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PRE-BIRTH GENETICS
SCIENTIFIC RESEARCH AND LEGAL VALORISATION OF THE CHRISTIAN MORALS

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Abstract

The article elaborates on pre-birth genetic testing, seen from the angle of avoidance of (i) eugenic choices and (ii) the moral and legal limits set for the genetic interventions. Genetic testing can be undertaken either *during* pregnancy, to discover if the fetus is at risk of a genetic disease (prenatal testing) or (more infrequently) *prior* to pregnancy, when embryos are tested to determine their genetic status (pre-implantation genetic diagnosis or PGD). Most testing conducted in the context of reproduction has been undertaken to establish the presence of genetic factors that are likely to directly affect the health of the child-to-be in predictable ways. These clinical differences are also reflected in the way the two technologies are regulated by the New Romanian Civil Code, adopted in October 2011. While PGD has provoked specific regulatory (legislative) responses, prenatal testing has attracted no such targeted regulation and operates within the confines of existing legislation around abortion: (a) the genetic modification of a person's biological origins is forbidden by contemporary Romanian law, unless it is oriented towards the prevention and treatment of genetic maladies, (b) the therapeutic finality of the genetic intervention, although not justifying in itself the ethical character of the medical act, represents a compulsory condition for the acceptance of the biomedical practice, and (c) as a reflection of the common Christian perception, the legislation has prohibited the creation of human embryos in the sole purpose of scientific research, without the existence of a 'parental project'.

The distinction between prenatal testing and PGD is influenced by the value attributed to prenatal life. This depends on the views about when the early human embryo becomes a being which can bear rights and to whom the others owe obligations. Different moral arguments have been proposed by the Orthodox and Catholic theology to assist the bioethical deliberations in determining the moral status that should be attributed to prenatal life. This article discusses the complex moral questions raised by pre-birth genetic testing considering the idea that destroying an embryo is no less morally problematic than terminating a pregnancy.

Keywords: human embryos, pre-implantation genetic diagnosis, assisted reproduction, predictive medicine, Christian morals

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1. Introductory comments

Despite the scientific progress represented by the regulation of biomedical practices on human genetics, and in the context of the adoption of the New Romanian Civil Code on October 1st, 2011, which regulates in articles 62-66 research on human embryos, a number of ethical questions remain unanswered in light of certain theological interpretations of bioethics.

From the perspective of the technical progress available by certain biomedical practices, two possible temptations are to be avoided: the one attached to eugenic choices, and the one derived from the utilitarian treatment of the human body; both are condemned by Christian principles which guided legal thought in the respective field. The New Civil Code postulates in imperative terms the prohibition of eugenic practices, which would undoubtedly deny the principle of human diversity. The research on human embryos raises the question of the opposition between the *humanitarian* and the *utilitarian* approaches of predictive medicine. It is also problematic to legalize a biomedical practice such as the examination of genetic characteristics simply because it respects currently accepted ethical principles.

In the text of articles 58-81, the authors of the Romanian New Civil Code intended to establish the premises of a legal protection meant to avoid the potential biological exploitation of vulnerable persons, as well as the objectification of the human body or discriminatory biomedical practices based on eugenic selection. To sum up, the moral concerns raised for the Christian thought by the use of genetic testing are grouped around the following issues: (i) the psychological impact on the children-to-be arising from learning that they were ‘chosen’ on the basis of observable genetic preferences; (ii) the unprecedented power in the hands of the parents offered by recent genetic techniques would not necessarily be used for the good of the child; (iii) the new genetic technologies may change the nature and meaning of reproduction; (iv) genetic diagnosis of the embryo is seen to alter the essential act of procreation, since procreation has traditionally been seen to be an act of acceptance of the children, despite their eventual disabilities.

