artificial souls

The 7th Revolution hypothesis presented points to a future where robots, equivalent to the human body and possessing partial souls, will proliferate en

masse. They will be controlled by a human through a remote micro-telekinetic interface, giving the robots feelings, intelligence and personality.

2.2. Analysis of the evolution and specific features of three generations of artificial intelligence systems

During the 6th information revolution, all the prerequisites necessary and sufficient to transform artificial intelligence of the 1st, 2nd and 3rd generations into strong artificial intelligence are being created.

2.2.1. First generation of artificial intelligence: Character systems (Weak AI)

The first generation of artificial intelligence (AI) is characterized by the use of symbolic systems. These systems are based on rules and symbols representing knowledge and inference rules (production and logical models). First-generation algorithms are capable of solving limited problems, but they are often ineffective in complex and unstructured problems.

2.2.2. Second generation of artificial intelligence: Statistical methods and machine learning

The second generation of AI is characterized by the use of statistical methods and machine learning. This includes algorithms that can adapt and improve based on experience and data. Second-generation methods allow AI systems to process large amounts of information and make decisions under conditions of uncertainty. However, they are limited in their understanding of context and have limited ability to generalize.

2.2.3. Third generation of artificial intelligence: Deep learning and neural networks

The third generation of AI is represented by deep learning and neural networks. These methods are based on structures that mimic the functioning of the human brain. Deep learning allows systems to analyze data at higher levels of abstraction, which improves the ability to understand context and generalize. Neural networks can automatically extract features from data, making them effective at processing complex and high-dimensional data.

Table 1 shows the known types of knowledge bases and shows the actual almost complete coincidence of many key terms of these knowledge representation models in meaning.

Table 1 – Known types of knowledge bases and the relationship between the semantic content of their main terms

Модель автоматизированного системно-когнитивного анализа и интеллектуальной системы «Эйдос» (Евгений Луценко, 1979)	Классификационные шкалы и градации	Описательные шкалы и градации	Конкретный образ объекта исследуемой выборки	База знаний (декларативное и процедурное представление знаний), прямые и обратные правдоподобные рассуждения	Обобщенный образ класса	Кластеры, могут отображаться в форме дерева и семантической сети	Конструкт как система наиболее непохожих классов с спектром промежуточных по уровню сходства классов
Логическая модель – классическая детерминистская логика (Аристотель, 350 году до н.э.)	Бинарные (дихотомические) справочники классов	Бинарные (дихотомические) справочники признаков	Бинарный вектор объекта	Правила логического вывода	---	---	---
Логическая модель (нечеткая логика Лотфи Заде, 1965)	Номинальные, порядковые и числовые справочники классов	Номинальные, порядковые и числовые справочники признаков	Вектор объекта с указанием степени выраженности у него признаков	Нечеткие правила логического вывода	---	---	---
Фреймовая модель (Марвин Мински, 1974)	Имена фреймов	Слоты и шпации	Фреймы-экземпляры	Процедуры формирования фреймов прототипов на основе фреймов-экземпляров	Фреймы-образцы, или прототипы	---	---
Продукционная модель экспертных систем (Аллен Ньюэлл и Герберт Саймон, 1972)	---	---	---	Продукционное представление правил вывода	---	---	---
Семантические сети (Джон Сэррелл, 1968)	---	Свойства и их значения	Элемент класса	Отношения между классами	Класс	Граф результатов кластерного анализа	---
Нейронные сети (Фрэнк Розенблатт, 1957)	Множество нейронов	Множество рецепторов	Объект обучающей выборки	Матрица весовых коэффициентов	Нейрон с весовыми коэффициентами	Нейрон 2-го слоя сети	---

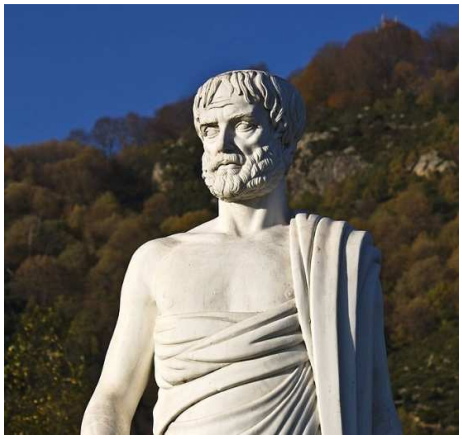
This table is something like a dictionary-translator of the basic terms of knowledge bases and its existence, in essence, means that these models basically have something fundamental and common to all of them (this is the concept of ontology) and all the differences between these models can be considered as variations on one theme.

2.2.4. Transition to strong artificial intelligence (AI)

According to modern scientific ideas, the transition to strong artificial intelligence consists of creating systems that can not only solve specific problems based on data and experience, but also have a general understanding of the world similar to that of humans. ASI has consciousness, the ability to self-learn, generalize knowledge and adapt to new situations. This level of artificial intelligence represents the maximum degree of autonomy and understanding, making the system capable of performing a wide range of complex tasks that require deep intellectual analysis.

The key features of strong AI, compared to previous stages of artificial intelligence development, is the presence of understanding, i.e. personality and consciousness. These features require and deserve deep study. There are currently many unsolved problems in this area, for which there are no generally accepted solutions in the scientific world.

2.3. Information essence of the labor process



Aristotle
384-322BC

Apparently, historically, Aristotle (384-322) was the first to formulate the idea of the informational essence of the labor process BC), who said that the essence of labor lies in giving shape to the material and gave the example of a potter who embodied the idea of a jug in clay, working entirely by hand or using a means of labor: a potter's wheel. Form is objectified information about a structure contained before its embodiment in a subjective idea.

From this point of view, in modern terminology, a potter's wheel is a means of labor that allows you to create 3d bodies of revolution based on information from a 2d projection.

Karl Marx
May 5, 1818 – March 14, 1883

It should be noted that the idea of the informational nature of the labor process was formulated by K. Marx in the section “Development of Machines” of Capital approximately 60 years before the creation of the scientific theory of information in the works of Ralph Hartley in 1928, i.e. approximately 156 years ago. Therefore, today we will express the ideas of K. Marx in slightly different terms than in his works. As a result, we obtain the following formulations.

Before starting the labor process, a person creates a subjective image of the future product of labor. During the labor process, information from this subjective image is transmitted and recorded into the object of labor, and during this process it is transformed into a product of labor.

