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THE CONCEPT OF THE EXTENDED MIND AND ARTIFICIAL INTELLIGENCE: THE PROBLEM OF HUMAN CREATIVITY

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Abstract. The concept of the extended mind was developed by Andy Clark and David Chalmers in the 1990s. Scholars have repeatedly interpreted this concept and elaborated on its various aspects. This article addresses technological aspects of the extension by focusing attention on the complementary action (called augmentation) of artificial intelligence on the human mind and its consequences. While some of them result from the possibility of expanding human cognition, others concern agency, including moral agency. Extension in this context means restoration of the abilities that the human being has lost or equipping man with new competences. Developed within the philosophy of the human mind, the concept of the extended mind can be applied to reflections within the philosophy of technology, especially as our understanding of the correlation between man and the tools he uses is becoming clearer. Artificial intelligence is an artifact that expands and complements human thinking and acting in the context of collecting and organizing information. Importantly, artificial intelligence can significantly complement human creativity in the operational and combination dimension; moreover, it can suggest new and unconventional solutions. Artificial intelligence should be treated as a human creation, operating on the basis of the observed model of human skills and tasks formulated by the programmer or designer. We should also characterize the threats to the risks associated with artificial intelligence development and analyze the possibility of creating ethical use of artificial intelligence-equipped artifacts, including *ChatGPT*.

Keywords: artificial intelligence, *ChatGPT*, creativity, extented mind, new competencies.

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> "At the highest level, public life involves choices about what it means to be human. Today these choices are increasingly mediated by technical decisions. What human beings are and will become is decided in the shape of our tools no less than in the action of statesmen and political movements. The design of technology is thus an ontological decision fraught with political consequences. The exclusion of the vast majority from participation in this decision is profoundly undemocratic" (Feenberg, 2002, p. 3).

1. Introduction

Expanding the cognitive abilities of the mind with technical and digital aspects improves the human ability to create, to think creatively, and to process the world of things in a way that is convenient for us. According to the general assumption resulting from the concept of the extended mind as defined by Clark and Chalmers (1998), the objects with which we surround ourselves (the notebook, the computer, the virtual world, digital objects) affect the functioning of the human mind. While some of the forms of augmentation complement

human abilities to collections and segregate information, others improve the functioning of our senses, not only by supplementing birth or acquired defects, but also by adding new possibilities of perception and reception of sensory impressions.

A change in the relationship between human beings and *technē* – in this case, between us and artificial intelligence – is inevitable. However, as these changes are evolutionary in nature, we may not be fully aware of them happening. At present, it is already difficult for us to imagine ourselves functioning in our day-to-day environment without some "intelligent" or "smart" devices. However, the long-term consequences of the changes resulting from the development and use of technological artifacts will affect human life, regardless of our attitude towards those modern devices. On the one hand, we are hopeful about the progress of civilization, believing that it will extend human life and improve its quality. On the other hand, we would like to avoid the negative and unforeseen consequences of this type of change. Thus, while hoping to prolong our lives, we also want to make sure that we remain physically and mentally vigorous in old age. The problem of ageing societies brings new challenges. The aging of the brain causes memory loss and senile loneliness. As we know, simple forgetting can be a nuisance. Counteracting, among other conditions, Alzheimer's and Parkinson's diseases are incomparably greater challenges (Gazzaniga, 2008, p. 348).

The article aims to analyse human creativity in the context of an extended mind. This extension concerns the use of artificial intelligence by humans. This, however, raises an important question: do we have ethical criteria for evaluating phenomena related to the impact of artifacts of modern technology on human life? For now, we do not have such standards. However, we are trying to describe the previously developed ethical concepts and apply them to assess the coexistence and interaction of humans with artificial intelligence-equipped creations of modern *technē*. This issue will be discussed in the final part of the article.

2. Technologically "extended" man

In the philosophy of technology, scholars commonly distinguish three positions when addressing the human–machine relationship:

1) Functionalism speaks of the superior position of the user in relation to the technical device he finds handy;
2) Substantialism regards *technē* products as capable of acting independently of humans, even though they are man-made and humans supervise their operation;
3) Autonomism expects that at a certain stage of development, machines equipped with artificial intelligence will not only attain intelligence, but will also become self-sufficient and will be able to act independently of man. This last stage causes the greatest controversy, although so far this possibility seems to lie in the remote future (Mitcham, 2022).

