

Technoscience and Artificial Evil: Ethical Aspect

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This article considers the ethical dimension of technological science (technoscience), namely, the problem of the applicability of the categories of 'good' and 'evil' to the functioning of new technologies. Aspects of evil brought about by the introduction of new technologies (i.e. lack/scarcity of resources, devaluation of human labour, ignorance of/inability to use technical tools, violations of the measure and harmony of life, etc.) are highlighted. Particular attention is paid to a new form of evil, namely artificial/technological evil. The article argues that the emergence of such evils is associated with the growing scale of human intervention in the natural course of things and with recent advances in technology. Dangers related to the uncontrolled development of technological science along many axes of human existence are analysed. The authors conclude that overcoming artificial evil is possible via a transition from a man-made to an anthropogenic (intellectual and humanistic) form of civilisation in which the achievements of technoscience serve not the self-destruction of mankind but the discovery of essential human forces.

Keywords: technoscience, technoethics, evil, artificial evil, technological evil

INTRODUCTION

Our current situation is marked by the interdependence of human beings and innovative, breakthrough technologies, with the latter imposing the conditions of such interaction (Chen, Wang 2022; Rimkus 2020). An important task of technoethical research is to determine which types of relations to technology are appropriate for humans and which, in turn, require justification in terms of their ethical foundations. This primarily concerns the application of the principles of humanism in technological design. In what follows, in Section 1, we provide an analysis of the field of technoethics and highlight a philosophical interpretation of technology. Perhaps unexpectedly, we demonstrate its non-technological side, which allows us to understand technology as a form of human subjectivity and as presenting a unique opportunity for its self-realisation and moral self-identification. Hence, technologies reveal their anthropological nature, giving people an opportunity to compensate for the limitations of natural resources by technical means. Humanity is gradually becoming technologised, evolving from a natural, social type of being to a technological being, *Homo technicus* (Galvan 2003; Galvan 2020). The further 'convergence' of the human being and technology is seen as a new phase of evolution, a defense strategy (Urban 2018), and an innovative way of ensuring the survival of *Homo sapiens*.

On the other hand, the technologisation of the human being comes with significant existential risks and threatens human nature, making it an element of technology, a detail of technical civilisation, without value in itself. Some authors view modern technology as an independent reality (Marcuse 2002; Lem 2008) which operates according to its own laws. Understanding 'techno-evolution' (Lem 2008: 244) as a complication of technological reality implies increasing individual dependence on technologies that force humans to obey the new rules created by the technosphere. In entrusting their affairs to technology, human beings turn themselves into means without being aware of this threat, that is, the danger of losing their status as *beings*, along with their identity and freedom (Heidegger 1977). In light of such dangers, in Section 2 we analyse those aspects of evil that are caused by total technisation and technologisation, the risk of which leading to the end of history in a literal sense.

We therefore propose that technology be interpreted as a new way of thinking, a new vision and a new attitude toward the world. The technologies of today are not a simple addition to the person; they are a way of being human. Consequently, the usual ratio of the artificial to the natural must be revised. In Section 3, we argue that the artificial should not be radically opposed to the natural, since the artificial is inscribed in the natural. The human being is artificial to the extent that he or she is capable of 'creating' technologically, and this gives rise to greater possibilities for creating evil. Given the new technological reality of human existence, we propose that the concept of artificial evil be expanded, stretching beyond the information sphere (Floridi 2013) to include the sphere of more recent technologies. In arguing for this view, we introduce the concept of 'technological' evil, a kind of artificial evil the emergence of which is caused by the interaction between the human being and technology. The emergence of these new forms leads to a shift in our common understanding of the nature and essence of both evil and humanity itself.