In the labor process, the subjective image of the product of labor is embodied in the material.

In this process, there is a multi-stage transformation of the form of information and an increase in the degree of formalization of the subjective model. Each stage corresponds to one labor function.

The human body and means of labor act as a channel for transmitting information from the subjective image of the future product of labor to the subject of labor.

So, the means of labor are, first of all, information systems. This is their essence and main function. Everything else, i.e. design, materials and energy - all this is needed only to support the process of transferring and transforming the form of information and for recording it into an object of work in order to change its structure.

In this communication channel, the form of information is transformed (representation language or coding system), as well as the transformation of information from a subjective form to an objective one.

Today, when so many people work with the help of computers via the Internet, the informational essence of the labor process has been laid bare and has become self-evident to everyone. And before, everyone paid attention to the fact that during work you get tired and sweat, i.e. paid main attention not to the function of transforming the form of information and intellectual functions, but to the function of transforming the form of energy, because engine function.

Let us note that in the process of cognition, on the contrary, information from an objective form is transformed into a subjective one and transferred to the created subjective model of the cognizable object.

The point of transformation of the subjective into the objective and the objective into the subjective is currently unknown to official science, as is the very nature of this transformation. This problem is called a psychophysical problem. In work [10], the author proposed its solution within the framework of a natural science formulation and solution to the main question of philosophy.

2.4. Information-functional theory of technology development

2.4.1. Law of independence of functions from supporting ones their structures

The fundamental law underlying the development of our technological civilization is known; this is the law of independence of functions from the structures that support them: “the same functions can be supported by different structures.”

For example: in the human body, the engine function (converting one form of energy into another) is realized by the digestive and musculoskeletal systems, and in a car the same function is realized by burning fuel in combustion chambers.

2.4.2. The law of transfer of labor functions from man to means of labor (Karl Marx, 1867)

Technological progress consists in creating means of labor of a higher functional level by transferring to them labor functions previously performed by humans.

Labor functions according to Karl Marx [11]:

1. Function of contact with the subject of labor.

2. Function of transfer and redistribution of energy (transmission function).
3. The function of transforming a simple monotonous movement into a complex, purposeful one that does work (work function).
4. The function of converting one form of energy into another (motor function).

The means of labor perform the same functions that a person performed before using them. But they perform these functions outside of human psychophysiological limitations. In addition, technological progress occurs immeasurably faster than biological and psychological progress. This is the meaning and expediency of creating means of labor and their application in practice.

If Karl Marx:

– I would ask the question whether in the future the development of means of labor will continue by transferring to them some other human functions that he realizes in the labor process;

– and would answer this question in the affirmative;

– and formulated that the next 5th labor function of a person is, in fact, the mental function of transforming information, thinking and goal setting (added to the system of labor functions of Karl Marx in 1979 by Prof. E.V. Lutsenko, along with another 11 labor functions functions in work [10][1]);

then Karl Marx could become a real forerunner (“great-grandfather”) of modern and future computer and intellectual tripods.

But, unfortunately, he did not write anything about it. At the same time, the authors are absolutely sure that he thought about this and understood it, but did not write it in his fundamental works, apparently because he considered it insufficiently scientifically substantiated and that the time for this had not yet come, and perhaps so it really was.

In fact, he said that in the future society, knowledge and science will become a direct productive force, and intelligent systems are precisely systems that transform empirical data into information, and this into knowledge, and solve problems of identification and forecasting based on this knowledge , decision making and exploration of the subject area by examining its model. Simply put, artificial intelligence systems are tools that greatly increase people’s ability to obtain and use knowledge.

[1]All labor functions transferred to the means of labor, starting from the 5th, are mental functions performed by the Human Soul and, in the currently most widespread form of consciousness, are recognized as subjective. But in the future, with higher forms of consciousness, when they are transferred to the means of labor, they will be perceived as objective [10, 23]. This means that all future technical systems will have a partial artificial soul (psyche) created by man, first in the nearest group of emotional formations, and then in the next group of formations and rational.

Labor functions can be transferred from a person to technical systems only in a strictly defined order, namely in the way they are listed in this work. The reason for this is approximately the same as why we cannot remove the inner one from the assembled nesting doll until we open the outer one.

2.4.3. Determination of the economic and political form of society by the functional level of the technological environment

When the next labor function of a person is transferred to means, a technological revolution occurs (the technological structure of society changes), which inevitably causes a revolution in production relations, economic and political structures of society, and therefore a transition of society to a new socio-economic formation, a group of socio-economic formations and corresponding to the most massive form of consciousness (stage of social cognition) [10].

2.4.4. Law of improving the quality of the basis (E.V.Lutsenko, 1979)

The development of systems occurs by resolving contradictions in the lowest structural level of the hierarchical organization in which they still exist (basic level). When contradictions at the basic level are resolved, the system moves on to development by resolving contradictions at a directly higher level than the previous one, which becomes the basic level.

In accordance with this law, the technological society has moved into the information society, and now it is transitioning to the cognitive society, i.e. knowledge-based society.

2.4.5. Determination of the form of human consciousness by the functional level of the technological environment

The functions transferred to the means of labor are realized by them outside the biological and psychophysiological limitations of humans. When using a means of labor of a certain functional level, a person learns not to perform the functions transferred to this means of labor, and the remaining functions are performed by the person without the restrictions associated with the need to perform the transferred functions. As a result, a person is partially freed from the labor process, moves away from it somewhat to the side, and a new, adequate “Image - I” and consciousness are formed in him. They change in such a way that the labor functions transferred to the means of labor cease to be recognized by a person as an attribute of the “image - I” [10].

2.4.6. Intelligent systems as remote microtelekinetic control systems (Soul-computer interface)

In 1979-1981, the author developed an information-functional theory of technology development, on the basis of which functional diagrams were obtained for both 5 already created in human history and 11 more promising technical systems, the creation of which is a matter of the future, and for one of these promising systems technical (engineering) solutions: this is a remote micro-telekinetic control system.

Telekinesis is the direct influence of the soul on objects and processes of the physical world (usually at the micro level) and is the way in which the Soul affects the physical body.

Today, more than 40 years later (!!!), Microsoft has received a patent for a somewhat similar “Telepathic Interface” system. Today, 40 years after these proposals by the author, intensive research and development in the field of neural interfaces, Brain-Computer interfaces (telepathic keyboard, thought control) are being carried out all over the world[2].