Genetic testing can be undertaken either during pregnancy, in order to discover if the foetus is at risk of a genetic disease (prenatal testing) or, more infrequently, prior to pregnancy when embryos are tested to determine their genetic status (pre-implantation genetic diagnosis or PGD). It should be noted that most testing conducted in the context of reproduction is done to determine if there are genetic factors present that could directly affect the health of the child in predictable ways [1, 2].

The licit character of the scientific research on human embryos may be discussed on a number of levels. First, the creation of human embryos is considered to be licit and moral only when integrated in a parental project. The ‘parental project’ refers to the fact that the conceived children are raised by families, enjoying the same rights as naturally born children, instead of being raised as organ donors, for example, or being conceived for the purpose of medical research. The creation of human embryos for merely scientific purposes is forbidden both by contemporary legal rules and Christian morals according to Messer [3]. The 'parental project' thus describes the applicants' intent of becoming legal parents of the child conceived through assisted human reproduction (AHR). Two fundamental catalysts have contributed over the past decade to initiate the required change in the legal and moral judgment: the issue of discovering genetic maladies in the prenatal stage, and the moral and legal limits for the interventions on human genetics. In both cases, the central issue is that of the *purpose* set for the genetic intervention itself: while eugenic or trivial interventions (as those oriented towards choosing the child's sex or physical qualities) are prohibited, those aiming at the avoidance of genetic maladies are usually considered morally justified. However, permission to choose the child's sex in order to avoid a genetic malady related to gender, despite challenging the principle that each child is considered to be God's gift and not merely human artefact, is allowed based on the Christian theory of God's absolute goodness that may be invoked in order to justify the genetic intervention. The Christian God is considered to be perfectly merciful and the Source of all goodness, humans being allowed to use intelligence for avoiding such maladies [4].

The place taken by religion and, in particular, by religiosity in the public bioethical discourse on pre-birth genetic testing has become quite important in Romania. Although secular bioethics is struggling to develop its own rights that are in connection with autonomy-based self-governing patient rights, the Christian discourse on morals applicable to genetic research is influential in a Christian majority society such as Romania. Furthermore, since Christian churches, particularly Orthodox and Catholic, were the foremost opponents of the alienation of man from his or her humanity, they were usually opposed to interventions on human genetics practiced in the pre-birth stage [5]. The legislative trend to the using a Christian narrative that stressed values and principles tied to biblical understanding and reconciled with human rights concepts became more obvious with the adoption of the New Romanian Civil Code; the Code explicitly valorises Christian thought on the ethics applicable to genetic research and testing. In light of universal human rights, the use of distinctive theological arguments in the bioethical debate can reveal much to the members of the Christian community, without excluding other non-religious and religious arguments other than those based on a European Christian heritage.

Questions still remain in how these regulations will be used. For prenatal diagnosis and prenatal scientific studies, a key question is which genetic abnormalities will be prevented and how this prevention affects those with the disability … and without the means of prevention. Do they still have a valued place in society? How does one balance the virtue ethic of accepting *all* people regardless of disability with the utilitarian ethics of minimising the social costs imposed by the persons with disabilities? The New Romanian Civil Code is silent here, since the Code is oriented towards the regulation of an individual's civil rights and duties, while not strictly focusing on the bioethical approach of medical practices. The new legal texts refer, for instance, to the question of the power of decision kept for specialists to establish the eugenic risks implied by a certain genetically predictive practice as opposed to the financial benefits associated with avoidance of disabilities [6].

It is thus worth noting that article 63 of the New Romanian Civil Code establishes unequivocal legal limits for intervention in human genetics, while forbidding those oriented towards modifications of the person's biological origins, except those concerning the prevention and treatment of genetic maladies, and forbidding the creation of a human being identical to another human being, deceased or alive, and the creation of human embryos in the purpose of scientific research. It also forbids the use of genetics for choosing the conceived child's sex unless doing so is oriented towards "the avoidance or cure of a severe genetic disease associated to the child's sex" (art. 63, paragraph 3).

