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NEW EUGENICS IN LIGHT OF INTERNATIONAL HUMAN RIGHTS PROTECTION

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Abstract: Technological development in the field of genetics led to the creation of the notion of the new eugenics, which aroused numerous discussions, primarily regarding the continuity or discontinuity of the new eugenics with the old eugenics. The usefulness of this notion in protecting the fundamental human rights can be examined. Establishing the differences or similarities with the old eugenics and different definitions of the new eugenics, do not provide a clear roadmap about what behaviors are contrary to the basic values, which should be protected at an international level. The focus should rather be shifted to specific controversial technologies, perhaps primarily on practices that already have or are about to have broader application, like in the case of non-invasive prenatal genetic testing (NIPT). Additionally, reproductive tourism and the development of technology require a quick response. On the other hand, in an ethically complex area, reaching consensus is a difficult task.

Key words: human rights, eugenics, Biomedicine Convention, EU Charter of Fundamental Rights, sex selection, genetic modifications, cloning.

INTRODUCTION

Eugenics as an ideology or the eugenic practice based on eugenics as an ideology bears truly negative connotations because it is primarily associated with the eugenic practice of the Nazis during the Second World War. In the light of technological development in the field of genetics, the notion of the new eugenics has also developed, which is differently understood and has

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aroused numerous discussions primarily regarding the continuity or discontinuity of the new eugenics with the old eugenics. Regarding the specificity of the notion itself and the question whether the new eugenics can be generally prohibited or allowed, the usefulness of this notion in protecting the fundamental human rights can be examined in the context of advancements in genetic technology.

The application of new technologies in the field of genetics requires a broad consensus, primarily due to reproductive tourism. Individuals, therefore, use the liberal laws of other countries to succeed in obtaining the desired result which is prohibited by domestic law. National legal orders cannot in principle tackle the challenges which have arisen. Reproductive tourism and the development of technology require a quick response. On the other hand, in an ethically complex area, reaching consensus is a difficult task and states nevertheless consider that internal law is most suitable for regulating this sphere. It should be kept in mind that in countries where no liberal or very liberal regulation has been adopted, it is difficult to prohibit already accepted practice (Gill, 2016, p. 129). Sometimes it is just enough to send samples to non-invasive prenatal genetic testing (NIPT). Namely, non-invasive prenatal genetic testing of mother's blood (NIPT) can, for example, identify the sex of a child with 98% to 99% accuracy starting from the ninth week of pregnancy, although it is primarily undertaken to determine chromosomal abnormalities (Nierenberg, 2017). With this test, more and more genetic traits can be identified, and because of the increasing complexity of the test, false-positive results may also occur. Such tests may indicate an increased likelihood of the development of a serious illness that a child-to-be will never develop, and it is foreseen that they can lead to other types of selection.[2] Besides, the fact that some practices have already become financially lucrative in some countries does not help, and therefore there is a lack of interest in regulation. The discussion should rather be shifted to specific controversial technologies, perhaps primarily on practices that already have broader application.

Currently, most controversial areas or techniques usually associated with the new eugenic practice are pre-implantation genetic diagnosis (PGD), prenatal diagnosis (PND), genetic modifications, particularly through CRISPR (Clustered Regularly Interspaced Short Palindromic Repeats), and Mitochondrial replacement technique in case of Mitochondrial disease.

When it comes to the instruments for the protection of human rights, the most important were adopted in Europe, while the instruments adopted at the

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[2] International Bioethics Committee. (2015). Report of the IBC on Updating Its Reflection on the Human Genome and Human Rights. SHS/YES/IBC-22/15/2 REV.2. Paris. Paras. 92-93.

universal level have limited scope (due to their legally non-binding strength, the number of ratifications and degree of determination). At the EU level, the EU Charter of Fundamental Rights of 2000 (hereinafter: the EU Charter) contains a unique provision on the prohibition of the eugenic practice (Article 3, paragraph 2).[3] The 1997 Convention on Human Rights and Biomedicine (hereinafter: the Biomedicine Convention) adopted under the auspices of the Council of Europe also contains certain relevant provisions.[4] The Additional Protocol to the Biomedicine Convention concerning Genetic Testing for Health Purposes and the Additional Protocol to the Biomedicine Convention on the Prohibition of Cloning Human Beings are also significant.[5]

OLD AND NEW EUGENICS

The notion of eugenics is associated with Francis Galton, who coined the term in 1883 (in Greek it means well-born, of honorable heredity). He primarily promoted positive eugenics aimed at producing higher-quality individuals by increasing reproduction of the most gifted members of the society where individuals would not be forced to engage in eugenic breeding practices (Selgeild, 2014, pp. 3-4). Eugenics is often divided into positive and negative. Positive eugenics would thus imply the promotion of human traits considered desirable and negative eugenics implies an avoidance of traits which are considered undesirable (Romeo-Casabona, 1998, pp. 241-242). More precisely, it is pointed out that within the old eugenics there was positive eugenics whose aim was to increase the frequency of socially desirable genes, that is, “genetically superior people”, and negative eugenics which aimed to reduce the incidence of unwanted genes and “genetically inferior” people (Powell, 2015, p. 684).

After the development of eugenics as a set of different ideas, the negative eugenic practice has emerged in many countries through the adoption of various laws. At the beginning of the last century, many eugenicists were guided by the idea that certain groups of people are “socially inadequate” and

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[3] EU. (2010). Charter of Fundamental Rights of the European Union. Official Journal of the European Union. C 83/391. 30.3.2010.

