

LIMITS OF (IM)MORTALITY - REFLECTIONS ON THE RIGHT TO DIE IN THE CONTEXT OF THE TRANSHUMANIST VISION OF THE FUTURE HUMAN

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Abstract Contemporary breakthrough discoveries of biological sciences and the ongoing technological revolution make the problem of the border of human life and the ways of its designing sound today in a completely new light. The aim of the paper is primarily to identify problems that arise on the legal grounds in connection with the latest discoveries of science. There is doubt as to whether dynamically developing social movements, such as transhumanism, do not require rethinking, in a completely new context, the right to death, subject to the huge complexity of this issue. The paper points out that in the light of immortality projects, there is the need to regulate the right to death in a manner significantly different from the already existing and still controversial approaches. The considerations carried out in the article are futurological and legal in nature, but it was mainly about a panoramic overview of legal problems related to biotechnological progress and projects of extending human life, including up to eternity.

Keywords
concept of death,
right to die,
living will,
transhumanism,
immortalizm

1 Introduction

The inspiration for this paper stems from transhumanist projects that reveal the problems associated with death in a completely new light. In the series "From the Memoirs of Ijon Tichy", Stanislaw Lem presents immortality as an option from which we should protect ourselves because the obligation of eternal existence can be even more tortuous than the anxiety associated with the necessity of death. The Russian immortalists, with Dmitry Ickow being at the forefront, claim that the Russian constitution should guarantee that "the inalienable right of every citizen of the Russian Federation is the right to eternal life and immortality. The state and the Constitution guarantee that this law will be respected as technology develops, providing a free extension of life to every citizen"(Olzacka, 2016, p. 57).

Presently, through scientific developments that have created opportunities for artificially supporting life threatened with natural death, science has negated the limitation of its duration to a specific moment. Defining the boundary between life and death is a complex problem, conditioned by a variety of factors - biological, medical, philosophical, religious, moral, legal and cultural. However, legal culture requires a very precise determination of the time of human death, due to the fundamental differences in the scope of human rights that apply to the living as opposed to the dead. From the date of death, its legal effects are recorded and implemented, and they depend on multiple variables including the medical types of death as well as its legal distinctions. Today, the effects of death are regulated by whole branches of law - such as inheritance law, insurance law, tax law, administrative law. For example, legal issues surrounding the collection of organs for transplantation are regulated by norms belonging to many branches of law (Tokarczyk, 2012, p. 385). Modern scientific developments have cast a new light on the many problems associated with the right to die. Discoveries by neurobiologists, such as Owen (Owen, 2018), raise the question whether so-called physiological signatures of consciousness from EEG, fMRI or similar testing methods signal actual consciousness, and if so, whether a person trapped in the so-called gray zone of consciousness may legally be provided persistent medical treatment. Furthermore, the revolutionary and rapid discoveries in genetics and in the field of Artificial Intelligence (AI) provoke further questions and multiply doubts. Over the last hundred years, life expectancy in Europe has increased by 33 years. Life expectancy is likely to further increase in the coming years, since scientists around the world

now have powerful tools for manipulating genes, such as the discovery of the CRISPR / Cas9 mechanism.¹ Even more provocative are the projects of transhumanists, assuming the creation of a digital posthuman (for example, Project Humanity +, Avatar 2045²). The transhumanism concept of transgression human biology and morphological freedom postulate deliverance from the obsolete body and technological evolution.

The purpose of this article is to identify and analyze the various uncertainties that modern discoveries have brought to bear on the legal understanding of death. It also analyzes whether dynamically developing social movements such as transhumanism require reevaluation of the right to die in a completely new context, considering the enormous complexities surrounding same. The considerations in the article are both futurological and legal in nature. Futurology is relevant because the law has not kept pace with the recent advances in technological progress, even in the sphere of basic legal concepts. Therefore, some of the transhumanist projects presented here may or may not materialize, which is why today we can only discuss theoretical proposals for legal solutions. However, it should be noted that without this scientific-futurist discussion the legal norms that eventually must be developed and implemented to regulate these matters will lag far behind, thereby creating a harmful legal void. Accordingly, this article is primarily focused on the panoramic sketching of legal problems related to ongoing biotechnomedic progress, even at the cost of candidly acknowledging that many unanswered questions presently exist and more will arise in the future.

