

Cloning: Normality and Pathology (Criminal Law Issues)

Yu. V. Radosteva

Ural State Law University, Yekaterinburg 620137, Russian Federation

**Corresponding author. Email: la-venta@mail.ru*

ABSTRACT

The rapid development of the field of biomedical technologies, which is increasingly in conflict with a whole set of ethical and legal principles, on the one side, clearly shows the unreadiness of society and law for such fast development of science and the level of intervention in the very essence of man, and on the other - the lag of legal science and practice in assessing and understanding human rights in this area. In this regard, the author of the article draws attention to the significant gap in the existing legal regulation of human cloning in domestic legislation. The statutory ban on human cloning formulated in this way is not only temporary but has not yet been fully reflected in the regulatory and protective legislation, which in itself is a prerequisite for the inefficiency of its implementation. The author notes the limitations of scientific research in this area, most of which is reduced to the study of medical and ethical problems. This has a significant contradiction with global trends in the development of legal mechanisms regulating human cloning, including from the position of countering crimes in the field of cloning and reproductive technologies. Taking into account the preventive and protective purpose of criminal law, the author defends the need not only to develop a criminal law mechanism for countering criminal manifestations in this area but also to update scientific works in the field of the implementation of the most important human right – the right to life, which acts as a starting point in regulating criminal liability for attacks in the field of cloning and reproductive technologies. In this regard, the author justifies the need to review the existing legal approach to determining the beginning of life, taking into account possible achievements in the field of biotechnology, and the development of a special legal regime for the criminal protection of human embryos.

Keywords: *cloning, biotechnology, legal regulation, embryo, right to life, criminal law, responsibility*

1. INTRODUCTION

As the world has moved on, its rapidly changing realities require an appropriate response to them in scientific, technical, legal areas, etc. As one of the most famous theoretical physicists of our time, Stephen Hawking, rightly noted, "humanity is experiencing one of the most dangerous centuries, and the progress in science and technology is becoming an increasingly serious threat to our existence. We are not going to stop making progress or cancel it, but we must recognize the dangers and control them." [6]

One of them is biomedical technologies, research progress in which has reached such incredible heights that the individual himself, every day more and more deprived of the sacredness of his essence, becomes not just an object of rational knowledge, but its product. This process, one of the negative consequences of which can be the anthropologization of a person through technological construction (cancelling, reproducing, modifying or genetically modelling) of the body and mind, or replacing the existence of the individual by transferring to other realities, cannot be stopped. At the same time, the

transformation of organic evolution through natural selection into evolution through intelligent design (through genetic engineering) and the prospects for genetic engineering, cloning, in vitro fertilization, and organ and tissue transplantation, including artificial ones, not only raise new problems and questions but also require a critical rethinking of existing experience, including from law [12, 15]. The lack of appropriate legal control is in itself a prerequisite for using these technologies to serve undesirable purposes. The law intervenes to restrict the use of technology and direct it exclusively for legitimate purposes [10].

Realizing that the diversity of the challenges addressed in the framework, only one study is impossible, we can focus just on certain legal aspects of human cloning, as the process of "creating a human being genetically identical to another living or dead person by transferring in the enucleated female sex cell from a somatic cell of the person" (Federal Law of the Russian Federation dated May 20, 2002, No.54-FZ "On a temporary ban on human cloning", Article 2). (Hereinafter – FZ "On a temporary ban on human cloning").

It should be noted that the existence of a special regulatory act restricting the issues of human cloning is undoubtedly positive in itself. But this act, as its name implies, is only

temporary, as well as the ban established by it since 11.04.2010, which is valid until the date of entry into force of the Federal law establishing the procedure to apply technologies for cloning organisms in the interests of human cloning. But since there is no special research on human cloning conducted on the territory of the Russian Federation, this postpones cancelling the introduced ban for an indefinite period.

It is important to emphasize that in the original version of Article 1 of Federal Law "On a temporary ban on human cloning", the ban was introduced for five years, on the expiry of which (from June 23, 2007), before the entry into force of changes made by Federal Law No. 30-FZ of March 29, 2010 "On amendments to Article 1 of Federal Law "On the temporary ban on human cloning", the issue of cloning remained generally unregulated.

Besides, cloning of organisms for other purposes is excluded from the scope of this document.

With this in mind, it is obvious that the legislator did not seek to absolutize the ban on scientific research in this area as a whole, but only attempted to restrain them until significant developments appeared in the study of the biological and social consequences of human cloning.