[4] Council of Europe (1997). Convention for the Protection of Human Rights and Dignity of the Human Being with regard to the Application of Biology and Medicine: Convention on Human Rights and Biomedicine. European Treaty Series. No. 164. Oviedo.

[5] Council of Europe (2008). Additional Protocol to the Convention on Human Rights and Biomedicine, concerning Genetic Testing for Health Purposes. European Treaty Series. No. 203. Strasbourg; Council of Europe (1998). Additional Protocol to the Convention for the Protection of Human Rights and Dignity of the Human Being with regard to the Application of Biology and Medicine, on the Prohibition of Cloning Human Beings. European Treaty Series. No. 168. Paris.

constitute a breeding stock of social unfitness (i.e., feeble-minded, insane, criminals, epileptics, drug addicts, deaf, blind).[6] Such practice varied depending on the scientific assumptions regarding potential dangers for the human race. Denmark and Switzerland passed laws which were not inspired by the idea of racial superiority, but because some eugenic measures were considered necessary. For example, in the cases of physical and sexual abnormalities (Stepan, 1991, pp. 30-31). In Sweden from 1934 to 1976, approximately 20,000 people were forcibly sterilized for eugenic reasons, due to mental retardation, visual impairment, and sexual abnormalities (Hyatt, 1998, pp. 476-477).

The earliest laws envisaging forced sterilization were adopted in the United States. By 1920, about half of the states in the US adopted eugenic laws (mostly people suffering from mental disorders and criminals were sterilized.). It is estimated that in the United States, from 1907 to 1961, approximately 62,000 persons were forcibly sterilized (Kluchin, 2009, p. 17). Latin America also had a widespread eugenics movement (Stepan, 1991). For a while, even Winston Churchill was advocating eugenics.[7] Eugenics movements were also developed in China and Japan (Chung, 2014, pp. 799-800). In the Kingdom of Serbs, Croats and Slovenes, there were also supporters of eugenics (Kuhar, 2017, pp. 92-113). In Nazi Germany, Hitler noticed the laws adopted in the United States and considered them as a desirable measure which should be also adopted in Germany (Hitler, p. 361). In Germany, as part of a wider eugenics policy, the "Law for the Prevention of Offspring with Hereditary Diseases" was adopted in July 1933, which sought to prevent the possible transmission of hereditary diseases through forced sterilization. The law identified nine vaguely defined groups of people suffering from hereditary diseases.[8] It is estimated that on the basis of this law approximately 350,000 people were sterilized by 1939 (Mifiler-Hill, 1992, p. 360). Eugenic beliefs culminated in the genocide during the Second World War, millions of people have been killed because of their national, ethnic and racial origin. After the crimes committed during the Second World War, the eugenics movement began to fade (although the controversial laws were in force in Sweden and the USA for some time after that).

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[6] Report of the Committee to Study and to Report on the Best Practical Means of Cutting off the Defective Germ-Plasm in the American Population I. The scope of the committee's work, by Harry H. Laughlin, Secretary of the Committee (1914). New York. p. 15.

[7] When he was Home Secretary (February 1910-October 1911) Churchill was in favor of the confinement, segregation, and sterilization of a class of persons contemporarily described as the "feeble-minded." (Gilbert).

[8] Law for the Prevention of Offspring with Hereditary Diseases (July 14, 1933). German History in Documents and Images. Volume 7. Nazi Germany, 1933-1945. Retrieved from http://germanhistorydocs.ghi-dc.org/pdf/eng/English30.pdf

However, modern discoveries related to biomedical-assisted fertilization, genetic testing, genetic modification, cloning, and a number of other issues have again made the eugenics topical, or more precisely, the new eugenics was formed. In this sense, the eugenic practice could be defined as any attempt to use reproduction to produce people with qualities that allow them to progress (Anomaly, 2018, p. 24). It can also be defined as a "practice that aims to improve human lives by employing an understanding of heredity in the exertion of control over who gets born or who reproduces" (Selgelid, 2014, p. 3). It can be also described as a social movement to improve the human species through the use of technology (Harding, 1991, p. 447). As described earlier, it is common to make a distinction in relation to the old eugenics, usually in order to promote the new eugenics. In the new eugenics, there is no element of organized coercion, which was the case in the old eugenics (Romeo-Casabona, 1998, p. 243). Additionally, as one of the basic disadvantages of the old eugenics is recognized the mixing of the undesirability of certain genes with the moral value of the people who carry them. (Powell, 2015, p. 684). It is also pointed out that in the old eugenics the wrong scientific settings were used, for example, that all human traits are determined by genes (all other factors are ignored) because the old genetics was full of inaccurate scientific assumptions (Ekberg, 2007, p. 590). However, regarding this last reason, we must ask ourselves whether the new eugenics also postulates the wrong assumptions that could be established in the future, due to further scientific progress.

It is common in the literature to condemn the old eugenics unanimously. It is correctly observed that the afterward authors decide either for discontinuity with it, and indicate that the new eugenics promotes the freedom of choice, or on the other hand, supporters of continuity indicate that a significant element of the old eugenics is still present, i.e., the drive for the improvement of the population, as well as various forms of discrimination (Cavaliere, 2018, p. 17). Unfortunately, such debates about continuity or discontinuity with the so-called old eugenics did not help in solving the complex practical problems that arise from the application of new technologies in the field of genetics (Cavaliere, 2018, p. 18). The understanding of the existence of continuity with the old eugenic is usually undertaken in order to put special emphasis on controversial techniques and to connect it with the unacceptable practice of the Nazis. However, the prolongation of the resolution of the arisen problems goes hand in hand with liberal views, which promote inactivity in relation to new technologies.

