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Introduction to the issue: *Artificial intelligence and transhumanism*

The current issue of *Argument: Biannual Philosophical Journal* covers two intersecting themes: artificial intelligence (AI) and transhumanism. AI is a field of research in computer science and cognitive science, but they also draw on the achievements of mathematics, psychology, neurobiology and neuroscience, a field that focuses on creating computer systems capable of performing tasks that normally require human intelligence. AI strives to create programs and algorithms that can learn, think, explore, recognize patterns, make decisions, understand natural language and process information in a way similar to human. Transhumanism, on the other hand, is an intellectual (philosophical) and cultural movement that proclaims the need to overcome human limitations and postulates striving to improve the human psychophysical condition. To this end, he proposes to use science, including artificial intelligence, and technology, especially biotechnology, neurotechnology and nanotechnology.

The relationship between artificial intelligence (AI) and transhumanism is relatively strong, although not always clear-cut. However, there are several nodal points. These include, among others: 1) Multiple human enhancement. Transhumanism seeks to expand and improve human capabilities through advanced technologies, including artificial intelligence. AI could be critical to achieving these goals by enabling us to improve our intelligence, cognitive, emotional, moral, and awareness. In addition, AI can support the improvement of our bodies, through the development of robotics, prosthetics or medical technologies. 2) The problem of technological singularity. In the context of the technological singularity, AI plays a key role as it is considered one of the main factors that can accelerate and strengthen the development of technology. The vision of the technological singularity highlights the potential consequences that the development of artificial intelligence will bring to humanity. 3) A matter of transfer/emulation of the human brain, mind and consciousness to a computer, by precisely mapping all neuronal connections in the brain and faithfully recreating them. 4) Reflection on the nature and

identity of man. What are the consequences of technologically modifying our mind and body? Does the introduction of elements of artificial intelligence change our identity? And many other interesting and important issues. Some of the issues have been analyzed in this issue of the magazine

The eye is a very complex organ. We already know a lot about it, but not everything. However, we know enough to create robots and teach them to see. One of the most important visual skills is judging the distance of the perceived object. There are different methods of teaching this ability. In recent years machine learning methods and deep neural networks have been used. The encoder-decoder architectures has been widely used for this kind of task. However, these solutions encounter some difficulties and limitations. The paper *Distance estimation using artificial neural networks: architectures, capabilities and limitations* by Tomasz Hachaj discuss the challenges faced by such architectures. Discussing these issues, the author refers to his own experience in the practice of developing algorithms for estimating the depth of single frames based on deep learning.

Nowadays, many scientists and engineers are working on a whole brain emulation. Krzanowski in his paper, *Does whole brain emulation entail the emulation of mental disorders?*, claims that whole brain emulation recreates all the functions of a fully functional human brain in some physical substrate. And he continues to argue that in order to replicate all of the human brain's functions, we also need to replicate the human brain's capacity for mental disorders. The author propose that this issue should become one of the main topics of ongoing research on WBE technology.

Antoni Płoszczyniec in his *Transhumanizm jako gnoza. Refleksja analityczno-historyczna* [Transhumanism as gnosis. Analitical and historical reflection] presents transhumanism as a contemporary form of scientistic gnosis. The author begins by introducing the basic concepts and distinctions (among others, between gnosis and gnosticism), and then thoroughly discusses the two types of gnostic thought and distinguishes the main themes of ancient gnosis. It reconstructs the basic ideas of representative transhumanists in order to finally show that transhumanism is a concept that duplicates the patterns characteristic of Gnostic thinking. Transhumanists see in scientific knowledge the possibility of liberation from the body and overcoming human imperfections, as the author writes, the possibility of "divining man" and solving such eschatological problems as suffering and death.

Michał Kumorek, author of *Sztuczna inteligencja a tożsamość narracyjna: perspektywa transhumanistyczna* [Artificial intelligence and narrative identity: a transhumanist perspective] attempts to show possible changes in the structure of narrative identity as a result of cyborgization (by combining the human brain with artificial intelligence). The starting point for his considerations is the hermeneutic structure of Paul Ricouer's narrative identity. The author

analyzes the effects of changes in the experience of unpredictability, uncertainty and memory in the life of a human assisted by AI. Among the various questions posed by the author, there is a question about human responsibility in this new reality: will the AI assistance increase the subject's responsibility for the actions taken, or rather contribute to its reduction.

Technological development is getting faster and faster. It cannot be ruled out that we are approaching the time when this progress will get out of our control and bring a radical and an unpredictable changes. This moment is called a technological singularity. It's not entirely clear what it will be. Rachel Palm in her paper *GOLEMA XIV prognoza rozwoju ludzkiej cywilizacji a typologia osobliwości technologicznych* [The GOLEM XIV's forecast for the development of the human civilisation and a typology of technological singularities] analyzes the conceptual technological singularity. Moreover, it introduces a distinction between existential singularity, prognostic singularity and convergent singularity. It does so on the basis of the already existing literature on the subject. And finally, he juxtaposes these possibilities with the prediction of Golem XIV, a character created by Stanisław Lem.

