


# WHAT THE ANCIENT GREEKS WOULD SAY ABOUT CYBORGS AND ARTIFICIAL INTELLIGENCE: A THOUGHT EXPERIMENT

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## ABSTRACT

How can technologies affect human nature? If the nature of human beings changes, one wonders: in which direction? These problems are actively discussed today by philosophers, sociologists and political scientists, representatives of religious denominations, etc. One of the points of view, which can be conditionally called “anthropomorphic”, boils down to the fact that the combination of man and machine is unacceptable, as this leads to anti-humanism, and one must follow the path of improving the Human Body. “Transhumanists” or “post-humanists”, on the other hand, say that everything that can be done must be done and progress cannot be stopped. The point of compromise is to comply with the “red line”: to prohibit reproductive cloning, but to allow the use of biotechnologies, for example, to treat people. The article also tried to implement a kind of mental experiment and to evaluate the technological trends indicated from the position of the ancient philosophers, mainly Socrates and Plato. The authors suggest that ancient philosophers could give ambiguous assessments.

**Keywords:** Cyborgization. Transhumanism. Posthumanism. Anthropomorphism. Artificial intelligence.

## O QUE OS GREGOS ANTIGOS DIRIAM SOBRE CIBORGUES E INTELIGÊNCIA ARTIFICIAL: UM EXPERIMENTO DE PENSAMENTO

LO QUE DIRÍAN LOS ANTIGUOS GRIEGOS SOBRE LOS CYBORGS Y LA INTELIGENCIA ARTIFICIAL: UN EXPERIMENTO MENTAL

## RESUMO

Como as tecnologias podem afetar a natureza humana? Se a natureza dos seres humanos muda, indaga-se: em que direção? Esses problemas são ativamente discutidos hoje por filósofos, sociólogos e cientistas políticos, representantes de confissões religiosas, etc. Um dos pontos de vista, que pode ser condicionalmente chamado de “antropomórfico”, resume-se ao fato de que a combinação de homem e máquina é inaceitável, pois isso leva ao anti-humanismo, e deve-se seguir o caminho do aprimoramento do corpo humano. “Transhumanistas” ou “pós-humanistas”, por outro lado, dizem que é preciso fazer tudo o que pode ser feito e o progresso não pode ser interrompido. O ponto de compromisso é cumprir a “linha vermelha”: proibir a clonagem reprodutiva, mas permitir o uso de biotecnologias, por exemplo, para tratar pessoas. O artigo também tentou implementar uma espécie de experimento mental e avaliar as tendências tecnológicas indicadas a partir da posição dos filósofos antigos, principalmente Sócrates e Platão. Os autores sugerem que os filósofos antigos podiam dar avaliações ambíguas.

**Palavras-chave:** Ciborguização. Transumanismo. Pós-humanismo. Antropomorfismo. Inteligência artificial.

## RESUMEN

¿Cómo pueden las tecnologías afectar la naturaleza humana? Si la naturaleza de los seres humanos cambia, uno se pregunta: ¿en qué dirección? Estos problemas son discutidos activamente hoy por filósofos, sociólogos y politólogos, representantes de denominaciones religiosas, etc. Uno de los puntos de vista, que se puede llamar condicionalmente “antropomórfico”, se reduce a que la combinación de hombre y máquina es inaceptable, ya que conduce al antihumanismo, y hay que seguir el camino de la mejora del cuerpo humano. Los “transhumanistas” o “poshumanistas”, en cambio, dicen que todo lo que se puede hacer debe hacerse y el progreso no se puede detener. El punto de compromiso es cumplir con la “línea roja”: prohibir la clonación reproductiva, pero permitir el uso de biotecnologías, por ejemplo, para tratar a las personas. El artículo también intentó implementar una especie de experimento mental y evaluar las tendencias tecnológicas señaladas desde la posición de los filósofos antiguos, principalmente Sócrates y Platón. Los autores sugieren que los filósofos antiguos podrían dar valoraciones ambíguas.