Slightly different defense of liberal perceptions, not justified by the usual argument of the freedom of choice, or the right to privacy is also present (Roberson, 1994). Namely, it is indicated that genetic modifications will be necessary in order to preserve the human species due to the evolutionary implications of modern medicine, or more precisely because it will lead to the process of "pseudogenization", which implies the accumulation of base-pair mutations in a coding gene to the point that it becomes nonfunctional (Powell, 2015, p. 676). As an example, it is indicated that relaxed selection of genes coding for bitter taste receptors, olfactory acuity, and other adaptations for detecting potentially toxic foods due to widespread food cooking already occurred. It is assumed, for example, that the increased use of sign language or medical devices will lead to an increase in the number of deaf and visually impaired people and thus to a growing dependence on classical medical devices, which will again lead to further mutations (Powell, 2015, p. 677). Although a possible theory, it is still far from the universally accepted reality, and the danger of lack of regulation of controversial technologies at the current level of development is nevertheless greater.

Regarding the different definitions of eugenics and accepted differences in relation to the old eugenics, they do not provide a clear roadmap about what is considered better, what makes human progress possible, or what behaviors are contrary to the basic values that must be protected. Certain behaviors are widely accepted, and they fit into the above-mentioned, generalized eugenics definitions. Pregnant mothers at risk of giving birth to a child with the congenital disease are routinely offered genetic testing and if tests reveal that the child-to-be will suffer from a severe genetic disorder then abortion is often sought (Selgelid, 2014, p. 6). In addition, in the process of biomedical assisted fertilization, it is common to create a large number of embryos, so that embryos of the best quality are implanted in the womb (the rest is usually frozen or destroyed) in order to make the procedure as successful as possible or to prevent its repetition (Selgelid, 2014, p. 7). As part of the new eugenics, it would still be useful to make a distinction between "enhancing the genetic identity of the person and eliminating diseases or anomalies when this is possible" (Galie, 2013, p. 85). For the first determinant, it can certainly be said that it is more questionable than the other, but there are also dilemmas in relation to the elimination of diseases and anomalies. In the first case, the term of human enhancement, enhancement for nontherapeutic purposes, or eugenics designer is used. Namely, testing embryos for a number of properties and conditions, such as height, intelligence and other similar characteristics, is becoming more and more probable. Some proponents of human enhancement for nontherapeutic purposes go even further, recognizing the duty to be morally enhanced by biomedical means, which implies enhancement of moral motivation and disposition to decide, although the research of medical means for achieving this has just begun (Persson, Savulescu, 2019).[9] The mentioned

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[9] In connection to different approaches to human enhancement it is correctly observed that in addition to the analysis of ethical argumentation, a variety of technologies, the scope of

segment of the new eugenics would definitely have to be banned at this point of technological development. Of course, elimination of abnormalities and diseases also must be strictly regulated. Even this segment of the new eugenics, although widely accepted, at the same time carries in itself a discriminatory dimension towards the diseased or disabled. It is permitted in many countries and usually associated with "diseases which doom their victims to shorter lives and cause extreme mental and physical disability, excruciating pain, and death during infancy or early childhood" (Selgelid, 2014, p. 6). It is customary to provide mandatory genetic counseling by law in such cases. From the practice of geneticists who advise parents, it turns out that the parents' decisions are not related to the improvement of the human race, but rather with their personal situation and the nature of the illness or disorder of a child-to-be (Galie, 2013, pp. 86-88). However, even in this case, the introduction of any modification in the genome of any descendants should be prohibited (Article 13 of the Biomedicine Convention).

INSTRUMENTS FOR PROTECTION OF HUMAN RIGHTS

It is clear that acts similar to those made by the Nazis are prohibited by international law. However, the question arises as to the extent the controversial practices that might belong to the new eugenics are regulated. At the universal level, there are no legally binding instruments governing this field. Violation of human rights that can be found in the general documents for the protection of human rights is possible, but these instruments are insufficient and vague. Nevertheless, there are certainly attempts to reach consensus in this area. In this regard, special declarations adopted under the auspices of UNESCO can be particularly highlighted: the Universal Declaration on Human Genome and Human Rights of 1997, the Universal Declaration on Bioethics and Human Rights of 2005 and the 2003 International Declaration on Human Genetic Data (which is the most specific, and contains the definition of a genetic test).[10] Especially indicative is the failed attempt to adopt a legally binding document within the UN, which would unambiguously prohibit the reproductive cloning of people. Instead, in 2005, the Declaration on Human Cloning was adopted, which has no legally binding character.[11] It did not explicitly prohibit either

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application of these technologies and specific interventions should be analyzed, and also, a methodological approach to human enhancement can not rely only on one theoretical current, ethics, or principle.(Mitrović, 2010, p. 94).

[10] UNESCO (2005). Universal Declaration on Bioethics and Human Right; UNESCO (1997). Universal Declaration on the Human Genome and Human Rights; UNESCO (2003). International Declaration on Human Genetic Data.