The New Civil Code allows altruistic, non-onerous donation of human organs, while not establishing explicit rules in the field of the donor's anonymity. The anonymity principle is numbered in the group of the conditionally applicable bioethical principles, being incident in the case of organ procurement from deceased or alive donors, while being excepted in the case of the donors of genetic material, where the questions raised by the conceived person's paternity and identity (the person's rights to access to information on his or her biological origins) may justify the revealing of the donor's identity [7, 8]. The text of the New Civil Code however does not contain specific rules applicable to the origin of genetic material from a donor; in the case of requests based on an individual's desire to know his or her biological origins, additional regulation will be needed.

By establishing the requirement of a parental project for the legal authorization of medically assisted procreation where article 447 of the New Civil Code requires that such requests may only be initiated by couples "formed by a man and a woman or by a single woman," the Romanian legislation has indirectly postulated the illicit character of homosexual parenthood, in accordance to the traditional view of Orthodox and Catholic communities [9]. Consequently, this definition only valorises medically assisted human reproduction for male-female couples, or a single woman, experiencing natural infertility. The law is criticisable for discriminating against male homosexual couples: technically, women from lesbian couples would be eligible for assisted human reproduction, while male couples are refused the possibility of accessing AHR.

2. The eugenic implications of genetic screening: legal and moral prohibitions

The New Civil Code expressly forbids eugenic practices. (Article 62 states that "(1) No one is allowed to make an infringement over the human species. (2) All eugenic practices aiming to organize a selection of the human beings are forbidden.") The Code thus avoided potentially eugenic effects coming from uncontrolled use of predictive medical practices such as preimplant diagnosis and pre-natal diagnosis. The new regulation excludes the possibility of using predictive medical techniques for purposes other than avoiding a malady (e.g. choosing a child's hair or eye colour or choosing gender unless it is associated with a malady).In addition, the Code excludes genetic intervention as a meaning of eradicating the birth of persons suffering from certain maladies, as the eugenic use of the pre-natal diagnosis is illegal. *The principle of the diversity of the human species* is thus seen as a central bioethical rule, while admitting that neither the malady, nor the presence of a disability alters one's humanity [10, 11].

Among the fears associated with the potential new uses of technology is the concern that genetic testing may lead to a new form of eugenics, at least at some not negligible levels, such as the child's-to-be sex or physical characteristics. (In the light of the new code, "(1) All medical interventions on the genetic characteristics of a person on the purpose of modification of the person's origins are forbidden, except in cases in which the prevention and treatment of genetic maladies is necessary. (2) All genetic interventions oriented towards the creation of a human being identical to another human being, deceased or alive, as well as creating human embryos in the sole purpose of scientific research are forbidden. (3) The use of the medically assisted reproduction techniques is forbidden when oriented towards choosing the sex of the conceived child, with the sole exception of preventing a serious genetic malady associated to the child's sex" (art. 63).) The main legal innovations brought to the judicial regime of the interventions on human genetics by adopting the New Civil Code may be summarized as follows: (a) the genetic modification of a person's biological origins is forbidden by law, unless is oriented towards the prevention and treatment of genetic maladies; (b) the therapeutic finality of the genetic intervention, although not justifying in itself the ethical character of the medical act, represents a compulsory condition for the acceptance of the legal character of the biomedical practice. (The exam of the genetic characters of a person "may not be undertaken in purposes other than medical or for scientific research, under the conditions fixed by law. The identification of a person on the basis of his or her genetic prints may not be undertaken unless a civil or criminal judicial procedure has been initiated or, upon the case, for medical or scientific purposes, under the conditions fixed by law" (art. 65 of the Romanian New Civil Code).) Two other important legal prohibitions postulated by article 63 are worth noting: cloning of human beings is forbidden by law, and the creation of human embryos for the sole purpose of scientific research, without the existence of a ‚parental project', is prohibited.