However, judging by the materials of the open press, world-class scientists in this field are still acting unconsciously and searching at random without having a fundamental information-functional theory of the development of productive forces, proposed by the author 40 years ago, from which such decisions follow. Their technical solutions in many important parameters are also still very far from the author’s proposals.

A number of these promising systems, proposed by the author more than 40 years ago, supporting the “Soul-computer” interface (term.aut.), will actually feel and think, and not just model these processes, like modern artificial intelligence systems. However, this is a perspective that is far beyond the scope of this brief paper [10].

3. Results

3.1. The answer to the question "Can machines think?" within the framework of the information-functional theory of technology development

3.1.1. Faith-Based and Scientific Objections

When Alan Turing in 1950, in his work [4], formulated the question of whether a machine can think, this gave rise to a large wave of discussions of this issue both in scientific circles and almost at the everyday level. During this discussion, a large number of objections were formulated to the idea that a machine can think.

A discussion of some of these objections is of great interest in connection with the problem considered in the work.

In addition, according to the author, this discussion organically touches on the most fundamental issues of a philosophical level and may well influence the worldview.

All these objections can be divided into two broad groups: faith-based and scientific objections.

Objections based on faith were usually not accompanied by any argument or justification. Let us note that here by faith we mean not religious Faith, but faith in different things at the everyday level.

[2]There is some information about this on the website:http://2045.ruand from the links:https://yandex.ru/search/?text=Telepathic%20interface%20neuralinterface%20Brain-computer&lr=35

Scientific objections, on the contrary, were reasoned and, naturally, based on the dominant scientific paradigm and worldview of the author of the objection.

So, objections based on faith were usually formulated in this form:

“A machine cannot think, because... Only man can think.”

“A machine cannot think, because... she can never think.”

“The machine can think, and why not.”

“A machine can think. Thinking is not the prerogative of man alone.”

We will not discuss such opinions, because... this does not provide anything for solving the problem posed in the work, although it can become the basis for an interesting psychological or sociological study.

Let's look at some scientific objections below.[3], as well as one very interesting objection, which is called “theological,” although in its formulation it is quite reasoned and more like a scientific one, but based on a religious point of view.

3.1.2. Only the subject can think. An object, for example a machine, cannot think in principle

This is a very interesting objection. Let us present the answer to it in the form of a hypothetical “Socratic”[4]dialogue between Alan Turing and his opponent.

Turing: And you, who formulated this objection, were you thinking when you formulated it?

Opponent: Of course!

Turing: And in my opinion you are an object of a certain composition, size and weight.

Opponent: This is partly true if you mean my body, but I am a person and a thinking subject!

Turing: And it is quite obvious to me that you are an object that claims to be a person and a subject. With the same success, a machine can claim, but this in itself does not mean that it is one.

Speaking seriously, we can put forward the opposite opinion: “Only an object can think.” Based on certain ideological systems [65], it is quite possible to assert that the intellect is some kind of intellectual machine that our personality uses to perform logical operations in much the same way as it uses the body to perform physical operations.

Of course, in the usual form of consciousness, the most common at this stage of development of society [66], intelligence is recognized by most people as subjective. But there are also higher forms of consciousness [65], in which it is recognized as objective. The higher the form of consciousness, the higher the

[3] A discussion of Turing's paper and other objections to his idea that a machine can think can be easily found online at:https://yandex.ru/search/?text=Thinking%20is%20a property of%20the immortal%20soul%20of a person.%20God%20gave%20immortal%20soul%20to%20man%20and%20every%20woman%2C%20but%20not%20gave%20souls%20to%20no%20other%20animal%20and%20machines.%20Therefore%2C%20neither%20animal%2C%20nor%20machine%20%20can%20think&lr=35

[4] As you know, Socrates often asked questions not because he didn’t know something and would like to learn from his interlocutor, but so that by answering this question the interlocutor would come to certain thoughts and conclusions

adequacy of the model of reality created with this form of consciousness. Therefore, it may very well be that a more correct point of view on the intellect is to recognize it as an object rather than a subject.

3.1.3. It is impossible to create a machine that thinks, and if possible, then only in a very distant historical perspective

Let us continue the answer to this objection in the style of an imaginary "Socratic" dialogue between Turing and his opponent.

Turing: May I ask you to look in the mirror? What do you see in him?

Opponent: I see myself, of course. But what do you mean by this, that I am a machine?

Turing: Of course not. I just want to say that you are created and you think. Thus, one look in the mirror is enough to prove that it is quite possible to create something thinking.

Opponent: That's true, but it's not relevant, because... I am not a machine and was created naturally, not artificially.

Turing: I didn't say you were a machine. I just want to say that if something is created in one way using a certain technology, no matter natural or artificial, then it can be created using another technology. And such other technologies are possible not just one, but many. Discovering and mastering these technologies is a matter of time. And the division of technologies into "natural", observed in nature itself, and "artificial", used by humans, is quite controversial and arbitrary. Moreover, if we consider that the natural technology of creating thinking beings is also used not by nature itself, but by man as a part of nature. Man is also a part of nature, and not something outside of it.

On our own behalf, we can add that in the foreseeable future, quasi-biological robots that actually think, and not imitate thinking, [67] may well be designed and created using genetic engineering methods.

3.1.4. Even if it is possible to create a machine that seems to think, it will still she will not think, but will only perform some complex internal operations that create the complete external impression that she is thinking

We will also answer this objection in the form of a comic "Socratic" dialogue between Turing and his opponent.

Turing: When you formulated this objection, were you really thinking, or were you just performing some complex internal operations that create a complete picture of what you are thinking?

Opponent: Of course I really thought.

Turing: I can easily imagine a machine that would say the same thing. What about complex internal operations? Did you carry them out?

Opponent: Apparently, when I thought, of course such operations were performed in my body.

Turing: Then it turns out that the mere fact of performing these complex internal operations is not an argument in favor of the fact that in reality the machine does not think, because... and in man they are fulfilled and no one objects to the fact that man actually thinks. Therefore, the reference in this context to this objection to complex internal operations is irrelevant. With the same success it can be argued that a person does not think, but only mistakenly believes that he thinks, but in fact he only performs certain complex operations that create the impression that he thinks.