2. RESULTS

Thus, despite the positive aspect of the step taken in the legislative regulation of human cloning on the territory of Russia, it also resulted in causing a significant conflict of laws problems. The question arising is not so much as the potential possibility of cloning a person or creating his genetic copies, that contradicts a whole complex of social problems, ethical principles and religious dogmas, as stated in the Explanatory Note to the Draft Federal Law No.125391-3 "On the temporary ban on human cloning".

Rather, they are due to the subsidiary nature of criminal law. "Protecting social benefits" the latter "really and reasonably defines the limits of lawful behaviour by its prescriptions, the content of which is established by the so-called regulatory branches of law" [5].

Accordingly, "a delay in changing protective norms can create complex legal conflicts that paralyze the law enforcement mechanism" [14, p. 192].

Thus, the legislative ban on human cloning, as well as the import into and export from the territory of the Russian Federation of cloned human embryos, established by the Federal law "On the temporary ban on human cloning", despite the provision in Article 4 that those responsible for its violation are liable under the legislation of the Russian Federation, did not receive logical support by appropriate measures of state coercion. And the fact that such norms exist, which are exclusively declarative in nature and are not provided with protective regulation, indicates that the legal policy in this area is not systematic, which once again actualizes the research interest in the declared problem.

This, by the way, is quite traditional for the related field of reproductive technologies. A similar declarative nature can be found in Article 35 of the now-invalid fundamentals of

the Russian Federation legislation on the protection of citizens' health, which stipulated that illegal artificial insemination and embryo implantation entails criminal liability established by the legislation of the Russian Federation.

At the same time, criminalization in this part was not made either during the period of validity of this document or at present. The Federal Law of November 21, 2011, No. 323-FZ "On the basics of public health protection in the Russian Federation", which replaced it, excluded the very mention of criminal liability for violations in this area, creating a corresponding uncertainty about the criminal legal assessment of what was done.

Concerning the nature of the legislative ban on human cloning in Russia, it should be noted that adopted domestic legislator of the Additional Protocol to the Convention on the protection of the rights and human dignity in the application of biology and medicine (ETS No. 168) the concept of attributable only to one type of human cloning, namely reproductive cloning, artificial reproduction involving a genetically exact copy. The legal status of another type of cloning – therapeutic cloning – has remained its uncertainty.

On the one side, this procedure is technically the same reproductive cloning, but with a limited period of embryo development. Leading embryologists of the world consider a human embryo up to 14 days old as a proembryon formed by cell layers representing germ membranes, a material that is not involved in the construction of the embryo itself. And only on the 14-15 day with the beginning of the formation of elements of the nervous system, a conglomerate of cells (embryo, blastocyst) should already be considered a living being.

Such cloning is called therapeutic only because the embryonic cells formed during the first 14 days can later turn into specific tissue cells of individual organs and be used in medicine for the treatment of many diseases. These cells of future organs are called "embryonic stem cells" [18].

And although a breakthrough in the study of human embryonic stem cells occurred in November 1998 in the group of James Thomson at the University of Wisconsin, which isolated such cells from the human blastocyst [19], the issues of legal regulation of actions with them have not been fixed either in domestic, foreign, or international legislation [19].

Being the progenitors of cells of almost all tissues and organs of an adult, in the past, due to the lack of biotechnology for their cultivation and preservation, they were destroyed (for example, in abortion clinics). However, the developments of recent decades have allowed not only to develop biotechnology for the artificial production of embryonic stem cells by cloning but also to create special nutrient media for growing living tissues from them.

This discovery has created huge prospects not only from technology for the production of human "spare parts", but also for the development of new methods for treating still considered incurable diseases, such as Alzheimer's disease, which is the most common cause of dementia, in turn,

recognized by the WHO as a public health priority. It is not for nothing that the discovery of D. Thompson and D. Becker was included by the journal "Science" in the top three most important biological achievements of our time after the decoding of the double helix of DNA and the Human Genome Project [22].

On the other side, therapeutic cloning, which is not formally explicitly prohibited by the Federal law "On the temporary ban on human cloning", can easily "develop" into reproductive cloning in a situation where the process of embryonic development is not stopped for 14 days and the formation of the fetus continues, and in the future the birth of a child.