THE ETHICAL DIMENSION OF TECHNOSCIENCE

Today, we face an obvious paradox: on the one hand, technologies open up unprecedented opportunities for human beings; on the other, they are perceived as anti-human, threatening phenomena. Resolving this conflict is possible within the framework of technoethics (Bunge 1977), which aims to resolve ethical issues related to the functioning of new technologies. Technoethics constitutes a new, applied dimension of ethics which determines the direction of technological development, while technology gives a precise form to this development. The emergence of technoethics is due to two main factors:

(1) Modern technologies are becoming increasingly advanced, prompting concerns about rapid technological development, which in the future will surpass human beings and lie beyond their control. This could lead to changes in the form of human existence, perhaps resulting in the radical transformation or even the destruction of humanity.

(2) Technologies affect all aspects of human existence, in particular the deep foundations of morality and relations in this area. Weber's conception of the neutrality of technology and its power to distance the human being from the moral foundations on which the life of the individual and the foundations of society are based is currently losing its relevance. As Heidegger argues, 'we are delivered over to it in the worst possible way when we regard it as something neutral; for this conception of it, to which today we particularly like to pay homage, makes us utterly blind to the essence of technology' (Heidegger 1977: 4).

With this in mind, the various problems of technoethics can be reduced to two main points:

(1) The sphere of human ethical attitudes toward technology is based on the idea of their harmonization, i.e. 'high technology, deep humanity' (Naisbitt 1999). It is worth noting that humanity is expressed not in the embedding of values in technologies but in their 'humanisation' and rapid adaptation to human characteristics.

(2) The field of technology's ethical attitude towards humanity involves the possibility of creating artificial moral agents that cannot harm humans. Here, the dominant moral principle is coevolution, the essence of which is the notion that intellectual technology should help people rather than interfering with human nature and life processes.

Such a desire to create artificial moral agents is based on the fact that even in matters of ethics, people try to rely on technologies to help them become more stable in matters of morality. But will these agents be able to improve morals and reduce harm? Scholars are very cautious about this perspective because in order to have the hallmarks of morality, an artificial agent must be endowed with three main qualities, namely, interactivity, autonomy and adaptability (Floridi 2013: 139). At this stage, these are possessed only by humans, and artificially created agents, although they have an ontological basis in technologically constructed reality, still depend on the individual.

This raises the issue of responsibility, which in technoethics boils down to a key question: if a technological system has harmed a person, who is responsible? There is no specific 'candidate' for responsibility, as responsibility today is shared by the customer, the manufacturer, the engineer/programmer, the user and the technological system. Therefore, in technoethics, responsibility is interpreted as a complex hybrid in which all participants are involved. The human factor therefore remains dominant.

The current technological situation does not necessarily require the emergence of a new ethics. Classical ethical concepts that can be applied to new technological realities remain suitable for solving ethical and technological problems, in particular, key concepts of consequentialism (chiefly utilitarianism), deontic ethics, the ethics of justice and virtue ethics. Within these limits, it is possible to evaluate scientific and technical activities, taking into account their goals and means (deontic ethics), consequences (consequentialism), content (virtue ethics) and ways of distributing benefits among participants (the ethics of justice). Technoethics combines all of these ethical projections into a common approach, which acts as a universal 'umbrella for grounding all sub-branches of applied ethics focused on technological areas of human activity' (Luppicini 2009: 2).

Thus, emphasis on the ethical side has become an unexpected triumph of technoscience (Caraca 2018: 99), and the emergence of technoethics has begun to include a growing range of ethical and technological issues in its content – starting from analyses of specific technological situations to broader socio-ethical issues concerning the place of technology in society and humanity as a whole. When researching and evaluating the technological sphere, technoethics is based on traditional ethical categories, namely, good and evil.

TECHNOETHICS AND EVIL. ASPECTS OF EVIL CAUSED BY TECHNOSCIENCE

Technology in itself cannot be considered evil, because it is only a means used by humans. As K. M. Meyer-Abich observed, 'a man is not the measure of all things, but everything that exists with us is the measure of our humanity' (Meyer-Abich 1990: 96). It is actions, not objects in themselves, that can be classified as evil (Floridi 2013: 187). In what follows, we will consider those aspects of evil that are prompted by and discovered in the development of technology and the use of new technologies.