By the way, the author had the idea that some students master this art well, and some of them quite successfully use the skills acquired at the university to create an impression on their interlocutor about what you think, even after graduating from the university.

3.1.5. Only the Soul can think, and the body is only a conductor (container) of the Soul. A machine, in principle, cannot be a conductor of the Soul, therefore she can't think

In the author's opinion, this is the most interesting deep objection. In the literature it is called the “theological objection.” It sounds like this:

“Thinking is a property of the immortal soul of man. God gave an immortal soul to every man and every woman, but did not give a soul to any other animal or machine. Therefore, neither animal nor machine can think."[5].

Let us add on our own that not only thinking is a property of the human Soul, but all psychological properties of the individual, in particular, those manifested in the process of cognition: feelings, emotions, thoughts, attention, memory and others.

Alan Turing himself answered this objection very clearly, clearly and frankly: “In trying to construct such machines, we should not unceremoniously usurp His power of bestowing souls, just as we do not do this when producing children. In both cases, we are rather His instruments, creating containers for the souls He created” [5] (my italics, author’s).

What does it mean? First of all, I would like to draw attention to the fact that Alan Turing recognizes the very existence of the Soul, which modern science is still far from achieving. Much like the science of the Montgolfier era, it is far from creating permanently inhabited orbital space stations, from lunar rovers and rovers, from spacecraft exploring all the planets of the Solar System and their satellites, and even having already left the Solar System and entered

[5]This text can be easily found on the Internet at the following link: https://yandex.ru/search/?text=Thinking%20is%20a property of%20the immortal%20soul%20of a person.%20God%20gave%20immortal%20soul%20to%20man%20and%20every%20woman%2C%20but%20not%20gave%20souls%20to%20no%20other%20animal%20and%20machines.%20Consequently%2C%20neither%20animal%2C%20nor%20machine%20cannot%20think&lr=35

interstellar space. In the author's opinion, Alan Turing wrote quite unequivocally that in his opinion:

– thinking is carried out not by the brain, but by the human Soul;

– people do not create new Souls, but they are created by God;

– people create containers for Souls, i.e. physical bodies, as he put it, “producing children”;

– people can create containers for Souls in another way: “by trying to construct similar machines,” i.e. thinking machines.

Alan Turing is essentially saying that thinking machines will be no more and no less thinking than our physical bodies, in other words, they will simply be functionally equivalent to our physical bodies. The author developed this idea in detail in [67].

When we discuss this objection, we directly touch on fundamental debatable issues that have the most serious ideological significance, which, on the one hand, science is intensively studying, and on the other hand, on which there is not yet one generally accepted point of view in science.

The most important of these questions is the question of the existence of the Soul. The existence of the Soul, which is the bearer of a person’s personality, his feelings and thoughts, is recognized in all pagan and monotheistic world religions, in all mystical and magical teachings and in many philosophical systems.

However, the existence of the Soul is still not recognized by science!

Meanwhile, science has accumulated a sufficient number of facts that are very difficult or even impossible to explain without recognizing the existence of the Soul. These facts primarily include facts confirming that a person does not think with the help of the brain, that he has another function (perhaps this is the function of supporting a communication channel between the body and the Soul). These are facts accumulated in the study of clinical death and out-of-body experiences “out of the body”. In this regard, first of all, it is necessary to mention the studies of Dr. Moody and his followers [68].

According to the author, until science recognizes the existence of the Soul and draws appropriate conclusions from this, the path to creating fully functional artificial intelligence will be closed to it!

Trying to create a fully functional artificial intelligence without recognizing the existence of the Soul is the same as trying to travel around the world thinking that the Earth is a disk resting on three whales (or elephants, or turtles, the essence of the matter does not change). In the same way, it is impossible to study organic chemistry, thinking that the organism would instantly die if chemical reactions took place in it, as in a retort (as Paracelsus (Philip Aureolus Theophrastus Bombastus von Hohenheim) wrote about). Likewise, it is impossible to create and improve a car with an internal combustion engine if you are based on the idea that under its hood the crankshaft is turned by representatives of dark forces, and not by pistons.

Those who, after these arguments, continue to believe that a computer, in principle, cannot think, because in it there is no one or nothing to understand, but can only imitate thinking (the argument of J. Searle “The Chinese Room”), in order to remain completely consistent, the same statement must be extended to a person in general and to ourselves in particular. Thus, the author argues that when J. Searle put forward his objection, he followed the principle of J. Searle, that is, he did not really understand what he was saying and what he was talking about. This guess is confirmed by the fact that he seriously thought that he thought with the help of his brain. This means that he did not understand at all what thinking is and how it is actually realized in nature in general, in man and in himself in particular.

Let's compare physical and mental labor without the use of labor tools and with their use. Let's imagine that a person is digging a hole and conducting scientific research: looking for patterns in empirical data. A person can dig a hole with his hands and look for patterns in empirical data with his natural intelligence. It will turn out so-so. If you take a shovel, or better yet an excavator, then the hole will be dealt with with less labor and time. With the help of an excavator, a person can dig a hole in a few hours that would take him years or even decades to dig by hand. If you ask a person who digs a hole using a means of labor, who is digging it, he or the means of labor, he will answer that: “of course I dig (with the help of an excavator).” If you take a computer equipped with an artificial intelligence system, the work of identifying patterns will also go faster. Moreover, this will make it possible to analyze such huge amounts of data that a person can simply lament only in dozens of lifetimes (big data). If you ask a researcher who analyzes this data, you or a computer (software system), he will answer: “of course, I analyze, with the help of a computer and an intelligent system.” Thus, it is not the artificial intelligence system that thinks, but the human researcher who thinks with the help of the artificial intelligence system. MORE over, THE SO-CALLED NATURAL INTELLIGENCE ALSO DOES NOT THINK, BUT A PERSON THINK WITH THE HELP OF HIS NATURAL INTELLIGENCE. But in order to understand this correctly, you need to know what a person is better than modern so-called “Western” science knows.

3.2. Answer to the question "Can machines have consciousness? and personality?" within the framework of the information-functional theory of technology development

In the context of the information-functional theory of technology development, the question of whether machines can have consciousness and personality raises important aspects related to the information and functional characteristics of technical systems.