Technical tools, including artificial intelligence, are man-made, and therefore their mode of use is programmed into their ways of use as defined by their human creator. The position commonly taken in the philosophy of technology is that *technē* products are related to man and constitute an essential part of human culture. This connection is determined by the term *system of technology* within which humans relate to and handle machines. The relationship

between culture and technology defines mutual relations; man as creator and user influences the world of machines, and, on the other hand, machines and their systematic use affect the individual person and the human species. This influence is stretched over time. While many scholars have studied the process of adapting technical tools to human needs, the other aspect, *i.e.*, the impact of technical artifacts on man, requires further, in-depth analysis.

The article's author adopts a hermeneutic perspective and uses the insights of the philosopher of technology, Dusek (2006). Its goal is to critically interpret the relationship between man and the products of technology. The use of the term *system of technology* allows us to describe the complex relationships between man and artifacts of technology and the impact of the latter on human actions (Dusek, 2006, p. 35). For the purposes of this analysis, I adopt a broad understanding of *technē* to include all human activities related to the use of tools or organizational systems used to communicate and create interpersonal relationships, as well as the production of things (including digital objects) created as a result of the operation of these systems. In such cases, the term *technology* tends to be used, which according to some researchers covers a wider range of issues than the term *technique* (Ropohl, 2010). In this sense, artificial intelligence is one of those artificial and at the same time material creations and objectified systems that affect the lives of individual people and the functioning of institutions.

Artificial intelligence is not merely "an artificial prosthesis for man as a being marked by insufficiency" (in the words of Arnold Gehlen). Nor is it "a special expression of human nature" (in the words of Oswald Spengler (Kiepas, 2000, pp. 11–13)). Currently, artificial intelligence algorithms can be an important complement to human competences. They can expand our cognitive, communicative, cooperative abilities with others with people and information systems. Moreover, artificial intelligence can assist in expanding the creativity of the human mind in various areas of human activity (Lamri, 2021, pp. 128–136). The modification of human cognitive abilities by artifacts equipped with artificial intelligence influences our actions, our relationships with our immediate environment, and also our general understanding of our own "selves", in the context of our understanding of ourselves as agents.

Contemporary technical artefacts affect, among other things, our understanding of space and time in the context of information and communication relations, *i.e.*, *near/far*, when it comes to the distance between partners, *slow/fast*, when it comes to the time of information circulation, and *little/much*, when we consider the possibilities of assimilating and processing information. The mediation of technical artifacts changes our perception of the world, our aesthetic preferences, the systems of collecting and storing knowledge, and the models of efficiently operating organizations. The presence of artificial intelligence-equipped devices affects also the cultural patterns that determine our idea of a fulfilled life. Driving "smart" cars and living in "smart homes", *etc.*, have come to be regarded as criteria, which define a person's social position and prestige. The lack of "smart" devices may condemn a person to social and professional exclusion as a result of their inability to keep up with the progressive "spirit of the age".

For the sake of consistency, it is necessary to define the meaning of the terms *mind* and *brain* as used in the argumentation presented here. *Mind* indicates the specificity of the singular existence of the human person; it is responsible for our individual thinking as a human

person, for our ability to feel and for the operation of the will. The faculties of the mind go beyond the biological and neuronal aspects of the brain phenomena that accompany mental activities. The conscious mind is not an illusion, an epiphenomenon of electrochemical brain activity; on the contrary, it is responsible for forming and controlling the processes that occur in the brain. The conscious mind of a person is the result of the emergent development of the human brain on the basis of a biological and cultural foundation (Schwartz & Begley, 2002, pp. 334–337). While the term *brain* usually occurs in the context of biological sciences, philosophers tend to use the term *mind*. The individual human person is an emergent entity that combines mental properties with the properties of the brain, the combination determining the process of thinking and conscious decision-making (Bremer, 2008). The incorporation of technical elements into human mental processes results from the development of technology and from the social approval for this specific type of interaction between man and the machine.