[11] United Nations (2005). Declaration on Human Cloning. A/RES/59/280.

reproductive or therapeutic cloning since the differences in therapeutic cloning had a major impact.[12] These documents are therefore in the sphere of soft law. They contain general principles, but they are accompanied by the assumption that they could open the way for the creation of binding, more specific legal rules. However, it remains an open question as to whether countries at the universal level will ever be ready for a more specific legally binding protection.

There has been some progress in Europe in this regard. The prohibition of the eugenic practice is protected in the EU Charter for the first time, namely in the field of medicine and biology "the prohibition of eugenic practices, in particular, those aiming at the selection of persons" must be respected (Article 3, paragraph 2). The EU Charter applies to the procedures of EU institutions and bodies, and to the Member States when applying EU law.[13] At first glance, this provision seems rather unclear, especially since the only determinant that the practice is directed towards the selection of persons, is preceded by the words "in particular", which suggests that there is a eugenic practice not directed at the selection of persons (Đukanović, 2015, p. 295). Moreover, it is not clear what is implied by the eugenic practice, since the selection of embryos or fetuses as a result of a serious genetic disorder could also be considered as the eugenic practice, although under certain conditions it is permissible in many countries. It seems that the prohibition of eugenic practice from the EU Charter has been derived from the formulation of crimes against humanity, as provided for in Article 7, paragraph 1, item g) of the Rome Statute of the International Criminal Court. The creators of the EU Charter had in mind the so-called old eugenics because the determinant of the prohibition of the eugenic practice, and especially those aimed at the selection of persons "relate to possible situations in which the selection programs are organized and implemented, including campaigns for sterilization, forced pregnancy, compulsory ethnic marriage among others, all acts deemed to be international crimes in the Statute of the International Criminal Court".[14] So, the prohibition of eugenic practice from the EU Charter refers more to the state, that is, it implies a certain degree of organization, the implementation of a certain broader policy and the application of coercion. The eugenic practice in the light of modern genetics has a different

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[12] Countries that are pro absolute ban on cloning could, in principle, interpret its text as if it is banning all forms of cloning, while on the other hand, countries that are pro-prohibition of reproductive cloning could interpret its ban as the prohibition only of the cloning processes which are in contrary to dignity, or in their case, it would be reproductive cloning, and the notion of cloning and the notion of a human being is not defined either. (Clados, 2012 p. 91)

[13] Article 51 (1).

[14] European Union (2007). Explanations Relating to the Charter of Fundamental Rights. Official Journal of the European Union. 303/17. 14.12.2007.

meaning, which definitely differs from the compulsory state policy. Additionally, such a provision is vague and confusing, as it is prescribed within the protection of the integrity of the person in the field of biomedicine, while the old understanding of eugenics should be linked to the prohibition of torture (Đukanović, 2015, p. 296).

The prohibition of eugenic practice is not specifically guaranteed in the Biomedicine Convention. However, the Biomedicine Convention contains two provisions that have the most direct meaning for the new eugenics. In addition, it should be noted that a rather small number of Member States have ratified the Biomedicine Convention (18 out of 47 member states of the Council of Europe).[15]

The new eugenics can be primarily related to the prohibition from Article 13 of the Biomedicine Convention, which provides that "an intervention seeking to modify the human genome may only be undertaken for preventive, diagnostic or therapeutic purposes and only if its aim is not to introduce any modification in the genome of any descendants". The purpose of this provision is primarily the ultimate fear of the "intentional modification of the human genome, so as to produce individuals or whole groups with specific characteristics and required qualities".[16] However, on the other hand, Article 5 of the Universal Declaration on the Human Genome and Human Rights stipulates it is nevertheless possible to undertake research, treatment or diagnosis which affects the genome of a person, but only after a previous rigorous assessment of possible risks and benefits.

The hereditary genetic modifications are in principle still in the experimental phase on animals. At present, human germline modification is not safe and effective, and significant technical and epistemic hurdles must be overcome before large-scale human genetic engineering (Powell, 2015, p. 670). However, the recent claims about genetic modifications on humans through the CRISPR technique have stirred the scientific public. Namely, following a Chinese scientist's claim that he has successfully changed twin embryos so that they have immunity to HIV, scientists are calling for a global

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[15] Council of Europe (2019). Chart of signatures and ratifications of Treaty 164, Status as of 02/06/2019. Retrieved from *https://www.coe.int/en/web/conventions/full-list/-/conventions/treaty/164/signatures?p_auth=sV1aew0N*. Serbia has been a signatory of the Convention since 9 February 2005; the ratification was implemented on 15 December 2010. The Convention came into force on 1 June 2011. *Sl. glasnik RS - Međunarodni ugovori*, br. 12/2010.

[16] Council of Europe (1997). Explanatory Report to the Convention for the Protection of Human Rights and Dignity of the Human Being with regard to the Application of Biology and Medicine: Convention on Human Rights and Biomedicine – Explanatory Report to the Convention on Human Rights and Biomedicine. DIR/JUR (97) 5. Strasbourg. par. 89.

moratorium on editing human genes that can be passed down on generations (Kuchler, 2019). Perhaps, as a sufficient argument against genetic modifications on humans, we may specify a case of genetically modified food that has been in broad use since the 1990s but with still unclear adverse consequences and the great controversy surrounding this issue.