2 End of life - biological, medical, ethical and legal borders - outline of the problem

Apart from an in-depth discussion of this issue, it is enough to mention here that two competing views clash in the aspects of the limits of life. Some claim that life begins from the moment of conception until death while others maintain that a person is “human” only while conscious or at least has a chance to regain consciousness. As Żaluski observes, this dispute, like most bioethical disputes, is irresolvable because each side to the debate has strong moral arguments supporting the rightness of its position (Żaluski, 2010, p. 205).

¹ <https://www.broadinstitute.org/research-highlights-crispr> (access 20 October 2021).

² <http://www.transhumanism-russia.ru> (access 20 October 2021).

In contemporary, developed societies the cessation of human life is a legal event of serious importance, which disregards related philosophical, theological, biological, psychological, medical and other dilemmas. A person's legal personality is terminated by death (Broniewicz, 2000, p. 63). Death is regulated by whole branches of law or parts thereof - inheritance law, insurance law, tax law, administrative law and others. The legal effects are recorded and implemented from the date of death. They depend on both the medical types of death and legal distinctions. On the basis of legal norms, the most important boundary runs between natural and unnatural death. While unnatural death can be the result of some form of violence or tragedy along with suicide, it can also be a result of euthanasia, in states of higher necessity during war. Death can also take place based on a judicial death sentence. Unnatural death is not only the most painful and difficult to accept, but also creates more legal problems (Tokarczyk, 2012, p. 385).

Death, according to its classical definition, occurred with the cessation of respiratory function and loss of circulation. But the achievements of medicine from the second half of the twentieth century made this definition obsolete. As a result of medical advancements, resuscitation and other forms of medical intervention can now restore respiratory function and circulation. In addition, circulation and breathing can be sustained artificially. At the end of the 1950s, descriptions of brain deaths (Goila & Pawar, 2009) began to appear in the medical literature. At the same time, the proponents of transplantology pointed to the urgent need to accept the criterion of recognizing the occurrence of death as early as possible, since determining the final moment of human existence in the legal sense was important in defining the principles of organ harvesting and transplantation *ex mortuo*. Ultimately, American scholars associated with Harvard Medical School formulated and developed the definition of brain death.³ Its main criteria were the lack of clinical symptoms of brain function within 24 hours. One of the first definitions of brain death was established in 1959, in France. The definition introduced the term "coma dépassé", meaning an irreversible deep coma, the so-called central nervous system death. It was not until 1968, during the meeting of the World Medical Assembly, that the "Communication on the subject of death" was announced, the so-called declaration of Sydney. The declaration replaced the phrase "death due to the cessation of cardiac function" with the word "cerebral death" (Małkosa, Wysokiński, Fidecki & Kuszplak,

³ See Report of the Ad Hoc Committee of the Harvard Medical School to Examine the Definition of Brain Death, <http://jama.jamanetwork.com>.

2018, pp. 46-49). Many American states, and also the majority of developed countries, except Japan, have adopted the definition of brain death. In 1981, the Presidential Commission on Ethical Issues in Medicine, Biomedical and Behavioral Sciences modified the approach to the recognition of death.⁴ The Uniform Determination of Death Act recognizes that after the brain stem loses the ability to perform integrative functions, individual systems of living organs no longer create a living organism as a whole. In essence, this recognition modified the definition of death, associating directly the life of the brainstem with the life of the entire brain, and indirectly linking the brainstem with the life of the organism as a whole. The literature indicates that it is important to recognize that the necessary but sufficient condition for the death of the brain as a whole is the confirmation of brain stem death. Considering the achievements of resuscitation, the traditional definition of death has been complicated by the fact that heart and breath activities can be replaced with artificial apparatus, which previously allowed for the omission of these organs in the earlier definition of death (Kalita, 2016, pp. 39-53). However, the most influential views, at least in terms of law and policy, have treated death in biological terms. The President's Council on Bioethics in 2008 reiterated this stance: "[we] reject the idea that death should be treated merely as a legal construct or as a matter of social agreement. Instead, (we) ... respect the biological reality of death."⁵