However, an important question arises here: do we have at our disposal ethical criteria with which to assess phenomena related to the far-reaching impact of modern *technē* on human life? It seems that, as yet, such criteria are not available, although we are trying to employ the existing ethical concepts and theories – *e.g.*, that of human nature and the dignity of the human person – to evaluate the coexistence and cooperation of man and *technē* products. I address ethical aspects of the use of artificial intelligence in the final section of this article.

3. Artificial intelligence and the concept of the expanded mind

Artificial intelligence is a collection of mathematical algorithms that are the result of discoveries within the multidisciplinary field of engineering, including neural networks, machine learning, a-life and fuzzy logic. Scientific research that deals with artificial intelligence uses the achievements of computer science, systems and organization theory, biology, neurocognitive, neuropsychology, philosophy of mind, and philosophy of science. Artificial intelligence uses advanced mathematical models (algorithms) to solve specific tasks of varying complexity. When solving a problem, we consider the connection between computer science and some aspect of knowledge from another field. Artificial intelligence uses advanced mathematical models (algorithms) to solve specific, complex tasks (Przegalińska & Oksanowicz, 2023, pp. 43–44). When we talk about artificial intelligence, the term *intelligence* means that a program, on the basis of a set of data containing examples of tasks and correct answers, finds relations between them and patterns of action. In such cases, intelligence is a phenomenon of thinking devoid, as it were, of the thinking subject and of the consciousness of the person who thinks.

In the broad spectrum of understanding artificial intelligence, we distinguish:

1) So-called weak artificial intelligence, also known as narrow artificial intelligence;
2) Strong artificial intelligence, also called artificial general intelligence (AGI) (Neubauer, 2021);
3) Superintelligence or singularity – artificial intelligence similar to human intelligence (Kurzweil, 2005, pp. 35–37).

In the case of weak/narrow artificial intelligence, we are talking about "intelligent" complementing of activities performed by a human being. *Deep Blue* (chess computer) by *IBM* is an example. The terms *strong artificial intelligence/universal artificial intelligence/full artificial intelligence* refer to the degree of the complexity of the software based on which computer applications can achieve a level of functioning similar to human intelligence. They are capable of abstract and intuitive thinking and of exceeding, in some areas, the capabilities of human intelligence by creating, for instance, new solutions, beyond the competence of the programmer or designer. Artificial intelligence can learn fast and draw surprising and revealing conclusions in the information resources (AGI) it possesses. A person can then use artificial intelligence to complement his own abilities to create (van der Maas et al., 2021).

For the time being, artificial intelligence does not mean artificial consciousness or self-awareness. Currently we are at the first level. We use a number of specialized digital applications that provide support in specific areas of human activity. Artificial intelligence is a computer program, even though humans may not be able wholly to comprehend its operation. Chatbots work well in the case of contacts and conversations with people; they are useful for specific applications, for example in customer service centers and shopping services. Chatbots can answer questions humans ask, but this does not affect the quality of the communication between humans. Predictably, the range of chatbots' competences will systematically expand (Wieczorek, 2021). Most often, we use applications equipped with weak artificial intelligence, ones which use the computing power of digital technologies and the ability to arrange and process large amounts of data. This, however, means that at this stage we pick "low-hanging fruit from the tree". So far, no algorithm has been developed capable of creating a strong artificial intelligence. Similarly, plans to create a singularity in the sense of an artificial intelligence equipped with self-awareness of its own existence and consciousness are for the time being a matter of the distant future. It is difficult to predict if this last aspect of artificial intelligence research should be developed further, and it is difficult to predict if it will be developed in the future. We are currently focusing on making the best use of artificial intelligence to expand the range of human activity (Larson, 2021, pp. 33–34).

Artificial intelligence is based on methods of acquiring knowledge known for centuries, *i.e.*, deduction (top-down) and induction (bottom-up). The top-down method played an important role in the early years of work on artificial intelligence. At that stage, various hypotheses were formulated and tested. However, as no operating system could effectively consider all possibilities, the beginning of the twenty-first century saw a return of bottom-up methods (Kleppmann, 2017). The latter method is based on techniques for detecting statistical patterns in large sets of data and consists in providing the program with access to data. The development of work on artificial intelligence based on this method has become possible thanks to technological access to data and the phenomenon called *big data*. It allows us to describe key correlations that occur between the data and not the senders of this data (Anderson, 2008).