At the same time, there are no norms in the current legislation that establishes responsibility for inaction regarding stopping embryonic development and subsequent embryo cultivation. And the question of the time frame for the formal prohibition of these actions is rather debatable, including as a result of the substantial uncertainty of the concept of human cloning mentioned in the law.

The used construction "human cloning - human creation" having similarities in the types of cloning can be interpreted as from the process, respectively, and all actions aimed at creating a human clone acquire the property of illegality. And from the result, i.e. the appearance of a person who is genetically identical to another living or dead person is considered to be illegal.

In the latter case, in the absence of an outright ban on therapeutic cloning and mapping of illegal acts, with the result raises another set of problems requiring special regulation, namely the definition of the legal regime of human embryos and actions that makes a fresh look at many of the already established positions on, for example, what is life and what is the timeline of its criminal-legal protection, what is embryo: a simple association of cells, potential or a real person.

According to biology and embryology the human embryo passes through in its prenatal development three stages: proembryo (14 days from the moment of conception); the embryo (8 weeks from conception); the fetus (from 8 weeks until birth) [21].

Article 2 of Federal law No. 54-FZ of 20.05.2002 defines a human embryo as a human embryo at the stage of development up to eight weeks, which also meets the medical criteria for periods of human embryonic development [1].

Taking into account that therapeutic cloning aimed at obtaining embryonic stem cells assumes that at a certain stage of development of proembryonic its dismemberment into individual cells that result in the death of proembryonic, is in the earliest stages of embryonic development concerning embryonic membranes before the formation of the elements of the nervous system, making it "human" content as embodied, for example, in Clause 1, Article 4 of the American Convention on Human Rights (Pact of San Jose, November 22, 1969) "Every person has the right to have his life respected. This right shall be protected by law and, in general, from the moment of conception. No one shall be arbitrarily deprived of his life"

is doubtful and comes into significant contradiction with the regulatory regulation of life protection issues in Russian legislation.

So, Clause 1 of Article 53 of the Federal law of November 21, 2011, No. 323-FZ "On bases of health protection of citizens in the Russian Federation", the legislator determined the beginning of human life, linking the time of birth with the separation of the fetus from the maternal body through childbirth.

Thus, it was brought to an end this long ongoing debate because of which life is connected with the moment of separation of the fetus from the mother's body, then cutting the fetus from the maternal body, with the beginning of spontaneous breathing, with the beginning of childbirth, the moment of cutting the umbilical cord [8].

In the Great Medical Encyclopedia, childbirth (birth act) is defined as "the physiological process of expelling the fetus, placenta with fetal membranes and amniotic fluid from the uterus through the birth canal after the fetus reaches viability" [1].

Linking the time of birth with the separation of the fetus from the mother's body, the legislator pointed to the actual process of birth, according to some authors "the birth of a child should not be considered the point of complete expulsion or extraction of an infant from the maternal body when the newborn begins to show vital metabolic functions belonging to an independent human body (pulmonary respiration, followed by the first breath and cry), and the time of the first birth contractions of a pregnant woman, when just beginning the process of separating the fetus from the mother's body" [23], and the result is the separation of the fetus and the mother's body.

From these positions, the opinions expressed on the pages of scientific literature about the need to separate the moment of the beginning of criminal law protection of life and the moment of the beginning of life itself can be considered partially justified.

The first means the emergence of any living substance, namely an autonomous human individual capable of development and socialization.

In the second case, life is interpreted from a philosophical and biological perspective and is perceived much more broadly. Life is considered as one of the highest forms of movement and organization of matter. The most common theory is about the protein essence of all living organisms, each of which is an individual integral system with a complex structure and metabolism, as well as a certain order of interrelated biochemical reactions. In other words, remembering the definition of one of the founders of Marxism, "life is a way of existence of protein bodies, the essential point of which is a constant exchange of substances with the surrounding external nature, and with the cessation of this exchange of substances, life also stops, which leads to the decomposition of protein" [24].

From these positions, we can detect life in human and animal organs and tissues removed for transplantation and artificially grown (in vitro), embryonic material for in vitro fertilization, molecular structures used in genetic engineering, etc. In this broad sense, life is practically devoid of criminal legal protection, except for the sphere

of transplantology, but even here there is a significant lag in legal regulation from the development of this branch of medicine [9].