It should be noted that some interventions on the human embryo that respect its life and integrity and which are directed towards the healing, health and survival of the embryo are acceptable both in Orthodox and Catholic tradition. This would include the genetic testing of embryos where the information obtained in the test will be used for the benefit of the tested embryo. However, it excludes genetic practices oriented towards eugenic purposes or which involve destruction of human embryos or the creation of them for merely scientific purposes, detached from a parental project [12].

3. Moral status of human embryos

3.1. Embryo creation for research purposes, legally prohibited

The ethical position within Roman Catholicism takes the view that human life begins at the moment of conception and thus considers an embryo as a human individual having the right to life. The bioethical implication of this position is that it is not acceptable to use embryos for merely scientific purposes and that it is impermissible to destroy or discard embryos. In contrast, Orthodox Christianity has numerous distinct traditions including the view that full human status may be acquired gradually. Central to Orthodox thought is the emphasis on healing and saving which would permit some uses of embryos for therapeutic and research purposes [13]. The contemporary Romanian legislation, reflecting a respect of Orthodoxy, prohibits the creation of human embryos for the purpose of scientific research and in the absence of a parental project, but it allows practices of assisted reproduction.

It is also worth observing that the principle of human dignity justifies the interdiction retained by the Romanian legislation in the text of article 63 of the New Civil Code, concerning the creation of human embryos. The latter may not, in any situation, be reduced to the stage of mere objects of study or scientific research. The present legislation does not allow the creation of human embryos merely for scientific purposes. The existence of a parental project represents the sole case in which a genetic procedure of creating a human embryo may be legally initiated. A common element of the reasoning in these examples that reflects Christian thought is its emphasis on the ethical significance of life. Both the Orthodox and the Catholic views mention the presence of life as an important characteristic in the embryo [14]. Additionally, the value that patients and altruistic donors place on the embryos to which they contribute warrants respect and consideration.

The restrictive rule which was retained by the Romanian legislation in article 63 of the New Civil Code was first expressed in article 18, paragraph (2) of the Council of Europe's Convention on Human Rights and Biomedicine, namely that “The creation of human embryos for research purposes is prohibited.” Thus the cited rule is opposed to the purely instrumental creation and use, leading to destruction, of potential human beings embodied in embryos, while rejecting the utilitarian acceptance that surplus embryos may be employed for generating scientific knowledge. As noted by specialists, “Personal and professional courtesy reinforce the ethical principle of respect for persons to require that investigators value embryos suitable for their research not simply as scarce commodities, but as gifts representing donors’ conscientiousness and sacrifice” [15].

3.2. Legal genetic choices vs. illegal genetic practices

In the Romanian Code, choosing the conceived child's sex by using predictive medical techniques is allowed only when oriented towards "the avoidance of a genetic malady associated to the child's sex" (art. 63, paragraph 3 of the New Civil Code). The existence of the cited legal exception confirms its *conditional* character as opposed to an absolute bioethical principle; conditionally applicable ethical rules often suffer exceptions, expressly enumerated by law. Consequently, this conciliation may conflict with the bioethical principle of diversity of human species and with that of prohibiting eugenic practices. It is unclear how this exception will be adjudicated to affect future laws on bioethics. Nevertheless, the current New Civil Code forbids eugenic biomedical practices by allowing gender selection only to avoid severe genetic maladies associated with the child's sex. The therapeutic finality of a medical practice may represent an admissibility condition. A strictly therapeutic intervention whose explicit objective is the avoidance of various maladies such as those stemming from chromosomal defects will, in principle, be considered desirable under existing law, provided it is directed to the true promotion of the personal well-being of the individual; thus when added to existing rules of the legal system, the admissibility condition of the 'therapeutic finality' does not change the system significantly. Therefore, allowing gender choice to avoid a sex-linked malady its exclusion from the list of legally prohibited eugenic practices.