A bottom-up approach requires access to data. The top-down approach involves implementing much initial information, which may need more (van der Maas et al., 2021). A bottom-up approach (the basis of machine learning) is currently more common. It refers to learning artificial intelligence patterns or models from raw data. It involves extracting features or representations directly from the data and using them to make higher-level abstractions

or predictions. Artificial intelligence algorithms in the process of deep learning discover only superficial statistical regularities (Jo & Bengio, 2017). Artificial intelligence is equipped with filters for pattern recognition and their specialized use, but not for independent thinking or the development of focused creative solutions.

Let us now turn to the concept of the extended mind. Formulated by Clark and Chalmers in 1998, this concept concerns the analysis of the influence of artifacts external to the human subject on the process of cognition. Clark and Chalmers (1998) argue that mental states are partly determined by objects external to man. Two elements play a key role in this theory, the analysis of the rules that govern the functioning of the mind and the influence of two elements of the environment on the human process of cognition, *i.e.*, natural objects and technical artifacts. In discussions about the concept of the extended mind, scholars have distinguished two versions of this problem, ontological and epistemological:

1) The ontological version concerns the nature of the extended mind, what it is, whether it exists or not, and its location in and outside the human person. This thread of thinking is important from the artificial intelligence point of view. Artificial intelligence-equipped systems are an increasingly important part of our worldview, and if we introduce some of its elements into our biological brains, they will become part of our anthropological make-up;
2) The epistemological version of the concept of the extended mind indicates that external elements – in this case technical ones – affect our knowledge of the world. Consequently, we must recognize that the content of our mental states depends on the environment, in this case the technical environment. In other words, the human image of the world is modified by the use of specific *technē* products, including artificial intelligence (Menary, 2007, pp. 27–29). We are still dealing with the human way of knowing reality.

The ontological version of this issue in the context of artificial intelligence problematics can be interpreted in two ways:

1) Functionalist. According to this interpretation, technical elements participate in the process of cognition and action, but they do so as aspects external to man. In this sense, the mind of a driver works differently when he drives a large truck at work and differently when he is on his way home in a small passenger car. The connection between the driver's mind and the truck is so specific that it causes him to assess the distance and set rules for parking and for avoiding obstacles on the road in a manner that is unique to this connection. The use of cruise control in modern cars to assist drivers when parking can be extremely helpful in moving efficiently on the road, but it can also stop our minds from learning parking operations in a natural way. Deprived of artificial assistance, drivers may end up having problems with accurate assessment of the distance from obstacles on the road (Fry, 2018, pp. 76–77);
2) Substantialist, which assumes that artifacts equipped with artificial intelligence may be components of the biological brain of humans. This, in consequence, will make the content of mental states the joint result of natural and artificial cognition. Will this mean that we will develop a posthuman image of the world? It is difficult to answer this question at this point.

The two versions of the ontological argument in the concept of the extended mind are interrelated when it comes to assumptions and specific approval for the introduction of *technē* elements into the realm of human thinking and decision-making. Even though the substantialist version seems to be a matter of the distant future, it is of interest to contemporary researchers (Schneider, 2019, pp. 108–110).

If the functionalist position is accepted, one can talk about an "extension" in the realm of creativity by human skills related to the inventive use of artifacts with artificial intelligence. There are three ways to understand creativity:

1) Exploration. We acknowledge the existing data, yet we explore new contexts related to its use. We still stick to the rules;
2) Combination. We combine different, incompatible elements. By means of analogy, we transfer the rules governing one aspect of reality to other areas;
3) Transformation. We change pre-existing rules, modify the assumptions to which we are accustomed, and check the effects of these changes. In these various aspects, the search for unconventional solutions can be useful for artificial intelligence (du Sautoy, 2019, pp. 20–24). Artificial intelligence algorithms can be creative in the operational and combination sense, inasmuch as they are based on the previous creativity of the human machine builder, which they extend and expand. Algorithms do what they are designed to do, and their creativity is narrowed to certain limits. The extended human mind can use artificial intelligence algorithms to find correlations between known data that it could not perceive independently. The creativity of artificial intelligence depends on the imagination of the computer scientist-designer and the data provided by the human expert.