**Palabras-clave:** Cyborgización. Transhumanismo. Posthumanismo. Antropomorfismo. Inteligencia artificial.

## INTRODUCTION

Today, technological progress has come to the point where it was possible to change the very nature of man. It turns out to be technically feasible what science fiction writers wrote about earlier: the creation of neurocomputer interfaces, bionic prostheses of limbs and other organs of the body, the cultivation of new organs, cyborgization. Back in 1998, British professor Kevin Warwick installed an RFID chip, and in 2002 implanted an implant that allows you to directly interact with a computer in the median nerve of the left hand and proclaimed the onset of the cyborg era (<https://www.independent.co.uk/news/professor-has-worlds-first-silicon-chip>). Stelarc, a performance artist and honorary professor of art and robotics at Carnegie Mellon University (Pittsburgh), researcher at Curtin University in Western Australia now, surgically grew an extra ear on his left hand through which other people can hear all the sounds he can hear via Wi-Fi (DAYAL, 2012).

He believes that in the future it will be possible to rent even someone else's body via the Internet, i.e. manage someone else's body as their own through neural networks. Stelarc has many other, more shocking ideas: the biological body, he says, is outdated, and it needs to be recreated, adapted to exist in the conditions of other planets and the cosmos (DERY, 2004, p.228-231). Another manifestation of the trend for the modification of living beings was the appearance in the late 1990s. a new artistic direction - bio-art - the purpose of which is to create works of art using biological materials (DNA, tissue, blood, etc.), as well as new biological creatures using genetic manipulations. So, one of the founders of bio-art, Eduardo Katz, raised a rabbit with the addition of green fluorescent protein isolated from jellyfish (EROKHIN,2014, p. 71).

## METHODS

The article attempted to implement a kind of mental experiment and evaluate the indicated technological trends from the position of ancient philosophers, primarily Socrates and Plato. These problems are actively debated today by philosophers, sociologists and political scientists (FUKUYAMA, 2004), representatives of religious faiths, etc. One of the points of view, which can conditionally be called "anthropomorphist" (was declared back in the late 1960s by I. A. Efremov (YEFREMOV, 1970, p. 308, 39) boils down to the fact that the combination of man and machine is unacceptable, since this leads to anti-humanism, and you should go along the path of improving the human body.

Another extreme point of view presented by Warwick, Stelarc and their supporters is that you need to do everything you can to do, and you can't stop progress ("transhumanism" or "posthumanism"). Francis Fukuyama proposed a compromise point of view (more likely close to "anthropomorphists"), which is to draw a "red line": prohibit reproductive cloning, but allow the use of biotechnology, for example, to treat people (FUKUYAMA, 2004, p. 293-295).

So, for J. Hughes F. Fukuyama - rather technophobe, suspected of intolerance to intelligent machines / cyborgs / genetically modified people. Hughes's views are closer to "transhumanists," but his transhumanism is democratic transhumanism: he is convinced that the development of technology and the upcoming difficult dialogue of "organic people" with artificial intelligence should be controlled by society and be aimed at the benefit of the whole society through democratic institutions (HUGHES, 2004). Thus, the "red line" is a conditional concept, and the temptation to shift it in one direction or another is great.

Therefore, there is reason to turn to the origins of modern humanism and ask the question: what would Immanuel Kant say about this? John Locke? Socrates? Indeed, what would Socrates say about body modifications, bioprosthesis, neural networks, and artificial intelligence?

Such a statement of the question may seem strange only at first glance, since political scientists and philosophers constantly ask questions about the significance of the experience of ancient democracy in the current crisis of democracy, the prospects of cyber democracy, on the one hand, and the advent of populism, on the other ([https://www.youtube.com/watch?v=\\_38rEaj7wL4](https://www.youtube.com/watch?v=_38rEaj7wL4)). We believe that Socrates or Plato, if adequately explained, could understand and comprehend the problems outlined above; after all, Platonic dialogues are no less sophisticated mental constructs than discussions about dialogue with artificial intelligence. But the answer that could be given is a specifically antique answer, and we will try to formulate it below.