Mitochondrial replacement technique in case of Mitochondrial disease is also controversial because it implies *in vitro* fertilization in which some or all of the child-to-be mitochondrial DNA derives from a third person. Currently, only the United Kingdom explicitly allows mitochondrial replacement therapy although it has been already used in other countries that do not explicitly legalize it, but which have more relaxed laws on genetic modification like Mexico and Ukraine (Ong, 2018). It is interesting to mention that a child was born in Greece with the help of this technique, although this country has ratified the Biomedicine Convention (Gallagher, 2019). Having this in mind, it is important to note that there is no general consensus among scientists whether this technique belongs to the field of germline gene modification or as some suggest it represents "Conditionally Inheritable Genomic Modification" (Newson and Wrigley, 2017, pp. 66-67).

Article 14 of the Biomedicine Convention contains another relevant provision in the light of genetic modifications. Namely, "the use of techniques of medically assisted procreation shall not be allowed for the purpose of choosing a future child's sex, except where the serious hereditary sex-related disease is to be avoided". Medically-assisted procreation includes artificial insemination, *in vitro* fertilization and any technique having the same effect which permits procreation beyond the natural process.[17] The question of the seriousness of the hereditary gender-related disorder is left to the Member States. But, in every individual case, appropriate genetic counseling of the persons concerned is necessary.[18] However, this provision has a reduced significance not only because of the low number of ratifications of the Biomedicine Convention but also because of reproductive tourism. This phenomenon became frequent. Interested individuals are mostly travelling to the United States to get a child of the desired sex, sex is selected before implantation, and this service has become financially lucrative for its providers (Smith, 2014; Greenfield, 2104). Promotion of the unlimited freedom of choice, the consumer mindset, with the knowledge that this is a financially lucrative industry, supports the probability of other forms of selection in the future (whether of psychic or physical characteristics of children). Thus, the prevalent importance of the individual freedom of choice

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[17] Ibid. par. 93.

[18] Ibid. par. 94.

is emphasized here, regardless of its content, or how it affects the interests of other entities or the interests of society as a whole (Attanasio, 1986, pp. 1285-1287). However, some values represent legitimate spheres for interfering with freedom of choice to a certain point, although there will always be misunderstandings as to where exactly this point is (Nussbaum, 2001, 95). It is also important to note that the sex selection is currently theoretically justified by the so-called "family balancing" concept, so in societies where statistics show that they prefer both genders, the sex selection should be allowed for this reason (Toebes, 2008, pp. 203-205; Pennings, 1996, p. 2343). However, not only that the gender equality is also questionable here, but also discrimination of families in which both genders are not equally represented (or approximately equally) is present (Shahvisi, 2018, pp. 123-137).

When it comes to sex selection, if we take into account the earlier definitions of the new eugenics, it is unclear whether it can be considered as a form of the new eugenics. If one sex is favored, it is clear this is not about "improving the human species" because the ability to reproduce will obviously be reduced. However, if it is about "improving human lives" and primarily the lives of parents who prefer certain sex, it could be considered as the new eugenics. Allowing sex selection under the pretext of protecting reproductive freedoms can surely lead to other types of selection, and the concept of "family balancing" could only be an introduction in that sense.

In addition, Article 14 of the Convention, unfortunately, concerns only the use of medically assisted procreation for the purpose of selecting a future child's sex, although the methods of sex selection after the fertilization through prenatal diagnosis are considerably more prevalent, and other reasons for selection are not mentioned. However, Article 11 of the Biomedicine Convention could be helpful in this sense: "Any form of discrimination against a person based on his/her genetic heritage is prohibited". On the other hand, as elsewhere in all the instruments for the protection of human rights, it is not clear when life begins, or who is considered to be a "person".

The devastating data on sex selection has been present in India and China for decades. The selection was primarily carried out through obtaining information about a child's sex through ultrasound, then in the case of unwanted sex of child abortion is performed.[19] Over time, a number of

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[19] According to the UN Population Fund, in China, 115.9 boys were born for every 100 girls in 2014, 115.6 boys in Azerbaijan in 2013, 114 boys in Armenia, in the period 2009-2013 in Northern Macedonia this number was 110.4, in Montenegro in the same period 109 boys, and in Albania in the period from 2012-2013 also 109 boys. United Nations Population Fund, UNFPA (Updated 23 July 2018). Gender-biased sex selection. Retrieved from https://www.unfpa.org/gender-biased-sex-selection

countries in which sex selection was implemented, has expanded. It has been estimated that since the 1970s, hundreds of millions of women in the world are "missing" (Sen, 2010, pp. 99-100). In this case, the use of ultrasound is an obvious example of massive abuse of technology.

Non-invasive prenatal genetic test of mother's blood (NIPT) generally represents a positive development of technology because it can detect chromosomal abnormalities and avoid traditional, invasive diagnostic methods that carry a high risk of abortion (amniocentesis and chorionic villus sampling). On the other hand, the test enables to determine the sex as early as the ninth week of pregnancy. In countries where pregnancy termination is allowed on mother's request (without any additional requirements related to the health of the mother or child, or if the pregnancy is a result of a criminal offense), it can be undertaken in the first trimester, mainly in Europe, usually between the tenth and twelfth week of pregnancy (with some deviations).[20] The new technology makes it easy to perform sex selection in these countries within legal limitations, and because the samples can be sent by post for sex identification.[21]

Sex selection is usually prohibited by domestic law, and sometimes by the use of any technique, not only procedures for medically assisted procreation (as in the case of the Biomedicine Convention).[22] In the Republic of Serbia,

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[20] IPPF European Network (September 2012). Abortion Legislation in Europe. (Updated January 2012) Retrieved from *https://www.ippfen.org/sites/ippfen/files/2016-12/Final_Abortion%20legislation_September2012.pdf*