For now, artificial intelligence's transformative creativity is thought to be impossible. However, new meta-algorithms, capable of breaking pre-existing rules, are constantly being sought and consequences of this are being examined. Transformative creativity means a disruption in the functioning of pre-existing systems and requires the ability of abstract and creative thinking. Things, which are authentically new, are combinations of previously known elements. So far, however, only the human species can be creative transformatively.

If we adopt the substantialist position, we must see whether a working combination of the protein and synthetic basis of thinking is at all possible. This issue may lie at the borderline of biology and technology, but a combination of this kind will have far-reaching anthropological consequences (Muszyński, 2015). I omit at this point the technical aspects, namely, the extent to which the implantation of synthetic elements in the brain will endanger human life. I want to consider this problem from the point of view of the philosophy of mind, in a nominalist and realistic perspective.

According to a nominalist position, being a person depends on the durability of the content of memory recorded on a natural carrier, *i.e.*, the biological brain. Person refers to an individual who is aware of his existence and capable of thinking and making choices. It seems that nothing would change if the brain were replaced with a digital carrier. In this view, a person exists provided, that there are information patterns in which his individual memory, preferences, emotional reactions, and personality traits are stored. The carrier of this content is the neural network of the human brain. Futuristic concepts which announce the possibility

of transferring the human brain to an electrical device (thus "enhancing" it), or connecting the human body with synthetic (artificial) intelligence ("enhanced uploads") seem to be exaggerated for the time being. The combination of the biological and artificial brains requires reprogramming the human body by means of complex nanotechnology, genetic engineering, psychopharmacology, neural interfaces, anti-aging measures, memory enhancement through promnesic agents, computers integrated into the human body, artificial intelligence, and many other cognitive technologies (Bostrom, 2014, pp. 5–6). Such far-reaching changes would make it difficult to determine the basis for the preservation of the psychophysical unity of the human person. Hence the question of whether attempts should be made at all to create a synthetic person. It should be assumed that, given the current state of knowledge, it is enough to create artificial intelligence as an extension of human creativity.

Adopting a realistic understanding of personhood, we should consider that being a person is essentially related to psychological content and as such remains dependent on the biological body. To affirm the dignity of the human person is to recognize the integral totality of mind and body. The idea of consciousness presupposes the existence of an individual as a separate entity who possesses this consciousness. Artificial intelligence developed at a very high level does not guarantee consciousness, let alone self-awareness, capable of making informed and free choices. Expanding cognitive abilities with artificial intelligence-related *technē* involves the discovery of new human capabilities for cognition and action. At the same time, it raises concerns that the use of information acquisition by artificial intelligence is associated with some significant threats to our humanity and with the phenomenon of dehumanization of culture. This makes it necessary to analyze the moral issues that arise from the "expansion" of the human mind with new competencies resulting from the use of artificial intelligence.

4. Creativity and ethical principles

In general, researchers agree with the thesis that artificial intelligence expands the possibilities of human cognition and action. The creativity of machines is initiated and stimulated by man-made codes. Considered in the context of the axiology, creativity is related to human freedom. Even though our creativity cannot be automated, it can be technologized, *i.e.*, realized on the basis of *technē*. Not all our abilities result from human activity. We can also learn from intelligent machines. For example, in chess and the ancient Chinese game *Go*, artificial intelligence has reached a level of competence far beyond the knowledge and competence of human masters (du Sautoy, 2019, pp. 50–52). Our current concern is with ethical standards related to the use of artificial intelligence. The use of artificial intelligence in games is just a step in the way to solving much more difficult tasks, where the decisions will have vital consequences for individuals and for humanity, especially in the areas of medicine, business, education, medical care and care for the elderly, as well as strategies related to conducting warfare.