Christian bioethical principles such as equality and solidarity between all human beings may be challenged by the use of predictive medical genetics techniques. These techniques risk the anticipatory identification of persons potentially affected by certain genetic maladies. Predictive medicine should not be a source of discrimination based on genetic characteristics [16]. In addition, the protection of individual freedom represents a major ethical rule in terms of authorizing biomedical practices. Several ethical principles are derived from this bioethical imperative, such as freedom to request or refuse a genetic test, freedom to be informed regarding the results of a genetic test, and freedom to choose or refuse transplant based on genetic techniques [17].The illicit character of examining genetic characters when oriented towards purposes other than therapeutic or scientific ones (e.g. a military or a cosmetic purpose), considers these ethical principles. Scientific research on human embryos and on embryo cells can only be justified if it has beneficial therapeutic value *for the patient* in the respective biomedical practice.

There are two observations to be made: (1) the New Civil Code does not explicitly regulate scientific research on human embryos except for prohibiting the creation of them solely for scientific purposes in article 63; (2) the protection of human embryos in the prenatal stage against their utilitarian treatment as objects of scientific research is not completely solved by the New Civil Code. It merely postulates alive persons' rights without mention of the status of embryos or foetuses to not be subject to scientific experiments, tests, organ procurement, medical treatment and other therapeutic or scientific interventions unless expressly authorized by law (art. 67). Several questions are thus kept unresolved, in the present legislative stage, such as general ethical legitimacy of scientific research on human embryos and foetuses. Consequently, there remains an ethical risk of objectifying humans in the prenatal stages of life.

Nevertheless, the Romanian legislation expressly retained the prohibition of creating human embryos for the sole purpose of scientific research and in the absence of a parental project. This practice would visibly ameliorate bioethical principles, such as the non-objectification of human beings and the respect of human dignity. The authors of the New Civil Code avoided a thorough pronouncement regarding the issue of the legitimacy of scientific research on human embryos and foetuses. This kind of research is still authorized by the present legislation in therapeutic purposes only, as in the case of avoiding genetic maladies and without transforming them into eugenic practices. Consequently, several questions remain open concerning the use of human embryos with maladies that could be an object of scientific experiment. These open questions may still contradict the virtue ethics of non-objectification of the human being in favour of the utilitarian ethics. No less respect may be shown for a human being in the prenatal stage as after birth if our guiding light is one based in virtue ethics.

3.3. Gradualist vs. conservative views on the pre-implantation genetic diagnosis

Both inspired by Christian principles, the gradualist and the conservative views on the moral status of embryos are different in several ways. For instance, the *gradualist* view allows that the moral and legal status of an embryo is constructed progressively and thus society owes more duties to a fetus nearer the time of birth than it does to an early embryo. As a consequence, genetic fetal testing is morally more problematic than pre-implantation genetic diagnosis (PGD) since it may ultimately involve destruction of human life at a relatively late stage of its development. Conversely, the *conservative* view considers that prenatal life should be valued from the moment of conception and entails that prenatal testing and PGD are equally morally wrong, since both involve the destruction of a human life. To engage in a pre-birth genetic diagnosis would amount, in the conservative view, to an attempt to usurp the role of God and arbitrarily set oneself up as the master of the conceived child’s life. The key difference in the permissive (gradualist) theory is that it is focused on the view that there may be a role for humans to assist God’s creation through reproductive technologies; thus PGD is not necessarily contrary to numerous religious traditions, including the Christian religion. Thus, provided the purpose of the genetic intervention is to prevent genetic maladies, humans participate with God in alleviating suffering. As advocated by the gradualists, children created both of traditional or natural means and those of artificial means will be equally pleasing in God’s eye, who remains the *de facto* Creator [18].

From the point of view of Christian morals, the question of prenatal genetic testing is complicated by two significant issues. *First*, prenatal testing during pregnancy potentially leads to the destruction of prenatal life at a later stage of development. *Second*, PGD involves purposely selecting certain embryos for implantation and rejecting others, not only the destruction of prenatal life. It should be noted that the recently adopted Romanian Civil Code prohibits the creation of embryos in the absence of a parental project and for merely scientific purposes, thus valorising the conservative views dominating public opinion [19].