[21] Disturbing data on the number of selective abortions - Montenegrins usually check the sex of the child. *I am a woman* http://www.zenasamja.me/porodica/1858/zabrinjavajuci-podaci-o-broju-selektivnih-abortusa-crnogorci-najcesce-provjeravaju-pol-djeteta

[22] For example, in Hungary, for the criminal offense of selecting gender before implantation, a sentence of imprisonment of 1 to 5 years is envisaged for a doctor who performs such a procedure (Julesz, 2015, pp. 214-216). In Serbia, a prohibition on sex selection for non-medical reasons through any diagnostic procedure, either before conception or during pregnancy is adopted. Fines for health institutions that violate this provision are foreseen. Law on the prevention and diagnosis of genetic diseases, genetically conditioned anomalies and rare diseases. *Official Gazette RS*. No. 8/2015, Art. 10 and 36. In Croatia, only the use of biomedical-assisted fertilization for the purpose of sex selection is prohibited, except for the avoidance of a serious hereditary sex-related illness, and financial penalties are foreseen for legal persons who violate this provision. Law on Medically Assisted Fertilization, *People's Magazine*, No. 86/12, Art. 27 and 56. In Montenegro, as a country where the problem of sex selection at the Council of Europe level was recognized, a ban on the termination of pregnancy with the aim of sex selection is foreseen, but also the use of early genetic tests to determine the sex up to 10 weeks of pregnancy, except in the case of a risk of hereditary diseases indicated by a clinical geneticist, and a fine for a healthcare worker is also envisaged. Law on Conditions and Procedure for Termination of Pregnancy, *Official Gazette of Montenegro*, No. 53/09, Art. 18, Art. 26.

genetic testing is permitted only for the purpose of predicting or detecting a genetic disease, genetically conditioned anomaly or a rare illness when the patient expressly agrees in writing, or when a pregnant woman agrees with it as a patient, in connection to embryos or fetuses diagnostics.[23] In both cases, the act is classified as a misdemeanor, not as a criminal offence, and the situation is the same even in the case of genetic modifications.[24] If the violation is committed by a foreign legal entity, it is punishable only if the offense is committed on the territory of the Republic of Serbia, and only if it has a business unit or representative office in the Republic of Serbia.[25]

Regarding the regulation of genetic testing at the international level, the International Declaration on Human Genetic Data (not legally binding) is relevant, and the Additional Protocol to the Biomedicine Convention on Genetic Testing for Health Purposes. However, the Protocol on Genetic Tests for Health Purposes as a legally binding document has been ratified by only six members of the Council of Europe.[26] In addition, it is tragic that it does not apply to genetic tests on the human embryo or fetus, nor genetic tests for research purposes.[27] This means that it does not apply to pre-implantation genetic diagnosis or prenatal genetic diagnosis.[28] It is necessary to adopt a legally binding document that would explicitly prohibit the conducting of non-invasive prenatal genetic tests from the mother's blood when the test is offered over the Internet, and the samples are sent by post. First of all, testing must be accompanied by adequate informed consent and can be undertaken only under individualized medical supervision, and persons providing genetic services must have appropriate qualifications. For example, the question arises whether the

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[23] Law on the prevention and diagnosis of genetic diseases, genetically conditioned anomalies and rare diseases. *Official Gazette RS*. No. 8/2015, Art. 7.

[24] Law on Medically Assisted Fertilization, *People's Magazine*, No. 40/2017 i 113/2017 - otherlaw, Art. 49, Art. 67, paragraph 1; Law on the prevention and diagnosis of genetic diseases, genetically conditioned anomalies and rare diseases, Art. 36.

[25] Law on Misdemeanors, RS Official Gazette, No. 65/2013, 13/2016. 98/2016 – decision US, Art. 31.

[26] Council of Europe (2019). Chart of signatures and ratifications of Treaty 203 Additional Protocol to the Convention on Human Rights and Biomedicine concerning Genetic Testing for Health Purposes, Status as of 14/06/2019. Retrieved from https://www.coe.int/en/web/conventions/full-list/-/conventions/treaty/203/signatures?p_auth=y4UdE2G5

[27] Council of Europe (2008). Additional Protocol to the Convention on Human Rights and Biomedicine, concerning Genetic Testing for Health Purposes. European Treaty Series. Strasbourg, Art. 2.

[28] On the other hand, the International Declaration on Human Genetic Data has a wider application than the Protocol on Genetic Tests for Medical Purposes, as it is applied to genetic tests of embryos and fetuses, Art. 1.

postman is involved in the performance of genetic services, which may be significant for the protection of the right to privacy. Finally, when results are obtained, they must be interpreted by geneticists who must provide adequate genetic counseling.

When it comes to cloning, it can also be described as a form of eugenics. The Additional Protocol to the Biomedicine Convention on the Prohibition of Cloning Human Beings is relevant, which prohibits any intervention seeking to create a human being genetically identical to another human being, whether living or dead. In the context of the protection of personal integrity, the reproductive cloning of human beings is also prohibited in the EU Charter (Article 3, paragraph 2). At the universal level, the Declaration on Human Cloning was adopted, but it does not explicitly prohibit reproductive cloning. However, the danger of widespread reproductive cloning is currently lesser than as it seemed when Dolly the sheep was cloned in 1996, and the popularity of this topic increased (Andrews, 1998, p. 644). It is highly unlikely that it will have wider application, unlike the therapeutic cloning that is considered ethically much more acceptable and can have significant therapeutic functions.