AI works with information provided by humans, and it acquires skills based on human knowledge. Further work on artificial intelligence depends to a considerable degree on the sources of financing. Currently, these resources tend to be private rather than not state-

owned, which makes us suspect that the information obtained by artificial intelligence will primarily be used for commercial purposes. This gives rise to the problem of how to protect the information regarding our personal data (General Data Protection Regulation). As the entertainment industry, politics, security, healthcare are finding more and more applications for the use of artificial intelligence, it is becoming increasingly necessary and urgent to insist on the postulate of conscious and ethically sound design and use of artificial intelligence-equipped artifacts.

Ethical standards can be introduced into artificial intelligence in two ways: 1) by self-regulation of the information technology sector, which means promoting legal and ethical standards among information technology specialists and experts whose job is to "train" artificial intelligence competences; 2) by direct or indirect legal regulations in this area of human activity (Anderson & Rainie, 2023). In many areas, the use of artificial intelligence is associated with abuse. Users of modern technologies, in which artificial intelligence is used are exposed to unjustified control by large corporations. This specific type of surveillance capitalism involves creating a set of consumer decision data. Human purchasing activity is treated as a material for information processing (Zuboff, 2019, pp. 425–426); artificial intelligence creates the possibility of profiling individual customer expectations. The algorithm that collects user-experience data may, at some point, end up knowing us better than we know ourselves. Thanks to artificial intelligence, business corporations can effectively coerce us into adopting a consumerist lifestyle, while at the same time, by distracting us, making us unaware of or oblivious to real and pressing social and political issues. In many situations, artificial intelligence-based marketing strategies are unethical and illegal. Through progressive and systematic enhancement of artificial intelligence, the use of algorithms will become common, a perspective that gives urgency to the need of introducing legal and ethical regulations (Suchacka et al., 2021).

The public's sense of security, including cybersecurity, increasingly depends on the use of new technologies. Paradoxically, artificial intelligence can act as an unauthorized authority in cases, which involve legal, medical, or moral issues. Machine learning, based on data received from human network users, can generate false images of the world, and perpetuate models of racial and gender discrimination. As a consequence, instead of disseminating the idea of fair and equal access to knowledge, artificial intelligence may reinforce the existing social barriers. In this context, artificial intelligence, rather than being a culprit, is an involuntary tool in creating and spreading new forms of injustice. The process of defining ethical standards for artificial intelligence developers and trainers must involve paying special attention to the protection of freedom, privacy, and human dignity.

However, we must not treat artificial intelligence as a conscious subject capable of moral behaviour. Only the human being is this type of subject, and it is the human person whose decisions and actions are good or bad in the strict moral sense. As users of new technologies, we may expect an intelligent robot to be an "artificial" friend we can talk to, a partner, and perhaps a career in sickness and old age. On the other hand, we may be unaware of the risks resulting from artificial intelligence being used as a tool for collecting information about our preferences, interests, political views, and social life. In the latter sense, artificial intelligence is a tool for large-scale and potentially unfair business and political practices. At the same time,

artificial intelligence can also be used to detect and prosecute those who use such unethical and illegal practices (Nosarzewska, 2021).

The use of *ChatGPT* deserves special attention. Currently, it can use *ChatGPT* 3.5 and *ChatGPT* 4.0. *ChatGPT* is a technologically advanced language model developed by *OpenAI* (2015–2023). Its primary purpose is to create answers to questions asked by bot users. *ChatGPT* can help solve technical problems; it can write a text or song, do our homework, and help us produce a diploma paper, a scientific article, or a computer program.

We can converse with it on various topics. The competence of the generative pre-trained transformer (GPT) bot results from the fact that it uses huge resources of the Internet and on their basis generates answers to our questions. It can be useful in fields such as science, education, technology, and entertainment (*OpenAI*). In certain situations, this algorithm can help us resolve legal issues and moral dilemmas.