In *Extended knowledge, reliabilism and cognitive enhancement strategies* Tomasz Walczyk proposes a new model of knowledge where extended knowledge is one of the integral dimensions of knowledge. For this purpose first reconstructs the idea of an extended mind and extended knowledge. In the proposed model, there is a place for extended knowledge in the strong sense and extended knowledge in the weak sense, Then discusses variety of cognitive enhancement strategies (from technological and behavioral to biochemical), and finally analyzes and tries to unify different approaches within reliabilist accounts of knowledge. The author also undertakes a critical discussion of the issues raised.

The paper *Wyzwania związane z tworzeniem etyki typu* data driven *dla maszyn typu* artifcial general inteligence *(AGI)* [Challenges related to creating data-driven ethics for artifical general intelligence (AGI) machines] by Krzysztof Sołoducha discusses the challenges we face in the development of artificial moral agents. Artificial decision-making systems and ethical behavior can be taught using the bottom–up method, based on the data provided to them, or top–down, based on a system of normative rules. The article analyzes the challenges related to the use of both methods and outlines the need to work on a hybrid approach. To check whether the latter works correctly, an ethical version of the Turing test can be helpful. In the article, the author presents several philosophical assumptions that should be taken into account when building such a test.

Magdalena Morze and Paweł Nowak's article *Ludzie i roboty. Praca z robotami jako (współ)praca zespołowa (*human robot collaboration*)* [People and robots. Working with robots as human–robot collaboration] deals with the issue of cooperation between humans and robots. Industrial robots are rapidly

replacing humans at work in numerous industries. Currently, however, more and more collaborative robots are being developed, designed to work directly with humans, hand in hand, towards a common goal. There are new challenges and difficult questions. When we cooperate with representatives of the same species, we can rightly count on getting to know each other, understanding and agreement, empathy and trust. What exactly is *cooperation* (with robots)? Can we trust robots? Should we trust them? These are just examples of questions that the author poses in the article.

Blockchain technology has recently gained importance not only in the financial sector, but also in other industries. It is an institutionally independent technology. It is characterized by a high degree of transparency, equal access and a high level of efficiency. By using it, anyone can maintain anonymity. The paper *Blockchain and clockwork trust* by Andrzej Leder analyzes the hypothesis, that we can understand the blockchain technology as a mechanization of trust. The outstanding aspect of blockchain is the question of past production. If the past moment would be indistinguishable from the present one, the inscription of events would have a messy and indefinite character. The past — and the temporal modality in general — guarantee the common memory of the past, which is the condition of possibility of trust.

The authors of next two papers, not related to the leading theme, present semiotic analyzes of religious practice in early tantric Buddhism, and the metaphoric gesture in contemporary dance. Marek Szymański, in his article, *Wzorce praktyki religijnej we wczesnej wadźrajanie i ich związek z buddyjską filozofią* [Patterns of religious practice in early Vajrayāna and their relationship to Buddhist philosophy], considers three successively arising patterns of religious practice in Vajrayāna tradition. The primordial pattern of tantric religious experience requires identification with the visualized deity. The practitioner temporarily transforms his own body into a container for the deity to enable its present, which implies the belief that the adept needs to identify himself with the ruler of the mandala in order to achieve the cognitive insight. Another pattern of this spiritual practice, requiring manipulation of emotions and sexual ecstasy, has a cognitive aspect too and leads to a soteriological transformation of the mind. An important assumption of the third pattern is that the appropriate modification of the life force permeating the adepts body can lead to the attainment of buddhahood. The paper *Semiotyka gestu metaforycznego w tańcu współczesnym* [Semiotics of metaphorical gesture in contemporary dance] by Paulina Zarębska discusses dance as a complex and multidimensional way of communication. As she emphasizes, with the help of the body, and more precisely, movements and gestures, often metaphorical ones, various meanings may be conveyed in dance. In Zarębska's opinion, a metaphorical gesture conveys hidden meanings and symbolic content through a kind of incongruity (inconsistency, inconsistency, contradiction) of elements in its structure, such

as facial expressions, hand and arm movements. It is thanks to the semantic and aesthetic layer of the metaphorical gesture that dance becomes an original form of rhetorical, persuasive and artistic communication.

The issue is completed with Andrzej Dąbrowski's review of the book *AI ethics: A textbook* by Paula Boddington. The book offers readers an insight into the fast-growing field of AI ethics. It discusses the most important current problems in the field of modern technologies and AI, including issues related to the wide use of artificial intelligence. It also addresses the problem of future AI and the important issue of superintelligence security. Above all, however, it gives a good introduction to selected issues, concepts, theories and debates related to ethics, pointing to a strong need to rethink old problems in the context of the development of artificial intelligence. Some issues related to the ethics of artificial intelligence are analyzed in a broader context and include certain issues in the field of philosophy, religion and culture.

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