According to this theory, consciousness and personality are traditionally associated with qualitative aspects of human experience, such as self-awareness, emotions, and personality traits. However, information-functional theory suggests that advances in technology may bring machines closer to emulating these characteristics.

Information aspect: Machines can process large amounts of information, including data about themselves and the environment. Improvements in sensors, data processing algorithms and artificial intelligence could lead to machines being able to analyze information about themselves and interact with the world around them on a more complex level.

Functional aspect: The development of technical systems can lead to the creation of machines capable of performing tasks that were previously the domain of humans. The ability of machines to emulate human functions such as decision-making, learning and adaptation can give the impression that they have personality traits.

However, it should be noted that even if machines can emulate certain aspects of consciousness and personality, this does not necessarily mean that they actually have real consciousness or personality.

Likewise, observing manifestations of consciousness and personality in a person also does not in itself mean that he actually has real consciousness or personality.

This makes it relevant:

– in-depth study of the nature of consciousness;

– substantiation of the answer to the questions about what is “real consciousness or personality” and what is “artificial or partial real consciousness or personality”;

– development of a criteria classification of natural and artificial forms of consciousness;

– development of a methodology for criterion identification in humans and technical systems of “real or artificial partial consciousness and personality”,

Thus, the information-functional theory of technological development opens up the possibility of thinking about the approach of machines to consciousness and personality, but further research and discussion are necessary to fully understand this issue.

3.3. Introduction of the concept of “electronic entity” into legal practice: Scientific and Legislative Aspects

3.3.1. Scientific aspects

In the modern world, with the growth of technology, new legal and ethical issues arise related to the use of artificial intelligence. The concept of "electronic entity" is a scientific concept that discusses the possibility of recognizing certain autonomous systems, software or artificial agents as subjects of administrative

and criminal law, including civil rights, property rights, inheritance, family law, etc.

In particular, legal questions arise about the rules and regulations regarding marriage, divorce, adoption, alimony and other aspects of family life between electronic persons, as well as between individuals and electronic persons (it seems that this is possible).

The scientific aspects of this idea include discussions of the extent to which these electronic entities are able to effectively simulate or actually have intelligence, consciousness and personality, and the extent to which they are independently capable of making decisions and interacting in their behavior with physical and electronic persons, to the extent that their behavior can comply with the standards and requirements established for individuals and legal entities.

3.3.2. Legislative aspects

The introduction of the concept of “electronic entity” into legal practice implies the creation of an appropriate legislative basis. This includes the development of rules and regulations that will determine the status of electronic entities, their rights and obligations, and liability in case of violation of the Law.

Legislators must take into account such aspects as the autonomy of an electronic person, its ability to make decisions, and the possibility of creating contractual relations between electronic, individuals and legal entities. At the same time, it is necessary to develop mechanisms to regulate and control the actions of electronic entities in order to avoid negative consequences and unfair actions.

One of the key issues in the legislative aspect is establishing responsibility for the actions of an electronic person. If problems arise, such as violation of existing laws (which are completely absent at the time of writing of this work) or harm, laws should provide procedures and responsibilities for electronic entities.

Modern legislation must find a balance between stimulating innovation and ensuring the protection of the interests of society and individuals. Introducing the concept of e-person into law requires a comprehensive approach and careful consideration of all aspects to ensure fair and effective implementation of the concept in the legal system.

3.3. Analysis of the seventh information revolution in the context of strong artificial intelligence

3.3.1 Introduction to the seventh information revolution

Modern society is faced with the prospect of a future hinted at by the 7th information revolution. Particular attention is paid to a scenario in which robots similar to the human body and possessing partial souls become widespread.

These robots will be controlled by a human through a remote micro-telekinetic interface, giving them senses, intelligence and personality.

Definition of the seventh information revolution

The seventh information revolution represents a period of intensive development of information technology, which goes beyond current achievements, anticipating future transformations. In the context of strong artificial intelligence, the seventh revolution opens up horizons where robots with partial souls become part of our daily lives.

Key characteristics of the seventh information revolution in the context of FII

1. Evolution of robots with human characteristics: The seventh revolution scenario envisages the creation of robots that are functionally equivalent to the human body, possessing not only strong artificial intelligence, but a partial soul, i.e. artificial consciousness and personality. This opens up new prospects for the interaction between man and machine and the organization of man-machine systems of not only technological, but also economic and social types of integration.

2. Control via remote micro-telekinetic interface: Humans will control robots via remote micro-telekinetic interface, allowing them to feel, think and even have a unique personality.

3. Senses, Intelligence and Personality of Robots: Robots of this era will be equipped not only with physical capabilities, but also with advanced intelligence, senses and individual personality, making them more similar to humans.

In this context, the seventh information revolution predicts not only technological progress, but also a paradigm shift in perception and interaction with artificial intelligence. This scenario highlights not only the technical aspects, but also the ethical and sociocultural issues associated with the introduction of such technologies into everyday life.

3.3.2 Strong Artificial Intelligence: Basic Concepts

Artificial Intelligence (AI) is a branch of artificial intelligence that strives to create machines with mental capabilities comparable to humans. In this section, we will take a closer look at the concept of strong artificial intelligence, its key characteristics, as well as the main goals and opportunities that this technology provides.

Explaining the concept of strong artificial intelligence

Strong artificial intelligence differs from weak AI in that it has the ability not only to solve limited problems, but also to think independently, learn, adapt to new situations and have general intellectual consciousness. This approach seeks to create artificial intelligence capable of performing any cognitive tasks similar to those performed by humans.

The main goals of strong artificial intelligence

1. Humanity in Problem Solving: The main goal of AGI is to create systems capable of learning and solving a wide range of problems, such as pattern recognition, natural language communication, and even creative thinking.

2. Self-paced learning and adaptation: AGI strives to develop algorithms and models that are capable of not only learning from provided data, but also self-learning, adapting to new scenarios and environments.

Opportunities provided by strong artificial intelligence

1. Advanced Problem Solving: AGI can solve complex, multi-valued problems that were previously considered the preserve of human intelligence, including creative and innovative tasks.

2. Self-learning and continuous improvement: Systems with AGI have the ability not only to self-learn, but also to continuously improve their skills and knowledge over time.

3. Applications in various fields: Strong artificial intelligence provides opportunities for applications in various fields, including medicine, finance, science, manufacturing and others, which promotes automation and increased efficiency.