Indeed, the categories of life and death in the current criminal law relate only to one of the objects of criminal law protection – a person. Even in the norms concerning the death of animals, their criminalization is carried out based on the connection of the act with a person, and not on the basis of an encroachment on the life of another living being. This is already evident in, for example, the systematic placement of the norm of Article 245 of the Criminal Code of the Russian Federation (Cruelty to Animals) in Chapter 25 of the Criminal Code of the Russian Federation (Crimes Against Human Health and Public Morality), the inclusion of special motives (hooligan and selfish motives), goals (causing pain and (or) suffering), methods (sadistic methods), the situation (in the presence of young children), which together indicate an attack on morality as an object of criminal legal protection, thereby excluding the life of animal itself. Similar criteria for criminalization can be identified concerning the elements of crimes that establish responsibility for poaching activity. Indeed, in the preamble to the Federal Law of April 24, 1995, No.52-FZ "On Animal World" it is fixed that "Animal World is the heritage of the peoples of the Russian Federation, an integral element of the natural environment and the Earth's biological diversity, renewable natural resource, the important regulating and stabilizing component of the biosphere, fully protected and rationally used for the satisfaction of spiritual and material needs of citizens of the Russian Federation".

Taking into account the relationship of cruelty to another creature, for example, an animal, and its manifestations with the person himself: "cruelty and emotional callousness, indifference to the suffering of a living being, contribute to the formation of sadistic tendencies" [13], "cruelty to animals in childhood is very likely to lead to crimes against people in adulthood" [7], "cruelty to animals in the MacDonald Triad is one of the behavioural characteristics that predict the possibility of committing violent murders in the future [11], approaches to the level and methods of criminalizing attacks on life in the broad sense of the word may well be subject to revision since respect for human life begins with respect for life in general.

And although as rightly stated by the European Court of Human Rights, "the starting point of the right to life refers to the margin of discretion of states, which must be recognized even with expanding the interpretation of the Convention for the Protection of Human Rights and Fundamental Freedoms, which is a living instrument that must be interpreted in the light of conditions of modern life [4]. This determines the need to revise the legal relationship and legal protection themselves human embryos, at least because of the existing (available) capacities to acquire qualities with further development.

Moreover, the prerequisites for that were laid in 1992 with the adoption by the WHO the criteria of live birth, according to which "a live birth is the complete expulsion

or extraction of a product of conception from mother's body without dependence from the duration of pregnancy, and the fetus after such separation breathes or shows other signs of life such as heartbeat, pulsation of the umbilical cord or obvious movements of voluntary muscles, regardless of whether the umbilical cord is cut and whether the placenta is separated; each product of such birth is considered as live births".

The same criteria for live birth are established in Clause 3 of the Medical Birth Criteria approved by Order No.1687n of the Ministry of Health and Social Development of the Russian Federation of December 27, 2011 "On medical birth criteria, the form of the birth certificate and the procedure for issuing it". The same document also established the birth criteria, namely:

- 1) the gestation period is 22 weeks or more if the child's body weight at birth is 500 grams or more (or less than 500 grams for multiple births), or if the child's body weight at birth is unknown, the child's body length at birth is 25 cm or more;
- 2) the gestation period is less than 22 weeks or the child's body weight at birth is less than 500 grams, or if the child's body weight at birth is unknown, the child's body length at birth is less than 25 cm - with a life expectancy of more than 168 hours after birth (7 days).

Accordingly, when separating a live-born fetus from the mother's body, the criteria for the emergence of such an object of criminal legal protection as human life directly depend on advances in the developing field of medicine. Today, this is the gestation period with the physical indicators of the child's weight or body length, or the life expectancy after birth.

Hence, we consider that it is well-timed to recognize the independent legal status of the embryo and fetus, including as an object of criminal law protection, if only because, as the European Court of Human Rights rightly noted in one of the cases of Parrillo versus Italy (complaint No. 46470/11), "the protection of the vital potential of the embryo" can be correlated with the purpose to protect morals and to protect the rights and freedoms of others."

This is consistent with the existing international and European acts, having non-binding nature, including for Russia, for instance, by the Declaration of the Rights of the Child: "the child because of his/her physical and mental immaturity needs special protection and care, including appropriate legal protection, both before and after birth", Clause 1 and 2, Article 18 of the Convention on the protection of human rights and human dignity in the application of biology and medicine: the Convention on Human Rights and Biomedicine (ETS No. 164) (concluded in Oviedo, April 4, 1997): "If the law allows researching embryos in vitro, it must also provide for the proper protection of this embryo. The creation of human embryos for research purposes is prohibited."