The Polish legislator introduced the definition of cerebral death in 1984. The cerebral death was defined as the permanent termination of all integrative activities of the central nervous system with artificially sustained or spontaneous circulation and respiration. "On the basis of the currently binding Act on the collection, storage and transplantation of cells⁶, tissues and organs, determining the moment of death, in accordance with Article 9, is based on the criterion of permanent and irreversible cessation of brain function (brain death) or as specified by the jurisprudence - with the end of brainstem function (cerebral death)".⁷ At the same time, as regards the criteria and manner of determining the death of the brain, reference is made to the minister responsible for health in the Official Gazette of the Republic of Poland,

⁴ Guidelines for the Determination of Death. Report of the Medical Consultants on the diagnosis of Death to the President's Commission for the Study of Ethical Problems in Medicine and Biomedical and Behavioral Research, <http://jama.jamanetwork.com>.

⁵ The President's Council on Bioethics. Controversies in the determination of death: a white paper by the President's Council on Bioethics. Washington, D.C.: U.S. Department of Health and Human Services, 2008, pp. 49-50.

⁶ Article 9 of the Act of 1 July 2005 on the collection, storage and transplantation of cells, tissues and organs, Journal of Laws of 2005 No. 169, item 1411.

⁷ See Judgment of the Court of Appeal in Krakow of 5 November 2008, II AKa 87/08, KZS 2009, z.1, poz. 65.

Monitor Polski, where the criteria and methods of determining the death of the brain are continually revised according to current medical knowledge. According to the currently binding announcement of the Minister of Health⁸, death is a dissociated phenomenon. This means that death embraces tissues and systems at different times. This distinction results in the disintegration of the system as a functional whole and subsequent permanent loss of individual functions in a different time sequence. Therefore, some functions of the system or parts thereof may persist for some time in isolation from other previously dead ones. The dissociated nature of the phenomenon is manifested in a special way in situations in which the death has already taken place in the brain, while the blood circulation is still preserved. In these cases, the state of the brain determines the life or death of a human being. In the majority of clinical cases, the swelling of the brain resulting from its damage grows from the side of the supratentorial space, and the brain stem is the last part of the brain to die. In such situations, the factor that qualifies as brain death is the irreversible lack of brainstem function. Permanent brainstem injury is characterized by the lack of both specific nerve reflexes and spontaneous respiratory function. Such outcomes, based primarily on clinical trials, are possible in the majority of cases, and its result is certain. The Announcement of the Minister of Health also states that in specific circumstances, the suspicion of brain death must be confirmed by instrumental studies. The Announcement underscores the fact that many years of medical practice has clearly demonstrated that in selected cases, departing from the concept of death of a human being as a whole for the death of the human brain as a whole is justified from both scientific and practical points of view. In the light of advances in medicine and the dynamic development of intensive care, such a position turns out to be absolutely necessary and right. Despite the huge possibilities of saving human health and life, brought about by modern medicine, there remain situations in which even the most advanced medical techniques are of no avail. One of them is brain death.⁹ Nevertheless, the definition of brain death raises doubts, not only from the perspective of the universal understanding of death (Nair-Collins & Miller 2017, pp. 747-753), but also among physicians and lawyers (Wójcik, 2007, p. 196).

⁸ Annex to the Announcement of the Minister of Health of 17 July 2007 on the criteria and manner of determining the permanent irreversible cessation of brain function.

