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«РОБОЭТИКА (ПО ЗАКОНАМ АЗИМОВА) И ЧЕЛОВЕЧЕСКАЯ МОРАЛЬ: ГДЕ ГРАНЬ ДОПУСТИМОГО?»

Участники:

Филипенкова Анастасия

Крутоголова Светлана

Байрамова Алина

Гарипова Амалия

Руководитель группы: **к.пед.н. Ершова О.В.**

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PLEKHANOV RUSSIAN UNIVERSITY OF ECONOMICS

“Unity in Diversity: Russia & the English-Speaking World”

“ROBOT ETHICS (ACCORDING TO ASIMOV’S LAWS) AND MORAL DILEMMAS: WHERE IS THE LIMIT?”

Participants:

Filipenkova Anastasiya

Krutogolova Svetlana

Bayramova Alina

Garipova Amalia

Supervisor: **P.h.D. Ershova O.V.**

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Theses:

1. There are two extremes: the apocalypse including the world fulfiled with robots, containing no place for humanity and another without any gadgets or devices at all. It is vital to know who should be replaced.
2. The possibility of involving a soul into a robot and enriching its mechanism with moral principles of men. There are already three rules formed by Asimov. However, they do not adjust robots' actions in all cases.
3. Robots have been in our world for a long time. Folks passed through implementations of them with uncertainty and fear. Every day robots are improved and developed by many scientists. Moreover, every country differs from each other.
4. The main role in the life and behaviour of robots is directly represented by the person, it is himself who lays the basic settings for the robot. The inventor adopts ethics into a robot, that is why roboethics is the question of the humanity's virtue.
5. The chances of finding the edge of what is acceptable in the "education". In this case, it is not the robot ethics that needs to have limits, but the creator should be restricted.

What do you mean by the word "apocalypse"? The majority of people visualizes the end of the world, accompanied by cataclysms and disasters, overtaking human race like a divine retribution. The Infernal Cauldron, the burning surface, earthquakes, floods and other terrible evil that can come to mind. On the other hand, nowadays, an entirely different vision has formed. Everything is dull, it is impossible to hear lively conversations of people on the streets, there are no children having fun and laughing on playgrounds and yards, crowds of clerks do not hurry up to the office in the morning, afraid to be late for work. So inanimate and unresponsive. The new world is the world of robots. There are no wars, no famine, in principle there is no place left for human problems. Both stories give you goosebumps. However, let's be honest, generation Z has exactly the same emotions caused by a broken gadget, the loss of a phone or cellular communication. Technological progress has simplified our lives so much that it is extremely difficult to adapt to the lack of necessary devices. Is it worth thinking about how much a person has become addicted to technology? Can a robot fully replace our fellow creature? Where is the limit?

When we talk about robotics, we ideate a code that does not change, in contrast to morality, which develops along with the multifaceted personality of a person who builds his principles throughout life (Pic. 1). In spite of the robots lacking morality, they also may obey the rules that Asimov once formulated:

1. A robot may not injure a human being or, through inaction, allow a human being to come to harm.

2. A robot must obey orders given it by human beings except where such orders would conflict with the First Law.

3. A robot must protect its own existence as long as such protection does not conflict with the First or Second Law.

Moral principles are a broader and more flexible concept, but should they be changed to a cold calculation of robots?

What to do during a fire in a building, to help those in trouble on your own account, or to leave this complicated task to professionals? And if a situation where you need to decide what is more important to save, a life of one loved or lives of thousands of innocent strangers, the choice will be obvious. In that case, are our moral standards correct? After all, we are sacrificing more people than we can save.

However, until now, people believe that robots they have created can do more harm than vulnerable morality. Isaac Asimov in his book "Caves of Steel" narrates: "A robot may not harm a human being, unless he finds a way to prove that in the final analysis, the harm done would benefit humanity in general" [2, 108 p.]. So why do people hustle and bustle about artificial intelligence?

Analysing historical facts, we found out that the population of the whole world is scared of new phenomena, not for the first time. What just did not cause people to panic in a process of technological development: electric cars, self-service tills, steamers etc. Exploring deeper, it was not the innovation itself that terrified them, but the consequences of the application, such as uncertainty and the unknown.

The result of the operation of cars without a driver could be the loss of jobs. The emergence of a non-cash payment method leads to the complication of trade and the depreciation of goods. The use of computers leads to the development of deadly diseases. Unawareness and ignorance are two of the worst enemies for the individual. We experience the same situation with the lack of information about robots (Pic. 2).