## RESULTS AND DISCUSSION

With considerable certainty, it can be argued that Socrates, like the vast majority of ancient thinkers (if not all of them), would have reacted sharply negative to any prospects and possibilities of techno-modification of the human body, if they were aimed at creating bioprostheses of human organs (i.e., prostheses from biocompatible materials controlled by human nerve impulses) or man-machine hybrids (cyborgs, biomechanoids, etc.). It would not be too strong an assumption that the ancient Greeks would treat people with bioprostheses and cyborgs in much the same way as in reality they treated people with disabilities and mythological monsters.

Literary evidence is even more revealing. Several ancient writers - Diodorus Siculus, Quintus Curtius Rufus, Justin - in their descriptions of the campaigns of Alexander the Great mention the meeting of the king with the Greeks, who were captured by the Persians. All of them were mutilated and disfigured: they were left only those parts of the body that were needed for work, so that among them were armless, legless, legless, etc. Alexander invited them to return home, but they preferred to stay, because in their cities they will become "an object of reproach" (DIOD, XVII, LXIX) and "instead of causing joy to their parents by their return, they should merely shock them by the horrid spectacle which they presented" (Justin. Hist. Phil., XI.14.11-12).

Speaking about the fact that one of the Spartan kings, Agesilaus (444/43 - 358 BC), was lame, Plutarch emphasizes that "his deformity" was compensated, firstly, by its beauty, and, secondly, his light and cheerful disposition, since the king "being first to jest and joke about himself, went far towards rectifying it," and, in addition, "his lameness brought his ambition into clearer light, since it led him to decline no hardship and no enterprise whatever" (PLUT. Ages. 2.2; PLUT. Lys. 22.5). Plutarch also reports on the Spartan custom of infanticide - the killing of weak and ugly newborn babies who were allegedly thrown into chasm-like place at the foot of Mount Taygetus (PLUT. Lyc. 16.1-2). The existence of this custom is doubtful: for example, it is not mentioned by Xenophon (430 - 356 BC), who knew Sparta, unlike Plutarch, at the time of her military power and firsthand; moreover, recent archaeological excavations have not found children's bones in the gorge near Mount Taygetus (<http://www.abc.net.au/news/>, 2007)<sup>1</sup>.

However, this is not important, but the fact that such a legend developed back in antiquity as a kind of aesthetic utopia representing a society consisting exclusively of physically (and morally) perfect people. Therefore, both conventional prostheses and bioprostheses or prostheses are a fashion accessory (for example, a futuristic hand prosthesis by Norwegian designer H.A. Huseklepp, reminiscent of a robot limb, or carbon fiber prostheses-blades of the 1996 Paralympic Games in running and long jumps Aimee Mullins (WEINSTEIN, 2011, p.119-123) would have caused horror and disgust in people of antiquity (not to mention ears grown on the hand, or genetically modified animals).

Man's rejection of the antiquity of man-machine hybrids, not to mention robots, is, in our opinion, also due to the fact that antiquity was not just a non-machine civilization; she was an anti-machine civilization. As an objection, we can, of course, recall the Archimedes screw and the fighting vehicles of Archimedes, which terrified the Romans (ROZHANSKY, 1988, p. 291-292, 321-322), the Alexandrian school of mechanics, to which Ctesibius, Philo and Hero belonged (the latter is known for the invention of aeolipil - a prototype of a steam engine, a odometer - a prototype of a taximeter, puppet theater and a vending machine for selling sacred water (DIELS, 1934, p. 322-332; ROZHANSKY, 1988, p. 56-67), as well as an Antikythera mechanism recognized by the oldest mechanical computing device designed for conducting astronomical calculations (<http://www.antikythera-mechanism.com>, JONES, 2017).