⁹ Work on the draft notice on the criteria and how to determine the permanent irreversible cessation of brain function is still ongoing. See, Ordinance of the Minister of Health of September 28, 2017, amending the Ordinance on the appointment of a Working Group for the preparation of the draft notice on the criteria and the manner of determining permanent irreversible cessation of brain function, DZ. URZ. Min., 2017.99.

Objections to the dissociative concept of death form the phenomenology (Türk 1996, pp. 60-72). Jonas opposes the adoption of the new definition of death. In his opinion, medicine usurps the right to determine the boundary between life and death. Medicine defines the signs of dying rather than the limits of life and death and supplies information about what dies in a man, but not about the fact that a man died. To ensure that we are dealing with the deceased, minimalist criteria are insufficient, but the maximalist criteria are necessary. By applying the former, medicine inflicts rupture on our body, delaying it from dying in order to obtain organs for transplantation. In his opinion, cerebral death is neither a death criterion nor an organ procurement criterion, but instead is a sign of the irreversibility of processes. Jonas points out: "My identity is the identity of the whole and the entire organism, although higher personality functions are based in the brain"(Jonas, 1985, p. 222).

According to Sobczak and Janaszczyk, the definition of brain death is based on the "social contract", because the criteria adopted for its adjudication and the set of texts defining the technical conditions for the declaration of death are contractual. They pointed out that the analyzed criteria of human death results from social pragmatism, because it brings more benefits to patients themselves, in particular organ donors and recipients and their families, and consequently to society and science, as opposed to natural criteria, which impose only high economic and social costs on society in exchange for doubtful certainty and defense of archaic values (Sobczak & Janaszczyk 2012, p. 190). Tokarczyk notes that doubts are exacerbated by the multitude of definitions of death: pathological and physiological, clinical and biological, circulatory and cerebral, direct and indirect, absolute and relative, civil and real. When biological sciences tend to define death in terms of the process, the law is forced to precisely indicate the moment of death - hour, day, month, year. When there is still life in a dying human body under the norms of biology and medicine, the law accepts the fiction of its total death. Therefore, there are some doubts whether the decision to declare death should be left to the physicians as the best prepared to adjudicate on the death criteria. Alternatively, perhaps it is wiser to give these rights to lawyers - legislative solutions or (and) court rulings. It is worth pointing out that according to Tokarczyk, the transplant uniqueness of brain death is undermined by Japanese scholars. They point out that cerebral death comprises not only the issue of the death of the brain itself, as it is accepted in Western countries, but also the ontological and axiological issue of its meaning. The essence

of brain death in the ethical sense does not remain in the brain itself, but rather in the relations that the person with cerebral death had with other people around him. The main point is whether it is an over simplification to say brain death does not involve unwanted spiritual death (Tokarczyk, 2012, pp. 386-387).

Legal recognition of the definition of brain death is important as it shifts the boundary between life and death, and thus affects the scope of the subject of legal protection. Determining this moment changes the subject-legal status of a person diagnosed with brain death. A person who has been diagnosed with brain death has no legal protection of their life; only legal protection of their corpse remains.¹⁰ Dignity and the place of burial arise from dignity due to man. Therefore, the death of the brain continues to protect the body (corpses, remains), which can be the subject of the executive action of desecration of corpses (Article 262 k.k.) (Stefański, 2004, pp. 21-22). These issues are more complicated if we ask the question about the right to die, which today resounds in a completely new light as will be further demonstrated. Issues surrounding the right to die are correlated with the issue of good life and they focus on the problem of freedom with regard to the achievements of technology and medicine, which dictate, to a certain extent, whether a human life either can be prolonged or shortened.