The data about the first practical application of the prototypes of modern robots dates back to the Hellenistic era. Then, on the lighthouse built on the island of Pharos, four gilded female figures were installed. During the day they shone in the rays of the sun, and at night they were brightly lit, warning sailors of the proximity of the coast. Over the centuries, robotics has developed, and in the 20th century the whole scientific direction appeared — bionics, which aimed to approximate the dynamics of robots to human flexibility. I. M. Makarov and Yu. I. Topcheev in their book “Robotics: History and Prospects” note: “Modern robots, created on the basis of the latest achievements of science and technology, are used in all the spheres of human activity. People have received a faithful assistant, capable of not only performing work dangerous to human life, but also freeing humanity from monotonous routine operations” [7, 78 p.]. The development and spread of robots have become possible with the improvement of computing technology. Therefore, we would like to analyse the level of robotization in various countries at the moment.

Russia has a huge potential in the field of technological development. It is stimulated not only by the available resources, but also by the government support. However, due to the political crises of the past, the country has to catch up with today's leaders. A number of strategic state programs that were created with the purpose of improving technologies such as “Rostech”, “Development of Science and Technology”, “Digital Economy”, etc. Russia holds a leading position in the space industry, nuclear energy, and aircraft manufacturing. Technological advances include such things as a 3-D printer for printing rocket engines, an exoskeleton, a solar car, a flying motorcycle. The achievements of domestic science are the formation of a legislative framework for the regulation of crypto economics and blockchain technology.

Unlike Russia, America has long been engaged in robotics, which specializes in military robots of various types: wheeled, tracked, mixed. Currently, there are also three types of ground-based robots. As we can see at A3 report, businesses are increasingly looking to fill gaps in production lines with robots. The leading industries for robotic workers are automotive, electronics, food processing and warehousing branches.

England contrasts with the mentioned countries. Despite some progress over the past few years, the UK still lags behind other countries in the use of robots. Consider at least the industrial sector, where it falls short of the average level of productivity. According to the latest International Federation of Robots (IFR) World Robotics Report, half a million new robots were installed around the world last year, but only 2,054 were in the UK (Pic. 3).

Due to local and global limbo related to energy prices, the availability of electronic components, and the cost of living crisis, it seems possible that the number of robotic installations will continue to grow. Nearly 570,000 of those mechanisms are predicted to be set up worldwide by 2024.

The creation of new technologies is a real art. An inventor is considered to be an artist, while a robot is his masterpiece. It combines not only the skill of a person, but also his imagination, inventiveness and desires. The creator of a technological miracle writes a program of functions. It is the person who controls the behaviour, work and utility of artificial intelligence. However, if the creator is an individual, who is possessed by evil intentions, then the robot turns into a weapon. The conception of moral is not inherent for artificial intelligence. He simply does not know how to evaluate his own actions and to determine where is the edge of good and evil. Do not forget that robots are not living beings. It turns out that if a person wants his creation to bring harm, it will be so. It is necessary to pay close attention not to artificial intelligence, but to the inventor. As Winston Churchill said once: “I am ready to meet my Maker. Whether my Maker is prepared for the ordeal of meeting me is another matter.” [10].

Is there any limit? It doesn't exist in the modern world. It just faded away. People are so eager to develop technology and make discoveries that they forget about two very important things: robot ethics and human morality. Take a look around, and you understand: all the creations created by man still remain under the control of man. Therefore, it does not matter how many moral rules should be established into the robot, and how they would be formulated. It really matters what moral rules we put into its creator. The boundary of what is acceptable lies in the culture of ourselves, and robots are just another embodiment of our desires, our capabilities, our interests and the fulfilment of our needs. "I don't think the robots are taking over. I think the men who play with toys have taken over. And if we don't take the toys out of their hands, we're fools." — Ray Bradbury [1].

Perhaps it's the three rules of Asimov? That is the limit of what is acceptable? Or may they be the ten Biblical commandments, because for robots we are Creators? The line is that technologies should develop and make our life easier and better, but no more. You can replace a worker with a robot, but you cannot assign exclusively human qualities such as intelligence, compassion, mercy to a machine. Daniel Wilson in “Robocalypse” claims: "Technology changes, but people stay the same." [1].