But these achievements of ancient technology should not be overestimated: they did not or almost did not affect the general course of development of ancient civilization, being, in fact, either toys, like Hero's assault rifles, or the creation of a narrow circle of the intellectual elite (or single geniuses like Archimedes). After they passed away, inventions turned out to be irreproducible and forgotten: already in the era of the late Roman Empire there were no people left who could reproduce the aeolipil or Antikythera mechanism. In less than two centuries, the inhabitants of Syracuse managed to forget Archimedes so much that the monument on his grave, found by

<sup>1</sup>A similar custom is established by Plato (through the mouth of Socrates) in the framework of the eugenic policy of an ideal state: "... the offspring of the inferior, and any of those of the other sort who are born defective, they will properly dispose of in secret, so that no one will know what has become of them" (PLAT. Rep. V.460c). "If they are unable to prevent a birth to dispose of it on the understanding that we cannot rear such an offspring" (PLAT. Rep. V.461c). Aristotle categorically stated that "let there be a law that no deformed child shall be reared" (ARISTOT. Pol. 7.1335b).

Cicero, was completely abandoned. "The brilliant achievements of mechanics and engineering (perhaps, with the exception of the construction of tools) do not find any recognition in wide circles" (DIELS, 1934, p. 36).

## SUMMARY

With what, however, is this "machinophobia" of antiquity connected? Two explanations can be offered: socio-economic and cultural, complementing each other. The lack of interest in technological progress is due, firstly, to the slave-owning character of ancient civilization. The practical use of technical innovations was not necessary; moreover, their absence made it possible to occupy a mass of people, both slaves and free, by primitive physical labor. Secondly, the aesthetic ideal of antiquity had a material and physical character. O. Spengler also defined the prasympol of antiquity (Apollonian culture) as a body, "a statue of a naked man" (SPENGLER, 1993, p. 247, 259, 307). A.F. Losev, continuing Spengler's thought, stated that the beauty in antiquity is "primarily the body", the body is not dead, but alive and animated, so that all of antiquity sought only to the utmost generalization of the living human body (LOSEV, 2000, p. 466, 561). Combining this beautiful, impeccable body with a machine - does that mean defiling it?

But cyborgization and augmentation (complementing body parts or replacing them with mechanical devices that give superhuman abilities) is just one aspect of our possible near future. The ability to rent someone else's body, another person, an android robot or an artificially grown clone avatar, controlling it remotely, is not only actively comprehended by science fiction (except for J. Cameron's Avatar, you can name, in particular, "Surrogates" J. Mostow: surrogate- androids with an ideal appearance work, travel, serve in the army, and people control them from their homes). Attempts are also being made in its engineering implementation: Professor Hiroshi Ishiguro from Osaka University has created a series of android robots remotely controlled by humans and enabling indirect physical contact between communication participants (<http://news.bbc.co.uk/2/hi/science/nature>).

Such a prospect, one can assume, would have seemed to Socrates and his interlocutors much more attractive. Firstly, the manipulation of an anthropomorphic - or zoomorphic - double would vividly remind a person of antiquity of the myths of transformations: Zeus in the form of a swan, Odysseus' companions, turned by Circe into pigs, king Ixion, who tried to seduce Zeus' wife - the goddess Hera - and who received her image created by Zeus from the cloud (isn't it, a very modern expression is a "cloud image"?) By the way, to the number of features of antique thinking A. Losev attributed Werewolf, "the universal ability of anything to pass into any other thing" (LOSEV, 2000, p. 419). As A. Clark suggested, any sufficiently advanced technology is indistinguishable from magic.

Daimon Socrates would most likely approve the use of "avatars" and "surrogates" for another reason - it is so similar to using the labor of slaves (and helots in Sparta). While the body of this "aggregate slave owner" - his avatar - is engaged in physical labor, another part of his personality can spend time in philosophical discussions, conversations or pleasures (the concept of the unity of a slave and a slave owner as a passive intellect, not engaged in physical labor, and a body engaged exclusively in physical labor) nominated by A. Losev (LOSEV, 2000, p. 433-447).