3 Homo Immortalis

For centuries, *homo sapiens* used tools - he regulated rivers, domesticated and cross-bred animals, and built increasingly sophisticated refined shelters. However, he had no influence on the structure of his body, cognitive processes, aging and mortality. Currently, human corporeality and cognitive abilities (perceptual and sensual reinforcements) are constantly expanding (Human Enhancement) thanks to convergent NBIC technologies (Nanotechnology, Biotechnology, Information technology, Cognitive science), development of Artificial Intelligence, Augmented and Virtual Reality. For the first time in history, man has extended his dominion not to the outside world, but to himself - his body and mind. The technological development is supported by the transhumanist movement - the trend formulated hypotheses regarding the future fate of the human species and the upcoming social changes to come through the achievements of science (Garreau, 2005, p. 10).

¹⁰ Regulation of the Minister of Health of December 7, 2001 on the treatment of corpses and human remains. Journal of Law of 2001.153.1783.

The term "transhumanism" was first used by the biologist Julian Huxley (brother of Aldous Huxley) in the book *Religion Without Revelation* in 1927, in which he suggested that humanity could overcome its species limitations through science, and could thereby break the barriers of carnality from the shackles of the human condition. The previews of transhumanism also appeared in the 1970s in the texts of Professor Fereidoun M. Esfandiary (the robotic pseudonym FM-2030), who wrote about transhumans as the next link in the chain of evolution. The movement has its roots in the ideology built on the project of cybernetics and Artificial Intelligence developed during the Cold War. At that time, the concept of creating intelligent machines to fight the enemy was born (they were supposed to take care of safety and perform difficult or arduous tasks for a man), and with time a futuristic postulate of transforming a man into a machine was added. According to Michael Anissimov, transhumanism involves not only taking control over its own evolution and increasing civilization diversity, but also encompasses the ability to create new entities such as cybernetic persons, genetically modified intelligent species or Artificial Intelligence (Anissimov, 2015). Transhumanism is closely related to the development of technology and science; above all, research on Artificial Intelligence, biotechnology and nanotechnology. Regardless of whether it connects to the concept of replacing the body with a mechanical medium or genetic modification, it assumes the modernization of the human form using solutions developed by the researchers. Transhumanists assume that scientific progress is synonymous with the development of man both as a representative of the species and as a member of the community (Cieślak, 2013, pp. 96-97). As part of transhumanism, there are many concepts of mediatization and technologization of people - from the so-called mindUploading (transfer of consciousness into the ICT network) through the cyborgization of the human body (to increase its natural motor and cognitive abilities) to concepts of immortality (different types of transplantation visions, human consciousness in the structure of an artificial, bionic body).

Researchers at the University of California, Duke University and also the Facebook company within the Unit Building, work on the technology of connecting the human brain with the computer scientists and companies are working on a special interface that connects the human brain with the computer, which will allow people to communicate directly with the machines. Projects involving the transfer of mind (mindUploading), which means the merging of human consciousness into a non-biological carrier, are definitely more frightening. George M. Martin from the

University of Washington, formulated the vision of mind transfer for the first time in scientific biomedical literature in 1971. According to his theory, information and any processes taking place in the brain can be separated from the biological body. Currently, intensive research in this area is being carried out in various centers, assuming the transfer of the mind to a computational device based on artificial neural networks.¹¹ Computer scientists and neuroscientists expect that in the future the computing power of computers will enable simulation of human brain activity in the computer memory, which should result in the simulation of a mind analogous to humans (Koch & Tononi, 2008, pp. 16-27). Similar ideas are provided by Russian researchers and transhumanists who, as part of the "Russia 2045" movement, assume the upload of human consciousness to the Avatar.¹² The goal of the organization founded in 2011 by the young multimillionaire Dymit Ickow is the "evolutionary leap of all humanity" towards "neo-humanity". A group of outstanding specialists are working on it in the field of neuroinformatics, neurophysiology, brain-computer interfaces, research on artificial intelligence related to the Russian Academy of Sciences. They are supported by representatives of the humanities and social sciences, as well as journalists and writers and publicists. Their main task is to create an avatar, i.e., an artificial body that will become a carrier of human consciousness. Creating the avatar will involve several stages, starting with the construction of an anthropomorphic robot, driven by the interface brain-computer, in order to create a medium that can be used to transfer human consciousness.