Creative activity that uses *ChatGPT* renders problematic the determination of the actual authorship of the work thus produced. The bot's operation is based on an algorithm, which makes us ask, what does it mean to be the "creator" of a work, in relation to artificial intelligence itself, and in relation to the person who uses its resources to create his or her work? If a human creator uses GPT, what are we to regard as his or her original work that must be copyright protected? *ChatGPT* chat skillfully uses what people have created so far and what is available on the Internet. Currently, it is assumed that only a human person can be the subject of copyright. Artificial intelligence does not own copyright or intellectual property rights, which also means that it cannot be the author or co-author of a man-made work. Although *ChatGPT* is owned by *OpenAI*, the company does not own the data used for bot training. The company revenue comes from the release of the GPT bot, but not from sharing and processing works produced as a result of using the bot (Anderson & Rainie, 2023). However, it should be expected that, due to the widespread use of chat. GPT, over time copyright protection rules will be created regarding the third parties on the basis of which the chat "acquired" its skills. This issue is not yet legally settled (*OpenAI Codex* (OpenAI, 2021)). Currently, *ChatGPT* is treated as public domain and, as authorship cannot be attributed to it, its products cannot be copyright protected. Common sense tells us that texts obtained by the bot should not be copied verbatim. As *ChatGPT* is efficient in finding information, we should be particularly careful when sharing our personal data, which is far from being a new recommendation. In addition, users of bot services should remember that the frequency of use means that artificial intelligence is increasingly integrated into various aspects of our lives, including the decisions we make.

ChatGPT does not think on its own. Its creativity depends on the behavioural responsibility of information system creators, who should make users aware of the need to treat the opinions of chat. GPT, like we, treats the statements of a human subject. Artificial intelligence systems should be transparent and safe to use, allowing us to control them. A person may be less knowledgeable than intelligent machines, but he or she should have control over them. This is particularly important because, in some industries, artificial intelligence systems can decide and act with a degree of autonomy. The justifying factor here is the greater effectiveness of action, especially when fast decision-making and emotional neutrality of the algorithm are required. However, *ChatGPT*'s answers should not be treated as verdicts that resolve

people's legal, medical, or moral dilemmas. The moral advice given by the GPT bot may be incorrect and inconsistent, so users should keep their distance from the bot's prompts, and, in a conversation with the chat, should ask for further arguments or counterarguments in pursuit of more extensive knowledge about the issue they are researching (Krügel et al., 2023). Ultimately, the person is the only conscious subject of moral actions, and artificial intelligence can at best expand and complement human action.

5. Conclusions

Artificial intelligence can play an important role in the development of human creativity. Artificial intelligence can be used in activities related to artistic expression in literature, film, and acting (Sovhyra, 2021). The current phase of artificial intelligence development does not affect the concept of human creativity. Artificial intelligence can be helpful in many areas of activity. For example, we can use artificial intelligence: a) to expand the areas of communication and to create new dimensions of public activity; b) to create a knowledge society (a new library), *i.e.*, to take things to a stage beyond the idea of information society; c) to protect ourselves against cybercrime, especially in a situation where cybercriminals also use artificial intelligence algorithms; d) to help identifying and stigmatizing abuses of institutions and people in positions of authority and power. Of course, these are opportunities, which may not materialize.

In addition, there is also the danger that a false perception of artificial intelligence's extraordinary abilities will negatively affect our confidence in human creativity. When we discover that intelligent algorithms are more efficient in making decisions, we may want to entrust artificial intelligence with other important aspects of our lives, such as choosing a life partner (artificial intelligence will identify character compatibility traits and areas of shared interest), choosing a job, or finding a holiday destination. We may want to entrust artificial intelligence with legal and business decisions in the managing of a company. We may want to use it when seeking advice in medical or moral matters. However, an example of how GPT chat works shows that the information it gives is not always correct. Interestingly, it apologizes when shown that the information it provides is incorrect. In addition, the systems guaranteeing the safe use of the GPT bot are not airtight, making the case that it can be used as a source of information obtained through unethical and illegal means.

There is no doubt that the development of human creativity is being expanded (complemented) by modern *technē*. It is to be postulated and hoped that our awareness as users of artificial intelligence artifacts will expand accordingly. As both creators (programmers and artificial intelligence trainers) and users, we should be aware of the creative possibilities and threats related to modern technologies. The main source of these threats is not artificial intelligence as such, but its misuse by people. Many ethical issues related to artificial intelligence have not yet been identified or properly defined. Our awareness of the need to reflect on these issues will grow as we discover more possibilities of artificial intelligence and the ethical and legal risks associated with its use. The current attitude is to think critically about tools such as GPT chat or other digital devices we use.

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