1. Finally, we cannot at least briefly touch on the attitude of our imaginary interlocutors to modern democracy - and to its future modifications, such as cyber democracy, by which we mean the expansion of political participation through electronic communications (online voting and online referenda). Socrates and other Athenian philosophers and intellectuals - Thucydides, Plato, Xenophon, Aristotle - did not approve of the Athens political system in the form in which it was established after the reforms of Cleisthenes (508-507 BC) (SURIKOV, SOCRATES, 2011, p.229-231).<sup>2</sup> Some of them proposed utopian plans for ideal policies ("Republic" and "Laws"), others emigrated, while others, like Socrates, criticized the system, while remaining completely loyal citizens. Nevertheless, all or almost all Athenian intellectuals of the second half of the fifth and first half of the fourth centuries B.C. considered the main disadvantage of democratic government that it does not ensure the knowledge and competent people come to power. It is unlikely that they would consider democracy a modern representative democracy in the form in which it exists in the countries of Western

<sup>2</sup>Aristotle among the types of democracy considered the best one in which the whole people participate in the election of magistrates, but "the higher offices being elected from the higher property-grades, or else for no office to be elected on a property-qualification, but for officials to be chosen on the ground of capacity"(ARISTOT. Pol. 6.1318b).

Europe and North America; probably they would define it as an oligarchy, politics (moderate democracy) or a mixed state system. The Schumpeterian model of democracy, according to which ordinary citizens have the right only to choose representatives of one of the competing elites ("competitive elitism") (HELD, 1997. p. 185-191), perhaps the ancient intellectuals would like more. And therefore, to the prospect of a wider and more active participation in the political life of ordinary citizens, ancient intellectuals would at least be cautious. If they knew a little bit more about the political history of the twentieth century, they would not fail to point out the fatal role of the masses in the establishment of totalitarian regimes — and all of them are tyranny, whatever K. Popper wrote (POPPER, 1992, p.246-247), categorically rejected (PLAT. Rep. VIII. 565a-569b; ARISTOT. Pol. 5.1310b.).

2. It is unlikely that the Athenian intellectuals would have aroused the sympathy of the possibility of creating a democratic Big Brother, which mankind has approached when everyone can watch everyone through a system of video cameras with Internet access. This, perhaps, would remind them of the Athenian practice of sycophancy, when voluntary scammers sued famous and wealthy people for any reason, justifying it by the need to observe the public good (but first of all pursuing their own benefit). You can, of course, consider sycophancy as one of the means of self-defense of radical democracy from the oligarchic threat, which was reflected in the definition of sycophant as "the people's watchdog" (THEOPHR, Char. XXIX, 5); however, ancient politicians, turning the meaning of this metaphor, accused sycophants of the fact that they were dogs who themselves devoured the sheep, which seemed to be guarded (DEMOSPH, XXV, Against Aristogeiton I, 40).

## CONCLUSIONS

With significant certainty, it can be argued that antiquity is characterized by the rejection of man-machine hybrids and that Socrates, like the vast majority of ancient thinkers (if not all of them), would have reacted sharply negative to any prospects and possibilities of techno-modification of the human body. The ancient Greeks would treat people with bioprotheses and cyborgs in much the same way as in reality they treated people with disabilities and mythological monsters.

Cyberdemocracy - despite the fact that it is approaching direct democracy that is usual for the ancient Greeks, and maybe that is why - would have been more skeptical of ancient thinkers. And, most likely, they would have reacted sharply negatively to the prospect of managing society with artificial intelligence (like Multivak A. Azimov or HAL9000 A. Clark). If they sharply condemned the unlimited power of man, how could they reconcile with the unlimited power of the machine?

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