According to the well-known Russian immortalist Vladimirovich Viszev, in the scientific and technical dimension, the struggle for an unlimited extension of human life consists of three stages. The first stage - gerontological, based on the achievements of science about aging and old age (gerontology) - focuses on strengthening human health. The second stage - juvenile - concentrates on protecting and restoring youth, in what he has to help juvenologia. The last stage - immortalological - will consist of achieving practical immortality. To achieve this objective, an entirely new scientific discipline called immortology will be created. Immortality will be through humanity achieved not only in the physical, individual plan, but also in the social plan. This means moving toward a new model of social progress: progress based on the change of generations in which we accept each person's death. Each person will be replaced by a model based on immortality. This

¹¹ MindUploading, <http://www.minduploading.org/> (accessed 1 December 2021).

¹² <http://2045.com/> (accessed 1 December 2021).

will require the skill of resurrecting a man - bringing him back to life, after losing it as a result of a singular unhappy incident. As a result of the transition to the new model of progress, the current species of human *Homo sapiens* will be replaced by a new species - *Homo immortalis* (Olzacka, 2016, p. 55-62).

4 Right to die

Death is not a human right - writes Pohler - but rather is an element of humans' nature (Pohler, 1974, pp. 936-950). In turn, Frankl, addressing the issue of passing away and eradicating the sense of human existence, postulates that endless life would be meaningless. "Man does not want to live at all costs, he wants to live with meaning. A short life can be filled with meaning, and long meaningless" (Frankl, 1984, p. 82). In the manifesto of The World Federation of Right to Die Societies, we read that 'death' is unavoidable. But we believe that the manner (and time) of dying should be left to the decision of the individual, assuming such demands do not result in harm to society other than the sadness associated with death". Meanwhile, the projects undertaken by transhumanists and immortalists show that a posthuman can overcome death. Certainly in the near future, with the advances in technology and medicine, there will be a significant extension of human life. Nevertheless, because of rapid technological advancements, the list of ethical and legal problems that remain unresolved today will be expanded to include new ones.

As indicated above, the diagnosis of death was subject to evolution and reevaluations, passing the following stages: (1) From the death of the whole person to the death of a man as a whole as a result of definitive cessation of blood circulation (classical definition). (2) From the death of a human being as a whole as a result of cessation of blood circulation, until the death of the whole brain (the so-called new definition). (3) From the death of the entire brain to the death of the brain as a whole as a result of death of the brainstem (definition of the so-called new modified). In the light of projects to transfer human consciousness to the machine, death will have to be redefined. Then how would we characterize the next stage? (4) From the death of a human being as a whole as a result of the cessation of blood circulation, to digital immortality? And would the law face completely new questions about the end of legal personality? The issue would be to regulate family and property relations of a person whose consciousness has not died, but has turned into a virtual, artificial,

cyborgic body. Should our avatar have full legal capacity or should it be limited, and if so, to what extent. These are just some of the questions that arise in this context.