In this context, strong artificial intelligence is a promising direction in the development of artificial intelligence, striving to create intelligent systems capable of not only performing specific tasks, but also possessing a general intellectual intelligence similar to that of humans.

3.3.3 Impact of the seventh information revolution for the development of strong artificial intelligence

The seventh information revolution is having a significant impact on the development of strong artificial intelligence (AI), creating new opportunities and challenges for intelligent technologies. In this section, we will look at an analysis of the technological trends driving the seventh information revolution, as well as the interaction between this revolution and the development of strong artificial intelligence.

Analysis of technological trends driving the seventh information revolution

1. Integration of the Internet of Things (IoT): The development of IoT technologies contributes to the collection and processing of a huge amount of data, creating the basis for the further development of intelligent systems, including strong artificial intelligence.

2. Big Data: Big data processing and analysis is becoming a key component of the seventh revolution, enabling the training and operation of strong artificial intelligence algorithms based on extensive data.

3. Development of Quantum Computing: Quantum computing technologies open up new horizons for information processing, which can

significantly speed up the computational tasks required for strong artificial intelligence.

The relationship between the seventh information revolution and strong artificial intelligence

1. Improved Machine Learning Algorithms: With the development of the seventh revolution, machine learning algorithms are becoming more sophisticated and efficient, strengthening the foundations of strong artificial intelligence.

2. Integration with smart devices: AI interacts with smart devices, providing automation and personalization of services, which becomes more important in the conditions of the seventh information revolution.

3. Solving complex problems: Strong artificial intelligence is used to solve complex problems presented by the seventh revolution, such as managing smart cities, medical diagnostics and creating technologically advanced industries.

4. Ethics and Security: The 7th Information Revolution emphasizes the ethics of developing strong AI, including transparency, responsible use, and security in AI.

As a result, the seventh information revolution stimulates the growth and development of strong artificial intelligence, creating favorable conditions for innovation and technological breakthroughs in the field of artificial intelligence.

3.3.4 Advantages and challenges of implementing strong artificial intelligence in the context of the seventh information revolution

The introduction of strong artificial intelligence (AI) as part of the seventh information revolution opens up broad prospects for society, but is also associated with a number of challenges. Let's look at the positive aspects and potential benefits, as well as the problems and challenges associated with integrating strong artificial intelligence during this period of technological change.

Positive aspects and potential benefits of using strong artificial intelligence

1. Effective decision making: AI is capable of analyzing large volumes of data and making complex decisions based on a vast information field, which increases the efficiency of decision making in various fields.

2. Automation of labor-intensive tasks: The introduction of AI allows you to automate everyday and time-consuming tasks, freeing up resources for more creative work and strategic decision-making.

3. Development of new technology areas: The integration of strong artificial intelligence is driving the development of other technologies such as quantum computing, biotechnology and robotics, creating innovative technology ecosystems.

4. Improving quality of life: The application of AGI in smart cities, healthcare and education helps improve living conditions by enabling more efficient management of resources and the provision of personalized services.

Problems and challenges that may arise when integrating strong artificial intelligence into the seventh information revolution

1. Ethical Issues and Data Security: With the development of AGI, ethical issues related to autonomous decision making arise, as well as data security issues such as threats of hacker attacks and lack of transparency in information processing.

2. Threats to the workforce: Automation and the introduction of AI can lead to changes in the labor market, posing threats to certain types of employment and requiring retraining of the workforce.

3. Lack of standards and legal regulation: The rapid development of AII technologies can lead to a lack of standards and effective legal regulation, which makes it difficult to control and ensure ethical use.

4. Transparency and explainability issues: The complexity of AGI algorithms can create problems in explaining the decisions they make, making it difficult to understand their logic and responsibilities.

Overall, the integration of strong artificial intelligence into all aspects of society in the context of the seventh information revolution promises significant benefits, but requires careful consideration of ethical, social and technological aspects to ensure sustainable and responsible development.

3.3.5 Development prospects and recommendations for the development of strong artificial intelligence in the context of the seventh information revolution

Forecasting the future development of strong artificial intelligence within the seventh information revolution

Strong artificial intelligence (AI) in the context of the seventh information revolution promises to become a key driver of innovation and technological progress. In the next decade we can expect:

1. Wider adoption in healthcare: AIS will be actively used to improve diagnosis, individualize treatment and enable more effective healthcare management.

2. Development of Smart Cities: With smart cities enabled by AGI technologies, we will see improved transport management, security and optimization of urban infrastructure.

3. Evolution of educational systems: With the use of AII in education, more personalized learning will be realized, as well as improved methods of assessing and adapting approaches to students.

4. Innovation in production and business: AGI will make production more efficient, improve logistics and enable the creation of intelligent business systems.

Recommendations for ensuring the effective use of strong artificial intelligence technologies in this context

1. Developing Effective Legal and Ethical Standards: It is important to develop clear and effective legal and ethical standards for the use of AII technologies while ensuring safety, responsibility, and respect for citizens' rights.

2. Training and retraining of personnel: Given changes in the labor market, it is important to invest in training and retraining of personnel to provide them with the necessary skills to work with AIS technologies.

3. Focus on Security Research: Resources should be directed toward cybersecurity and data protection research to prevent threats posed by the use of AGI technologies.

4. Stimulating innovation and startups: Supporting innovative projects and startups in the field of strong artificial intelligence contributes to the creation of new technologies and their successful implementation in public and industrial spheres.

5. Formation of international standards: Global cooperation in creating international standards for the development and use of AIS technologies will help unify approaches and ensure their effective use at the global level.

With these perspectives and recommendations in mind, the implementation of strong artificial intelligence in the seventh information revolution can be a key factor in achieving new heights in technology and social progress.

Conclusion

The seventh information revolution, coupled with the development of strong artificial intelligence (AI), represents an important direction of technological progress that affects many aspects of our lives. In analyzing this context, we identified key points that highlighted the significance of this technology fusion and its impact on society.

Seventh information revolution:

- Represents an era where data volume, the Internet of Things and quantum computing form a new information paradigm.

- Stimulates the development of smart technologies, including strong artificial intelligence, as a key element of this progress.

Strong artificial intelligence in the context of the seventh revolution:

- Provides perspectives for solving complex problems in medicine, education, manufacturing and other fields.