The Russian legislator in the Federal Law "On the temporary ban on human cloning" has so far banned only the import into and export from the territory of the Russian Federation of cloned human embryos, definitively leaving unanswered the question of the possibility of extending this ban to actions with proembryons.

Thus, such acts with embryos obtained naturally are formally permissible, but their transition requires special custom procedures or special permission (authorization document).

At the same time, questions about evaluating other actions with human embryos, both obtained by cloning and naturally, clearly indicate the legal gap that exists today.

It is enough to remember the sensational case in the Sverdlovsk region when 4 plastic containers with human embryos aged 22-26 weeks were found on the side of one of the highways in July 2012 [2].

The result of the check of that incident was the attempt to prosecute under Article 254 of the Criminal Code of the Russian Federation (Deterioration of Land) for damage to land by formaldehyde used to treat embryos. The order to dismiss the criminal complaint and to hold the guilty ones only to administrative responsibility for improper disposal of medical-biological waste as well as the addressing to the university administration a letter demanding to prosecute the officials who were supposed to control biomaterials.

On the one side, the legal consequences of evaluating the revealed fact of such treatment of embryos are quite natural, since the act does not meet the criteria of any of the crimes provided for by the current Criminal Code of the Russian Federation.

On the other side, this cannot be recognized as the norm for the treatment of human embryos, including from public morality, which is included in the number of objects of criminal law protection. It is no coincidence that as a reflection of a system of values generally accepted in a particular society, it is not limited, unlike other objects: health, property, public safety, etc., by a normative framework, although it acts as an ideological guideline for the formulation of a legal ban. At the same time, the norms of criminal law, a priori, not only should not contradict the moral requirements but on the contrary, comply with them. This, in turn, will inevitably require a review of the existing assessment of attacks on the human fetus.

Today the prevailing approach that the fetus in fact has no independent criminal-legal protection is recognized as a part of the mother's body, equated with the organs and tissues of human origin, whereby, for example, abortion, i.e. the termination of pregnancy, without regard to the period, caused by the harm suffered to health, with the development of miscarriage, intrauterine fetal death, premature birth or stipulated necessity of medical intervention, is an independent criterion for ascertaining causing of heavy harm to health of the pregnant woman (Article 111 of the Criminal Code of the Russian Federation), abortion is considered a crime only if the person without higher medical education of the corresponding profile (Article 123 of the Criminal Code of Russian Federation), and actions aimed at harming the fetus or resulting in it, for example, in the process of birth, including intrauterine (before birth) and intranatal (during delivery) deaths, not as an offence, also may not be the norm from a position of adequate criminal law protection. It should be remembered that, for example, the increasingly common cases of children being born a few

months after the death of their mothers [8. p. 12]. But what was a miracle a few years ago is now more likely to be considered within the norm. What can we say about possible technologies of the future? We can only guess. Of course, the technologies developed today still assume that a woman is in the process of human cloning, and the embryo should be transferred to her uterus. But proponents of ectogenesis, which involves the disembodied cultivation of the body, are not only developing appropriate technologies but also applying them to animals and bacteria. Moreover, there are common statements that in just two or three decades, such practices will become widespread, since to create an artificial womb, an artificial uterus is needed to provide the fetus with nutrition, and amniotic fluid to remove waste from the developing body. This is what the legislator noted in the preamble of the Federal Law "On the temporary ban on human cloning" in support of the time frame of the ban on human cloning: "...considering the insufficiently studied biological and social consequences of human cloning. Taking into account the prospect of using existing and developing technologies for cloning organisms, it is possible to extend the ban on human cloning or cancel it as scientific knowledge in this area is accumulated, and moral, social and ethical standards are determined when using human cloning technologies."

In all the above situations, in which the human fetus has no connection with the objects of criminal law protection, chronologically protected from the moment of birth to death, including the cases of existing separately outside the body of the bearer of these rights, it is not protected in any way. Therefore, damage to the fetus of the dead woman and by force of Clauses 1 and 2 of Article 66 of the Federal Law of November 21, 2011, No. 323-FZ "On bases of health protection of citizens in the Russian Federation" the "moment of death is the moment of his brain death or biological death (irreversible death). Brain death occurs when the complete and irreversible termination of all its functions, registered with a working heart and artificial lung ventilation", all these cases are not criminally punishable. And even with the appearance of the object of criminal law protection after the birth of a child, actions that caused, for example, significant pathologies and developmental defects that led to child disability are not criminal.