The shocking stories of people trapped in the so-called “gray zone of dignity” and the dilemmas of their families are electrifying and have stimulated public opinion world-wide. Against the background of different legislative approaches in different countries, and various court judgments in these matters, there are questions about the differences between refusal to provide treatment, suicide, assisted suicide, doctor-assisted suicide and permission to die. It is also difficult today to decide the extent to which the law should regulate such issues and who should make decisions. Should such decisions be made by physicians, those standing in close relations to the patient, the courts, or special state offices. Perhaps the decisions should be dictated solely by the person’s living will. But what if the patient did not leave any declarations of will? The matter is complicated due to the discoveries of Owen and his colleagues and the possibilities of “talking” with some patients in the vegetative state by means of appropriate tests using fMRI. Maybe then the decision will depend on the will of the patients themselves. But only to the extent that their declaration of will is conscious and free. None of these questions can be answered in this article, or even in any extensive study. However, it is important to understand that these unresolved moral, medical and legal dilemmas will become even more complicated when mankind shifts death to the border, which is difficult to predict accurately today. As Owen points out, readiness to end someone's life is connected with the problem of a given person's level of awareness and how much of that person remains in the person (Owen, 2018, p. 258). How to act in accordance with the will of the replacement for our loved one, who discovered that eternal life in cyberspace, is not a privilege but a torment. If you assume his awareness, can you simply press the “Delete” key? And if so, under what conditions? And if we would be able to determine them, how would we deal with the problem of a long-lasting life since presently we do not have to confront the problem of limits of persistent therapy?

The multifold problems associated with the transhumanist conception of mind uploading are technical, anthropological, philosophical and legal. Will the transfer of identity take place simultaneously with the transfer of the mind? The problem of continuity begins with the question of whether the mind formed in the scanning process will be the same person from whom the information was collected. What attributes of the mind will the transfer concern? Will it be just a copy, some kind of

artificial intelligence faithfully reproducing a particular person? Will the transfer essentially result in a unitary human being, his memory, feelings and identity? (Pawlak, 2018, p. 15). In the context of Kurzweil's theorems, a human being recreated from data by uploading becomes the version of the original, only updated on the interfaces in the form of data or in a robotic body (Kurzweil, 2013, p. 306). Therefore, the question arises whether the person recreated from the data will still be the same person or only a copy who can develop his independent personality separately from the original.

5 Conclusions

The transhumanist scientific and research initiatives presented in the article indicate that the problem of immortality is today not only a dream, but an opportunity that can come true. This has been observed by well-known figures from the world of science and philosophers. In this context, the already complicated problem of death appears in a completely new light. It may turn out that immortality involves not only the freedom of the individual in the field of the right to good death, but also guaranteeing the right to simply die: to end life without transferring consciousness to a computer or bionic body, remaining faithful to human nature, and not another, whose singularity today we can not foresee. In this context, death may become a privilege that will require appropriate legal guarantees, going far beyond the still unfinished debate concerning the definition of death and the right to die with dignity.

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Notes

1. <https://www.broadinstitute.org/research-highlights-crispr> (access 20 October 2021).
2. <http://www.transhumanism-russia.ru> (access 20 October 2021).
3. See Report of the Ad Hoc Committee of the Harvard Medical School to Examine the Definition of Brain Death, <https://hods.org/English/h-issues/documents/ADefinitionofIrreversibleComa-JAMA1968.pdf> (access 28 July 2022).
4. Guidelines for the determination of death. Report of the medical consultants on the diagnosis of death to the President's Commission for the Study of Ethical Problems in Medicine and Biomedical and Behavioral Research. JAMA. 1981 Nov 13;246(19):2184-6. PMID: 7289009.

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5. Article 9 of the Act of 1 July 2005 on the collection, storage and transplantation of cells, tissues and organs, *Journal of Laws of 2005 No. 169*, item 1411
 6. See Judgment of the Court of Appeal in Krakow of 5 November 2008, II AKA 87/08, KZS 2009, z.1, poz. 65.
 7. Annex to the Announcement of the Minister of Health of 17 July 2007 on the criteria and manner of determining the permanent irreversible cessation of brain function.
 8. Work on the draft notice on the criteria and how to determine the permanent irreversible cessation of brain function is still ongoing, see Ordinance of the Minister of Health of September 28, 2017 amending the Ordinance on the appointment of a Working Group for the preparation of the draft notice on the criteria and the manner of determining permanent irreversible cessation of brain function, *DZ. URZ. Min.*, 2017.99.
 9. Regulation of the Minister of Health of December 7, 2001 on the treatment of corpses and human remains. *Journal of Law of 2001.153.1783*.
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