The first such aspect is *evil as a lack/scarcity of resources*, which is perceived mainly on an emotional and sensory level, as an experience of temporary discomfort – broken equipment, network failures, bad internet speed, etc. Thus, through technoscience, we arrive at a phenomenological interpretation of evil, which becomes evil only because it is perceived by human beings who give ethical assessments of technologies in concrete situations. This leads us to a metaphysical understanding of evil, interpreted as ‘the imperfection of things, even the unreasonable ones’ (Leibniz 1989: 467). Here, failures of technology begin to be treated as evil in themselves, although, in fact, they are directly related to the human being (errors in programming technology, its improper operation, etc.). In this respect, evil is a kind of motivation for the further development and improvement of personality; it rises to a new, technological level of functioning. In this case, justifying the existence of evil is permitted not as an absolute necessity or condition of the existence of the good but because of its expediency.

From the perspective of technoscience, *evil as stupidity/ignorance* (Svendsen 2010) or *illiteracy/lack of knowledge* takes the form of incompetence and unprofessionalism, which is especially dangerous when it comes to the use of technologies and scientific developments. From this perspective we observe the banality of evil (Arendt 2006), which is not self-consciously evil and manifests itself at the level of the fulfillment of ‘production tasks’. In this case, the person does not make a moral choice but is motivated by the desire for career growth and profit, automatically fulfilling job-related duties in the management of technological means. At this level, evil is at its worst, taking the form of ‘mental dullness, normative socialization and universal programming’ (Baudrillard 1993: 98).

When it comes to the third aspect under discussion, *evil as devaluation*, technologies devalue humans and their work, resulting in unemployment and the impossibility of self-actualisation. Technical means make people helpless and incapable, turning them into their complements (Blumenberg 1993). This is, to some extent, the end of anthropology (Baudrillard, photocopier), since the human is transformed from the subject of activity to an element of the technological system to which he or she is forced to submit. Hence, we turn to the aspect of evil that results from the totalitarian coercion of a system or structure (Zimbardo 2008). Due to the constant ‘bombardment’ of such systems and structures, the human being is reduced, logically and practically, which leads to the emergence of heteronomous evil (Benn 1985). This circumstance forces humans to abandon critical thinking and moral evaluations, putting them at the ‘disposal’ of the latest technologies, which are not characterised by ethical certainty and predictability.

The fourth aspect is *evil as the destruction and violation of the measure* inherent in being. Today, evil is perceived as an integral part of things (as Baudrillard writes, ‘the cursed side of things’) and as the principle of the destruction of natural human connections through their mediation by the latest technologies. A ‘nuclear umbrella’ is currently hanging over our lives, threatening the extinction of the human species, *Homo sapiens*. This also includes experiments on humans, interference with genetics, artificial insemination, cloning, etc., as a result of which human existence itself is in question.

Evil as self-centeredness (selfishness) often leads to disregard for other people’s interests. This is manifested in our relation to technologies used for personal gain (‘positive’, ‘healthy’ self-centeredness) or as a tool for harming others ‘negative’ selfishness). In this case, it is ‘negative’ selfishness that causes evil; the will is reduced to arbitrariness (Berdyayev 2005: 169). Through technology, humans begin to conquer nature, seeing themselves as the center of the universe and thus feeding their selfish inclinations. Today, we are very close to epoch-making change – from

being passive observers of nature to becoming its active choreographers (Kaiku 2004: 19). Therefore, selfishness can be both evil in its own nature and the image of evil in the human being (Benn: 799), caused by the advent of technical means.