At the same time, the Internet is full of such terrible "recipes" for terminating pregnancy at a later stage. For example, according to the creators of the popular medical series "Doctor House", one of the episodes was based on real medical practice. After the Chinese authorities introduced a one-child-per-family policy and banned determining the sex of a child before birth due to femicide (killing girls), since the birth of boys was valued more, to get rid of the child, metal needles were inserted into the baby's fontanelle. These metal needles damaged the brain, and the baby quickly died. But some of them managed to survive. These acts, which are rather in the field of pathology, still require an appropriate criminal law assessment.

Another gap situation that requires intervention in the legislative criminal law regulation is again generated by the current realities and concerns cases of fetal removal from the mother's body, for example, for surgical medical intervention, after which it is placed back in the uterus.

This leads to a conflict of laws problem with determining the beginning of life and death, since the extracted fetus may meet the medical criteria of birth, respectively, indicate the appearance of life and health as an object of criminal law protection, but when it is subsequently placed in the uterus, without establishing signs of death, the person's life disappears somewhere and reappears only at subsequent birth. Then how to qualify the committed action? It is impossible to answer this question at the current level of criminal law regulation in this area.

3. CONCLUSION

Taking into account the above mentioned, it is possible to recognize the position found on the pages of scientific literature that the moment of birth of a child, indicated in Clause 1 of Article 53 of the Federal law of November 21, 2011, No. 323-FZ "On bases of health protection of citizens in the Russian Federation", which means the appearance of a new subject of law, does not correspond to the legally recognized border of termination of human life, which means the disappearance of the subject of law, which is recognized as brain death, is not without logical meaning. Therefore, "legally, a person's life is the life of his brain, and the beginning of the brain's life means the beginning of a person's life. Therefore, from the legal point of view, the initial limit of human life today should at least be associated with the appearance of a formed mass of brain cells (the birth of the brain) that make the fetus viable. And this happens even in the mother's womb long before the birth of the child itself (by the fifth month of pregnancy)" [23].

However, since this difference in the Russian legislator's approach to determining the beginning and end of a person's life exists in the concept of the equivalence of individual rights to inviolability and protection of human life, on the one side, and women's rights to reproductive freedom, including the right to terminate the pregnancy, on the other, it is obvious that society and the state are not ready to change this situation. And without resolving the existing dilemma, criminal law regulation of responsibility for crimes in the field of human cloning, as well as illegal actions against human embryos, including the systematic attribution of such attacks either to crimes against the individual, or to attacks on public morals, or some other ones, is impossible.

ACKNOWLEDGMENTS

Scientific project "Identification of problems of legal regulation in the field of use of genetic and genomic information. Preparation of evidence-

based proposals for making changes to the system of the Russian Legislation to eliminate them" (Subject code: FEUW-2020-0005)

REFERENCES

- [1] B.V. Petrovsky (Ed.), Big Medical Encyclopedia in 30 volumes, 3rd ed., Moscow, 1974-1989. Retrieved from: <https://бмэ.орг/index.php/%D0%9F%D0%9B%D0%9E%D0%94>
- [2] The "embryo case" was not initiated, Russian newspaper, August 3, 2012. Retrieved from: <https://rg.ru/2012/08/03/reg-urfo/otkaz-anons.html>
- [3] Additional Protocol to the Convention for the Protection of Human Rights and Dignity in Connection with the Application of Advances in Biology and Medicine Concerning the Prohibition of Cloning of Human Beings (ETS No. 168). Retrieved from: <https://www.coe.int/ru/web/conventions/full-list/-/conventions/treaty/168>.
- [4] European Court of Human Rights, Tyrer V., The United Kingdom, Application N 5856/72, Judgment, Strasbourg, 1978, 25 April. Retrieved from: <https://hudoc.echr.coe.int/eng#%7B%22itemid%22:%5B%2201-57587%22%7D>.
- [5] A.E. Zhalinsky, Criminal Law is expected to be changed: a Theoretical and Instrumental Analysis, 2nd ed., Moscow, 2009. Retrieved from the Internet legal information system "Consultant Plus".
- [6] S. Hawking, Most Threats to Humans Come from Science and Technology, Warns Hawking; The Guardian, January 19, 2019. Retrieved from: <https://www.theguardian.com/science/2016/jan/19/stephen-hawking-warns-threats-to-humans-science-technology-bbc-reith-lecture>.
- [7] B.J. Holoyda, W.J. Newman, Childhood Animal Cruelty, Bestiality, and the Link to Adult Interpersonal Violence, *International Journal of Law and Psychiatry*, 47 (2016). Retrieved from: https://www.researchgate.net/publication/301832244_Childhood_animal_cruelty_bestiality_and_the_link_to_adult_interpersonal_violence.
- [8] T.V. Kondrashova, Problems of Criminal Liability for Crimes against Life, Health, Sexual Freedom and Sexual Integrity, Yekaterinburg, 2000. 348 p.
- [9] N.Sh. Kozaev, Issues of Criminal Law Protection of Life in the Light of Modern Achievements of Scientific