CONCLUSION

As noted, literature often makes a distinction between the old and new eugenics and then concludes whether there is continuity with the old eugenics. Such analyses do not help to solve specific problems arising from advances in technology. Namely, in the light of the protection of basic human rights, it would be more appropriate to define concrete practices considered the most unacceptable, and to reach consensus on a wider basis. The notion of the new eugenics itself is understood differently, and it can cover different practices, some of which are widely accepted and others should be strictly regulated. In this sense, some progress has been made in Europe, but unfortunately, it is very difficult to achieve a broader consensus in this sphere. Due to reproductive tourism, and sometimes because of the mere sending of samples for analysis in another country, regional regulation cannot be satisfactory.

In some legislations, sex selection through the use of pre-implantation genetic diagnosis is permitted and in others, it may be permissible through the "family balancing" concept, which is likely to be a prelude to the wider application of genetic modifications and not only in case of illness or disorder. Genetic modifications which introduce the modifications in the genome of the descendants should be prohibited, especially in case of human enhancement. First of all, the modifications in the human genome can generate unknown consequences, and the integrity of the species may be challenged. Second, good parenting should be based on love and acceptance of the child, and parents should offer unconditional love and value to their children without consideration of their traits (Vizcarrondo, 2014, p. 242). Human enhancement results in the design of the child to the parents' expectations (Vizcarrondo, 2014, p. 242). Domestic law will not have any relevance for individuals who can afford a designer baby through reproductive tourism. Such a selection will be guided by the consumer mindset, and by what a particular parent considers to be best for his future child at a given moment, rather than improving the species. As one of the arguments against it, it is also stated that the descendants did not consent to the modification.

However, the problem of non-invasive genetic tests from mother's blood is currently much more relevant and the fact that genetic testing services are widely available on the Internet, without respecting the fundamental rights of the patient. Such tests can lead to an increased number of abortions, not only for the purpose of sex selection, but also because of misinterpretation of results related to possible illnesses, and they may have questionable accuracy. Besides, testing of other traits, except for the disease is anticipated with these tests. Domestic law cannot deal with this practice, and it is necessary to respond at the international level. It is necessary to regulate the area of pre-implantation genetic tests as well as prenatal genetic tests more decisively.

BIBLIOGRAPHICAL REFERENCES

Andrews L. B. (1998). Is There a Right to Clone?. *Harvard Journal of Law & Technology*. 11 (3): pp. 643-681.

Anomaly, Jonathan (2018). Defending eugenics, From cryptic choice to conscious selection. *Monash Bioethics Review*. 35 (1-4): 24-35.

Attanasio, John B. (1986). The Constitutionality of Regulating Human Genetic Engineering: Where Procreative Liberty and Equal Opportunity Collide. *The University of Chicago Law Review*. 53 (4): pp. 1274-1342.

Cavaliere, Giulia (2018). Looking into the shadow: the eugenics argument in debates on reproductive technologies and practices. *Monash Bioethics Review.* 36 (1-4): pp 1–22.

Chung, Yuehtsen Juliette (2014). Better Science and Better Race?: Social Darwinism and Chinese Eugenics. *Isis*. 105 (4): pp. 793-802.

Clados, Mirjam Sophia (2012). *Bioethics in International Law: An Analysis of the Intertwining of Bioethical and Legal Discourses*. Inaugural-Dissertation zur Erlangung des Doktorgrades der Philosophie an der Ludwig-Maximilians-Universität. München.

Đukanović, Anđela (2015). *Evropski standardi u oblasti biomedicine -pravo na integritet ličnosti.* doktorska disertacija. Beograd.

Ekberg, Merryn (2007). The Old Eugenics and the New Genetics Compared. *Social History of Medicine*. 20 (3): pp. 581-593.

Gaille, Marie and Viot, Ge´raldine (2013). Prenatal diagnosis as a tool and support for eugenics: myth or reality in contemporary French society?. *Medicine, Health Care and Philosophy* Volume 16 (1): pp. 83-91.

Gallagher, James (11 April 2019). 'Three-person' baby boy born in Greece. *BBC News*. Retrieved from https://www.bbc.com/news/health-47889387

Gilbert, Sir Martin. Churchill and Eugenics. *International Churchill Society*. Retrieved from https://winstonchurchill.org/publications/finest-hour-extras/churchill-and-eugenics-1/

Gill, Lawrence E. (2016). Designer Eugenics: Germline's Future Interests. *Ave Maria International Law Journal*. 5 (1): pp.112-129.

Greenfield, Beth (5 December 2014). Couple Spends $50K to Choose Baby's Sex, Shining Light on Trend. *Center for Genetics and Society*. Retrieved from *http://www.geneticsandsociety.org/article.php?id=8244*

Harding John R. Jr. (1991). Beyond Abortion: Human Genetics and the New Eugenics. *Pepperdine Law Review*. 18 (3): pp. 471-512.

Hitler, Adolf. *Mein Kampf*. Translated in to English by James Murphy (1939). Retrieved from http://www.greatwar.nl/books/meinkampf/meinkampf.pdf

Hyatt, Stephanie (1998). A Shared History of Shame: Sweden's Four-Decade Policy of Forced Sterilization and the Eugenics Movement in the United States. *Indiana International & Comparative Law Review*. 8(2): pp. 475-503.

Julesz, Mate (2015). Pre-Conceptual Sex Selection. *Jura*. 21(1): *pp*. 214-217.