Evil *as self-affirmation in hostile aggression* is manifested in actions aimed at causing harm; it consists in ‘the temptation to kill’ (Freud 2014) and ‘the irrational sense of hostility’ (Wilson 2004). That is, it is the kind of evil which in ethics is called evil for evil’s sake, and it is perceived as pathological and sociopathic. Aggression as a natural instinct (Freud 2014; Lorenz 2002) and the desire for destruction and devastation are most fully manifested in the field of technoscience. Due to achievements in technoscience, this natural human desire sinks to a qualitatively new level, thus revealing the unlimited scale of the evil of which man is capable (mass murder, terrorist attacks, genocide, etc.).

In the context of understanding *evil as the discovery of modern technology*, the destructive and creative nature of evil is revealed (Kunnas 2008). Evil is capable of breaking boundaries and going beyond the possible/permissible. Moreover, technologies unleash the potential of evil, which now penetrates almost everywhere – hence the anamorphosis of all its modern forms is endless (Baudrillard 1993: 121).

Evil has both external and internal dimensions; however, people usually seek to transfer the imperfections of their inner nature to the outside, to the technologies they have created, which should compensate for and/or at least reduce these shortcomings. As a result, a completely new type of evil begins to form – artificial evil (Floridi 2001; Floridi 2022), which primarily harms the modern information world (the information system). As we will see below, this explanation of artificial evil should be interpreted quite broadly, in a way that incorporates a new, modified form of technological evil, the emergence of which is caused by the functioning of new technologies.

ARTIFICIAL/TECHNOLOGICAL EVIL AS A CONSEQUENCE OF THE FUNCTIONING OF TECHNOSCIENCE

In the context of everyday discourse, the ‘artificial’/technological often has a negative connotation, perceived as something ‘false’, unnatural and bad. The natural/genuine, in turn, is perceived as positive, real and good. Thus we obtain the usual opposition between the natural and the artificial, in which conformity to nature is presented as a criterion of morality, while the artificial is legitimised only as supplementary to nature.

Nature includes not only the material world but also human existence, one peculiarity of which is the fact that the individual not only adapts to the natural environment but seeks to adapt it to his or her own needs. Man is ‘so imperfectly endowed with nature that from the very beginning he needs artificial means to maintain himself and his appearance. The fact that a man can exist only in an artificial way is what makes his nature’ (Picht 1979: 122). In this way, the human being begins to be perceived as something artificial as he ‘creates’ himself, compensating technologically for his own natural imperfections.

With the complication of the technological sphere, our interpretation of evil has also changed; we have begun to distinguish between several dimensions of evil, namely, cosmic, social and human. In the cosmic sense, evil is understood as a type of faceless chaos, a hostile entity that threatens the world order and leads to natural disasters. At the level of society, evil assumes the image of a social force that opposes itself to the whole and causes its destruction. At the human level, evil is thought of as a disharmony of bodily and spiritual

qualities. According to these dimensions, a distinction is made between three main types of evil: natural, social and moral. However, increasing attention is being paid to those aspects of evil that do not fit into this classification. Thus we can speak of a new, modified form of evil, artificial/technological evil, which is associated with the functioning of science and technology. This type of evil encompasses the other three types, giving us a fuller understanding of its nature and essence.

Artificial evil, according to L. Floridi, was supposed to transcend the dichotomy between moral and natural evil and take its place beyond the responsibility of man, nature and society. In reality, however, the emergence of artificial evil has led to the transformation of all of evil's usual forms. Once perceived as objective, natural evil is now in most cases caused by people who act as natural agents (i.e. introducing various diseases into the natural world, creating new ones such as AIDS, COVID-19, etc.). In an effort to create a new 'humanised' world, humans prompt natural disasters (floods, melting glaciers, climate change, ozone depletion, etc.) by interfering excessively in the natural course of things. Natural evil thus becomes artificial, and its emergence is 'initiated' by human beings and the technologies we create.