and Technological Progress, *Medical Law* 2 (2014) 49-52.

[10] Lavi Shai, *Cloning International Law: The Science and Science Fiction of Human Cloning and Stem-Cell Patenting, Law, Culture, & The Humanities*. Retrieved from: <https://ssrn.com/abstract=2389574> or <http://dx.doi.org/10.2139/ssrn.2389574>.

[11] J.M. Macdonald, *The Threat to Kill*, *American Journal of Psychiatry* 120 (1963) 125-130.

[12] S. McCaffrey, *Biotechnology and International Law: Biotechnology: Some Issues of General International Law*, *Transnat'l Law* 14 (2001) 91. Retrieved from: <https://scholarlycommons.pacific.edu/cgi/viewcontent.cgi?article=1034&context=facultyarticles>.

[13] V.S. Miroshnichenko, *Some Qualification Issues of Animal Cruelty (Article 245 of the Criminal Code of the Russian Federation)*, *Laws of Russia: Experience, Analysis, Practice* 12 (2011). Retrieved from the Internet legal information system "Consultant Plus".

[14] Z.A. Neznamova, *Conflicts in Criminal Law*, Yekaterinburg, 1994. 284 p.

[15] Orna Ben-Naftali, Triger Zvi, *The Human Conditioning: International Law and Science-Fiction, Law, Culture and the Humanities*. Retrieved from: <https://ssrn.com/abstract=2343601>.

[16] Order of the Ministry of Health and Social Development of the Russian Federation of April 24, 2008, No.194n "On Approval of Medical Criteria for Determining the Severity of Harm Caused to Human Health." Retrieved from the Internet legal information system "Garant".

[17] Explanatory Note to the Draft of the Federal Law No.125391-3 "On the Temporary Ban on Human

Cloning." Retrieved from the Internet legal information system "Garant".

[18] *Development of the Human Embryo and Some Moral and Ethical Problems of Assisted Reproduction Methods*, Russian Medical Server. Retrieved from: http://www.rusmedserv.com/problreprod/1998g/3/article_590.html.

[19] A. Thronicke, A. Damaschun, A. Kurtz, J. Borstlap, *The Changing Landscape of European and International Regulation on Embryonic Stem Cell Research*. Retrieved from: https://www.researchgate.net/publication/24345581_The_changing_landscape_of_European_and_international_regulation_on_embryonic_stem_cell_research/link/59e91d3b458515c3633d4346/download.

[20] J.A. Thomson, J. Itskovitz-Eldor, S.S. Shapiro, M.A. Waknitz, J.J. Swiergiel, V.S. Marshall, J.M. Jones, *Embryonic Stem Cell Lines Derived from Human Blastocysts*. Retrieved from: <https://science.sciencemag.org/content/282/5391/1145>.

[21] N.N. Fedoseeva, E.A. Frolova, *The Problem of Determining the Legal Status of an Embryo in International and Russian Law*, *Medical Law* 1 (2008). Retrieved from the Internet legal information system "Consultant Plus".

[22] A. Chugunov, *Was a simple cell, became a stem cell*. Retrieved from: <https://biomolecula.ru/articles/byla-kletka-prostaia-stala-stvolovaia>

[23] R. Sharapov, *Criminal Law Meaning of the Legal Definition of the Moment of Birth of a Child*, *Criminal Law* 3 (2012) 75-78.

[24] F. Engels, *Dialectics of Nature*, 6th ed., Moscow, 1934. Retrieved from: <http://filosof.historic.ru/books/item/f00/s01/z0001011/st000.shtml>