- Faces ethical challenges related to transparency, safety and impact on the labor market.

Results of the analysis:

- The seventh information revolution creates a favorable environment for the development of strong artificial intelligence that can transform society and the economy.

"However, ethical, safety and social impact issues must be proactively addressed to ensure the sustainable adoption of these technologies."

Overall, the combination of the seventh information revolution and strong artificial intelligence opens up new opportunities for society, but also poses new challenges. The sustainable and ethical use of these technologies requires not only technical readiness, but also a deep understanding of their social and economic implications.

4. Discussion

4.1. Analysis and substantiation of the hypothesis about the future creation and mass distribution of robots with an artificial partial soul

The idea of creating and distributing robots with artificial partial souls represents an interesting and complex aspect of the evolution of robotics and artificial intelligence. Let us consider the analysis and justification of this hypothesis, identifying key aspects and possible directions of development.

4.1.1. Analysis

1. Emotional connection with technology: The creation of robots with artificial partial souls can be aimed at strengthening the emotional connection between man and machine. Empathy and sensitivity can enhance interaction and integration of technology into everyday life.

2. Development of artificial intelligence: The integration of partial souls into robots involves the development of more complex algorithms for machine learning and understanding emotions, which helps to enrich the functionality of artificial intelligence.

3. Psychological aspect: Robots with artificial partial souls can become not just tools, but also partners and even friends (or enemies) in various areas of life, including education, healthcare and social communication. This can have a positive impact on a person's psychological well-being, but can also cause a number of problems. It seems that the time is approaching when new areas of science may appear: the psychology of robots, the social psychology of human-robotic systems, etc. This section of psychology that studies the relationship between people and robots in groups and teams is called. Social psychology The social psychology of human-robotic systems studies the influence of social factors on the thinking, behavior and emotions of people and robots, as well as the dynamics of their interaction within mixed groups and society as a whole. In this context, she studies social norms, interactions, conflicts, and other aspects related to social dynamics and interactions between humans and robots.

4.1.2. Rationale

1. Evolution of human attitude towards technology: Over time, we have seen a change in human attitude towards technology - from simple tools to smart systems. The development of robots with artificial partial souls may be the next step in this evolution.

2. The need for deeper interaction: With the advancement of technology comes the need to create machines that can not only perform tasks, but also engage in deep, human-like relationships. This is especially true in areas where not only functionality is important, but also the emotional component.

3. Technological Advances and Scientific Advances: Modern advances in robotics, neural networks and natural language processing provide the technical basis for the implementation of artificial partial souls in robots.

In conclusion, the hypothesis about the future creation and mass distribution of robots with artificial partial souls has a number of promising aspects that can make a significant contribution to the development of robotics and improving the interaction between man and machine. However, the implementation of such technologies also raises ethical, safety and sociocultural issues that require careful consideration in further research and development.

4.2. Comparison of the seventh information revolution with previous ones and assessment of its global impact on human civilization

The seventh information revolution, being the pinnacle of the sequence of previous information revolutions, acquires its uniqueness in the context of human development. Let's consider it in comparison with previous information revolutions, highlighting key features and trying to assess its global impact on human civilization.

4.2.1. Comparison

1. Connection with previous information revolutions:

- 1st revolution: The emergence of sound language and object consciousness became the starting point for humanity.
- 2nd revolution: The emergence of writing in text form reflected progress in the preservation and transmission of knowledge.
- 3rd revolution: The rise of printing created a new way of mass transmission of information.
- 4th revolution: The advent of computers and electronic forms of information storage changed the way data is processed.
- 5th revolution: The development of electronic transmission of information through networks, primarily through the Internet, has influenced global connectivity.
- 6th revolution: The emergence of online artificial intelligence systems has opened up new opportunities for performing various tasks.

2. Seventh Revolution:

- Internet as a knowledge space: The Internet is transforming from an information space into a knowledge space, denoting the main direction of modern information technologies.

- The role of artificial intelligence: Artificial intelligence systems are penetrating all spheres of society and playing a key role in this evolution by transforming data into information and then into knowledge.

4.2.2. Global Impact

According to the authors, during the 7th information revolution, robots will be created and widely distributed, functionally equivalent to the human body and possessing a partial artificial soul, first sensual, and then in a more distant future, intelligent, which will have not only feelings, emotions and intelligence, but also artificial consciousness and personality. These robots will be controlled by a person using a remote micro telekinetic interface, i.e. in the same way that a person's Soul controls his physical body. In order to master the technologies necessary for this, people must en masse master higher forms of consciousness, in which the ratio of relatively objective and relatively subjective content and other parameters of consciousness change significantly. Before this, in the history of mankind there was only one similar leap in evolution: when people generally realized themselves as humans at the physical level of reality [5].

In addition, the 7th information revolution has a global impact on society in several aspects:

1. Economic Impact: The Seventh Revolution is shaping new sectors of the economy, creating jobs in the fields of artificial intelligence, quantum technologies and big data analytics.

2. Sociocultural impact: Changes in education, health care, art and social life under the influence of new technologies create completely new sociocultural realities.

3. Ethical Considerations: There are complex ethical issues surrounding the use of artificial intelligence, data privacy, and potential social inequalities.

4. Global connectivity and level of systemicity of society as a whole: The development of information technology enhances the global connectivity and level of systemicity of society as a whole, creating new opportunities for cooperation, but also causing challenges in the field of cybersecurity.

The seventh information revolution represents a new stage, filling the Internet with knowledge and emphasizing the importance of artificial intelligence. The hypothesis of creating robots with partial souls poses new challenges and opportunities, emphasizing the importance of ethics and balanced development.

4.3. A brief examination of possible problems associated with the mass distribution of advanced artificial intelligence systems

With the widespread adoption of advanced artificial intelligence (AI) systems, new challenges and potential problems arise that require careful attention and discussion. Let's briefly look at some of them:

1. Ethical issues:

- Decision Making: How will AI systems make ethical decisions, especially in the context of different cultures and values?

- Responsibility: How to define and distribute responsibility for the actions of AI systems, especially in the case of autonomous systems?

2. Privacy and Security:

- Data protection: How to ensure reliable protection of data collected and processed by AI systems to avoid leaks and abuse?

- Cybersecurity: How to prevent advanced AI systems from being misused for cyber attacks and hacking?