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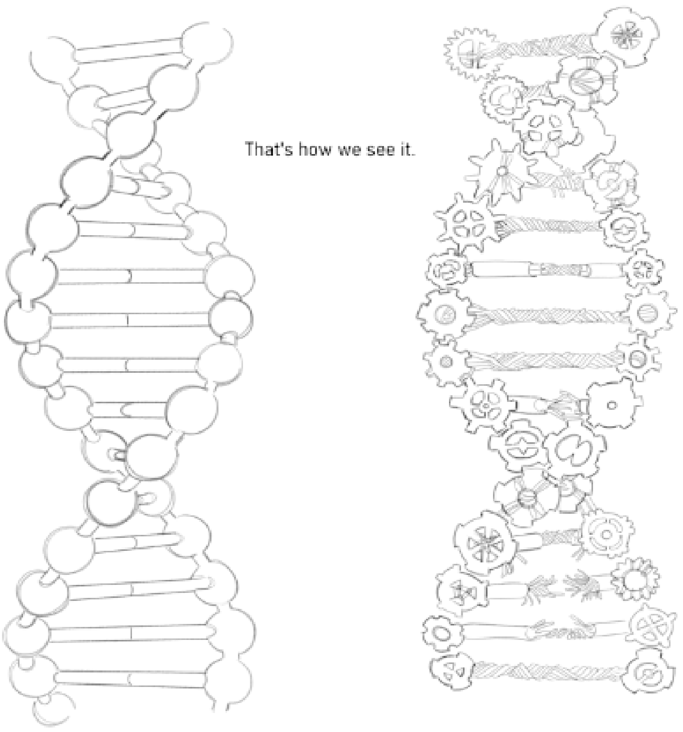
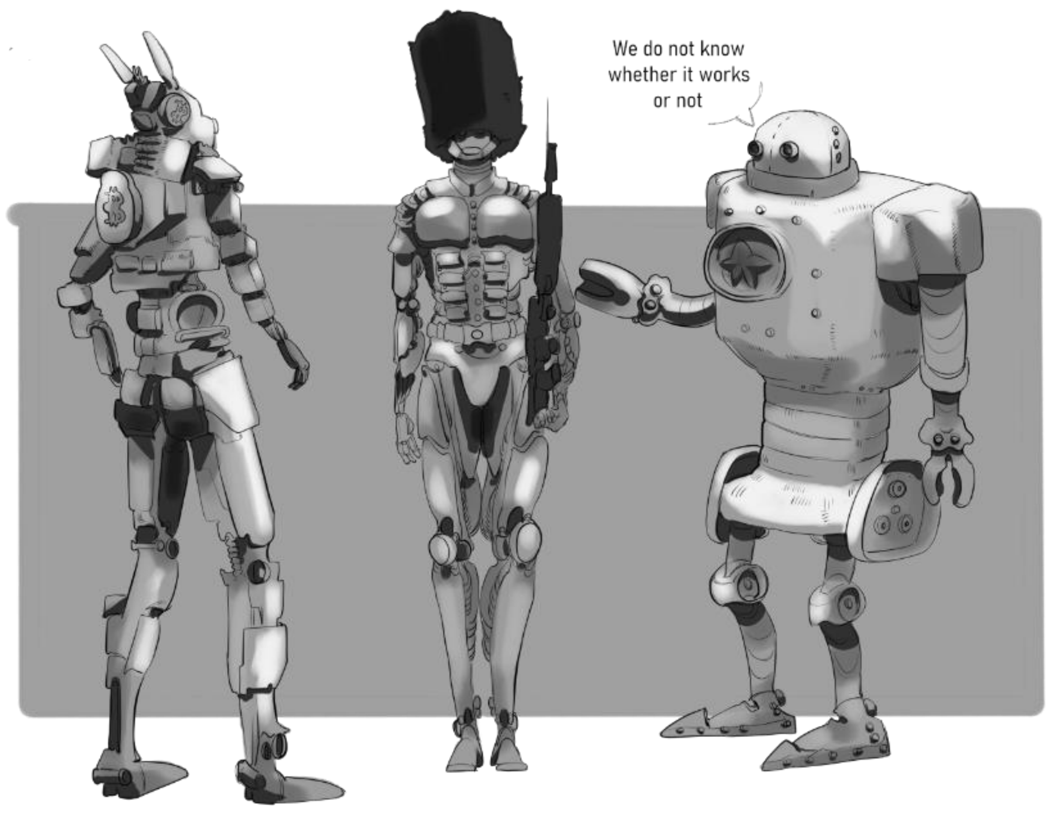
Appendix



pic. 1. Human DNA and non-

existent robot DNA

pic. 2. Man exaggerating robotization process in industry



pic. 3. Robots of different nationalities