Kluchin, Rebecca M. (2009) *Fit to Be Tied: Sterilization and Reproductive Rights in America, 1950-1980*, USA: Rutgers University Press.

Kuchler, Hannah (13 March 2019). Scientists plead for moratorium after designer babies outcry, Developers of Crispr technique for genome editing also call for halt to experiments on hereditary genes. *Financial Times*. Retrieved from https://www.ft.com/content/468a1f16-45c9-11e9-a965-23d669740bfb

Kuhar, Martin (2017). 'From an Impure Source, All Is Impure': The Rise and Fall of Andrija Stampar's Public Health Eugenics in Yugoslavia. *Social History of Medicine*. 30 (1): pp. 92-113.

Mifiler-Hill, Benno (1992). Genetic In equality and Social Injustice: A Lesson from History. In BBV Foundation (Ed.) pp. 357-364. *Human Genome Project: Ethics*. Madrid, Bilbao: Thyssen-Bornemisza Collection.

Mitrović, Veselin (2010). Argumenti za i protiv »poboljšanja« ljudskih bića genetskom intervencijom. *Sociologija*. LII (1): pp.75-96.

Newson, Ainsley J. and Wrigley, Anthony (2017). Is Mitochondrial Donation Germ-Line Gene Therapy? Classifications and Ethical Implications. *Bioethics*. 31(1): pp. 55-67.

Nierenberg, Cari (2017, December 20). Am I Having a Boy or Girl? — Ultrasound & Sex Prediction. Live Science. Retrieved from https://www.livescience.com/45582-boy-or-girl.html

Nussbaum Martha C. (2001) *Women and Human Development: The Capabilities Approach*. New York: *Cambridge* University Press.

Ong, Sandy (Jun 2018). Singapore could become the second country to legalize mitochondrial replacement therapy. *Science*. Retrieved from https://www.sciencemag.org/news/2018/06/singapore-could-become-second-country-legalize-mitochondrial-replacement-therapy

Pennings, Guido (1996). Ethics of sex selection for family balancing, Family balancing as a morally acceptable application of sex selection. *Human Reproduction*. 11 (11): pp. 2339–2342.

Persson Ingmar, Savulescu Julian (2019). The Duty to be Morally Enhanced. *Topoi*. 38(1): pp. 7–14.

Powell, Russell (2015). In Genes We Trust: Germline Engineering, Eugenics, and the Future of the Human Genome. *Journal of Medicine and Philosophy*. 40 (6): pp. 669-695.

Robertson, John A. (1994). *Children of Choice: Freedom and the New Reproductive Technologies*. Princeton. New Jersey: Princeton University Press.

Romeo-Casabona, C. M. (1998). Health and Eugenics Practices: Looking Towards the Future. *European Journal of Health Law*. 5 (3): pp. 241-260.

Selgelid, Michael J. (2014). Moderate eugenics and human enhancement. *Medicine, Health Care and Philosophy*. 17 (1): pp. 3-12.

Sen, Amartya (2010). More than 100 Million Women Are Missing. In: Murthy, Padmini and Lanford Smith Clyde (Eds.). *Women's Global Health And Human Rights*, USA: Jones and Barlett Publishers, 2010,

Shahvisi, Arianne (2018). Engendering Harm: A "Critique of Sex Selection For "Family Balancing". *Bioethical Inquiry*. 15 (1): pp 123–137.

Smith, Rebecca (21 Jul 2014). Number of women travelling to America to choose sex of child rises 20%. *The Thelegraph*. Retrieved from https://www.telegraph.co.uk/news/health/news/10978836/Number-of-women-travelling-to-America-to-choose-sex-of-child-rises-20.html

Stepan, Nancy L. (1996). *The Hour of Eugenics: Race, Gender, and Nation in Latin America*. Ithaca and London: Cornell University Press.

Toebes, Brigit (2008). Sex selection under International Human Rights Law. *Medical Law International*. 9 (3): 197-225.

Vizcarrondo Felipe E. (2014). Human enhancement: The new eugenics. *The Linacre Quarterly*. 81 (3): pp. 239–243.

NOVA EUGENETIKA U OGLEDALU MEĐUNARODNE ZAŠTITE LJUDSKIH PRAVA

Apstrakt: Tehnološki razvoj na polju genetike doveo je do pojma nove eugenetike. To je pokrenulo brojne diskusije koje su se mahom fokusirale na pitanje kontinuiteta odnosno diskontinuiteta nove i stare eugenetike. Potrebno je ispitati upotrebljivost navedenog pojma u oblasti zaštite osnovnih ljudskih prava. Samo određenje razlika i sličnosti navedenog ne obezbeđuje jasan put za razumevanje vrsti delovanja koja su suprotna osnovnim vrednostima, koja bi trebalo da budu međunarodno zaštićena. Bolje je usredsrediti se na specifične kontroverzne tehnologije. To bi možda pretežno trebale biti one koje imaju ili će imati šire polje upotrebe, kao u slučaju neinvazivnog prenatalnog testiranja (NIPT). Treba naglasiti da reproduktivni turizam i razvoj adekvatnih tehnologija zahtevaju brz odgovor. Ipak, treba imati na umu da je postizanje konsenzusa u etički složenom području težak zadatak.

Ključne reči: ljudska prava, eugenetika, Biomedicinska konvencija, Evropska konvencija o ljudskim pravima, odabir pola, genetička modifikacija, kloniranje.

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