Today, natural evil is also related to moral evil, since it is provoked by human negligence and irresponsibility in the use of technological means (e.g. environmental pollution, toxic emissions, industrial waste). Natural evil thus expands the limits of the application of moral evil, which emerged in a time of anthropocentrism, when the human being was the sole agent of morality. In the contemporary technological world, we are seeking to expand our understanding of the moral agent by introducing artificially created moral agents that are responsible for their own actions. Neither their emergence nor the emergence of artificial evil negates anthropocentrism, however, insofar as such developments continue to be perceived as the consequences of human actions that do not function independently.

Finally, artificial evil is directly linked to social evil as all wars, terrorist acts and other social conflicts are generally caused by artificial factors. In addition, the emergence of new technologies takes warfare to a qualitatively new level, provoking the development of new forms such as information and hacking wars, cyber attacks and more. Thus, artificial evil is a complex modification of natural, moral and social evil, the evolution of which is caused by the development of new technologies. The human being, society, nature and technological systems are all involved in its functioning today.

This standpoint suggests that we should not radically oppose the artificial to the natural, because they are closely related. The more technologies evolve, the more they are perceived as a proper and 'natural' human existence. Today, technologies are beginning to mediate between the human being and the world, helping to transform the natural into the artificial. Artificiality has become a means of human existence in the world, a way of being with others and being for the self. This requires a new, sensible approach to the artificial, one that does not pose a threat to human existence. Therefore, it is important to open up a new space for critical reflection on artificiality, evil, human nature and its relationship with new technologies (Petrushenko, Chursinova 2019).

CONCLUSIONS

In the modern age, there is an increased danger of using the achievements of technological science to create new modifications of evil, associated with the rapid development of new technologies (artificial/technological evil). What was previously inaccessible to human intervention and perceived as natural and unchanging is now the object of human activity.

Without a doubt, technoscience offers an opportunity to control and transform reality. Science explains what can be done with the world, technic is the means of such changes, and technology is the means of this transformation. However, we should not forget that innovative technologies are merely tools that people use for their own (self-interested) purposes, a catalyst for problems that already exist in society.

In view of this, the main task of technoethics is not to indulge in self-interested (in many cases destructive) whims via technology but to prevent the uncontrollability of technoevolution. With the growing unpredictability of the results of the implementation of scientific and technical developments, modern technologies must be used not only to increase human efficiency and effectiveness but also to create conditions for safe human existence (thus preventing artificial evil). Overcoming artificial evil is possible in the process of changing the ethical principles of human existence, on the path from a man-made to an anthropogenic (intellectual and humanistic) civilisation, in which the achievements of technoscience do not serve the self-destruction of mankind (evil) but the discovery of essential creative forces (good).

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Technomokslas ir dirbtinis blogis: etinis aspektas

Santrauka

Straipsnyje nagrinėjama etinė technologinio mokslo (technomokslo) dimensija, tiksliau, gėrio ir blogio kategorijų pritaikomumo naujosioms technologijoms funkcionuoti problema, pabrėžiant jų naudojimo sukulto blogio aspektus (pvz., išteklių stoka ar nepakankamumas, žmogaus darbo nuvertinimas, negebėjimas naudotis techniniais įrankiais ar nežinojimas apie juos, gyvenimo harmonijos, saiko pažeidimas ir t. t.). Ypatingas dėmesys skiriamas naujai blogio formai, būtent dirbtiniam / technologiniam blogiui. Pabrėžiama, kad jų atsiradimas siejamas su augančiu žmogaus intervencijos į natūralią dalykų eigą mastu, su naujaisiais technologiniais laimėjimais. Analizuojami pavojai, kuriuos daugeliui žmogiškosios egzistencijos parametrų kelia nekontroliuojama technologinio mokslo raida. Autorės daro išvadą, kad dirbtinį blogį galima įveikti pereinant nuo žmogaus sukurtos prie antropogeninės (intelektinės ir humanistinės) civilizacijos, kad technomokslo pasiekimai prisidėtų ne prie žmonijos susinaikinimo, bet esminių žmogiškų galių atradimo.

Raktažodžiai: blogis, dirbtinis blogis, technoetika, technologinis blogis, technomokslas