3. Social and Economic Inequality:

- Accessibility: How can we ensure equal access to advanced AI systems to avoid widening social and economic divides?

- Employment: How to deal with potential job losses due to automation and AI?

- Robots fighting with advanced artificial intelligence, artificial consciousness and personality for their rights: this is truly the scariest aspect of the problems with advanced AI. If Robots become self-aware, won’t they, at a certain stage of their development, begin to fight people for their civil rights and freedoms? Will this not be a repetition at a new stage of evolution of the nightmare that we have already seen, when slaves fought for freedom, and then the black population fought for their civil rights and freedoms and for equality with whites? And we know that this struggle is not over yet and it is generally unknown when it will be over or whether it will be over at all.

4. Transparency and Explainability:

- Acceptability: How to ensure that decisions made by AI systems are understood and accepted to avoid public mistrust?

- Explainability: How can we make AI systems more explainable and understandable to people?

5. Liability and Legal Issues:

- Legal Liability: How to deal with legal liability issues in the event of errors or harm caused by AI systems?

- Regulatory framework: How to create an effective regulatory framework to control and regulate the use of advanced AI systems?

6. Dependency and Control:

- Dependency on AI: How to prevent society from becoming overly dependent on AI systems and maintain balance in their management?

- Technology Acceptance: How to ensure informed and informed public acceptance of advanced AI technologies?

A brief discussion of these issues highlights the importance of developing clear standards, ethical principles, and legal frameworks for the use of advanced AI systems. This is the only way to ensure the sustainable and effective implementation of these technologies, while minimizing the potential negative consequences of the widespread introduction of artificial intelligence systems.

5. Conclusion

5.1. Summing up the research

The conclusion of this article on the study of the seventh information revolution in the context of strong artificial intelligence represents an important point of generalization of the analysis performed. Based on the presented data and conclusions, we can formulate the main results and identify key directions for future research.

5.2. Highlighting Key Findings

1. Evolution of Information Revolutions: The study highlights the continuous historical logic (“red line”, mainstream) of information revolutions, ranging from the first steps of sound language to the emergence of advanced artificial intelligence systems.

2. The Role of Strong Artificial Intelligence: The seventh information revolution is highlighted by the role of strong artificial intelligence, turning the Internet into a knowledge space and providing new opportunities for data processing and decision making.

3. Challenges and Opportunities: The widespread adoption of advanced AI systems brings its own challenges, such as ethical issues, data security and social inequality, but also opens up new prospects for development and collaboration.

4. The Need for Regulatory Frameworks: Awareness of the potential challenges highlights the need to develop effective regulatory frameworks and ethical standards to govern the use of advanced AI systems.

5. Prospects for the 7th Information Revolution: The hypothesis of the creation and mass distribution of robots with partial souls, controlled by humans through a telekinetic interface, raises important questions about the future of interaction between humans and technology.

In conclusion, this study not only provides an overview of the current state of information technology, but also highlights the key trends facing humanity in the era of the seventh information revolution. Understanding these challenges and opportunities is critical to developing a sustainable and ethical path for technology development in the future.

5.3. Suggestions for future research and development

According to the authors, there is much more truth in the famous proverb “The new is the well-forgotten old” than is usually thought. This is seen in many examples, such as Dahir's training of Prince Supramati to control his thoughts with the help of a magic mirror [1].

In [1], the authors show that the long process of development of remote mental interfaces, in which the authors also took part, is bringing our civilization closer and closer to the re-creation of what was known in ancient times (not everyone knows, of course, as indeed today) like a magic mirror.

In this work we will give an extensive quotation from the fundamental two-volume monograph of the famous philosopher and political figure of India Sarvepalli Radhakrishnan “Indian Philosophy” [1, 2].

Sarvepalli Radhakrishnan
September 5, 1888 – April 17, 1975

“Those yogis who achieve the ability of samdhi begin to destroy karma, which appears in three forms: (1) in deeds committed in the past, the consequences of which began to appear in the present life (prarabdha), (2) in those deeds committed in the past, the consequences which must be redeemed in some period of a future life, or in reserve (samchita) karma, and (3) in those deeds done in the present life that require atonement in the present life or in some period of a future life (asami). The latter can be overcome through devotion to God or service to society.

Ready karmas are exhausted in this life, but about unready ones, which will be realized in a future life, it is said that yogis can create all sorts of bodies necessary to pay off old debts. Each of these bodies has its own citta, or mind, called nirmana citta[6]***, or artificial intelligence. Artificial bodies with their cittas are different from ordinary bodies because they are completely systematic in their actions. The yogi's consciousness controls these various automata. As soon as the automaton, which has its own destiny and which must exhaust a certain portion of deferred karma, has completed its task, the yogis remove their control over it and the “man” dies a sudden death. Unlike the ordinary mind, artificial mind experiences do not leave traces behind.***» [3] (italics mine, author).

Note that this was written by Sarvepalli Radhakrishnan in a monograph published in 1931! At that time, no one in the world, even in “civilized

[6]Free translation by the author of the term: “nirmana chitta” from Sanskrit into Russian: “non-human mind”

England," had yet used the terms "artificial intelligence" or said that automata with artificial intelligence could be created. This is, of course, surprising, but even more surprising is that Sarvepalli Radhakrishnan is referring not only to modern times, but also to ancient times, perhaps hundreds or even thousands of years distant from our time. This is, of course, surprising. But we are writing about this in this work not because we want to please readers with interesting information.

In work [1], the authors show that the long process of development of intelligent systems, in which the authors also took part, is bringing our civilization ever closer to the re-creation of what was known in ancient times (not everyone knows, of course, as is the case today) as "Artificial bodies with their nirmana cittas." In a two-volume monograph of 1979-1981[7]"Theoretical foundations for the synthesis of quasi-biological robots," one of the authors writes that our civilization has come close to creating intelligent anthropomorphic robots (androids), completely functionally equivalent to the physical human body and having an artificial partial soul, which will be controlled by a person in higher forms of consciousness with the help of remote micro telekinetic interface (technical solutions have been proposed), i.e. in the same way that a person's soul controls his physical body. By people in the most common form of consciousness at present, these robots will be perceived and recognized as having feelings, intelligence and personality [1].

These are our suggestions for future research and development: do what people have done in the past.

Данная статья на русском языке [6].

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[7]45 years have passed since then…….