The fact that pre-implantation genetic diagnosis relies on the creation, selection, rejection, and possible destruction of embryos is a significant reason why PGD is subject to intense moral scrutiny. Since pre-implantation genetic diagnosis cannot take place unless embryos are available for genetic analysis, the described process necessarily involves the creation and selection of some embryos in preference to others. Embryos that are not selected will be destroyed, stored, or used for research purposes, which aliments theological concerns regarding the morality of the genetic practice [20].

Traditionally, procreation been seen to be an act of acceptance of the children, despite their disabilities, since the presence of a disability does not alter the child's humanity. That is one of the reasons why recent theological discourse tends to see genetic diagnosis of an embryo as a serious threat to the essential value of the procreation, enhancing the fragile balance between the legitimacy of infertile parents' request for medical assistance and the child's-to-be right to self-fulfilment [21].

Focusing on the legal point of view does not facilitate obtaining an answer. In the religious rhetoric, the embryo's status as a person makes it a legitimate subject of moral concern, while judicially the embryo's lack of a legally complete personhood justifies the partial withholding of rights; nevertheless, the embryo's status as a *potential* human being supports the intermediate conclusion, that of limited legal capacity, thus enjoying some specific legal protection.

3.4. Destruction of surplus embryos, in ethical terms

In using embryos for strictly reproductive purposes, expressly allowed in articles 62-66 of the Romanian New Civil Code, other ethical issues are present. Embryos that are not selected for *in utero* implantation will be destroyed, stored, or used for research purposes, which enhances theological concerns on the morality of the genetic practice Once the embryo attaches to the uterine wall, it is on its way to becoming a human being and thus it might seem that the implanted embryo would be more entitled to legal protection than the unattached, pre-implantation embryo. However, even though the implanted embryo is clearly further along in becoming a human being than the non-implanted embryos, the fact that the latter has the *potential* of becoming human beings is a source of concern for theological thought. On the other hand, selection of the implanted embryo among excess embryos is essential for the pursuit of the reproductive process. If the moral status of the embryo is neutral, having no *inherent* purpose (e.g. creation of embryos for merely scientific purposes, in the absence of a parental project), it may be said that it is only parental intention that directs its use to make the genetic practice legal or illegal.

4. Assisted human reproduction: ethical concerns

The aim of this section is to identify a number of concerns about assisted human reproduction (AHR) and to discuss new ethical challenges framed by those concerns in the context of current and foreseeable applications in the area of pre-birth genetics.

Medically assisted reproduction techniques are considered a palliative alternative for natural infertility, while applying the principle of non-discrimination between the potential parents [18]. This definition does not encapsulate the complexity of the arguments surrounding the morality of the genetic interventions assisting human reproduction. The New Civil Code texts allocated to the issue of medically assisted procreation do not solve all potential questions raised by these techniques. This legislation avoids expressly regulating the issue of revealing the identity of donors of genetic material unless the conceived child’s request is for therapeutic reasons related to the conceived person’s health or its descendents. There are no provisions reasons attached to the individual’s right to be informed regarding his or her biological origins. The necessity of a *parental project*, implying at least the mother’s existence, as an admissibility condition for the medically assisted human reproduction is expressly mentioned in article 441, paragraph (3). (According to Article 441, paragraph (3), “The parents, in the legal sense, may be a couple formed by a man and a woman or a single woman.” The first two paragraphs of the cited article are concerned with the paternity issue; the law establishes that “(1) the medically assisted human reproduction implying a donor determines no liens of paternity between the conceived child and the donor. (2) In this case, a judicial action for establishing the donor’s civil liability is inadmissible.”) The compulsory character of the existence of a parental project is also stipulated in the second paragraph of article 442 of the New Romanian Civil Code, applicable since October 2011, according to which death, divorce, or separation of the future parents invalidates consent to the medically assisted reproduction.

The *medical* and *social finality* of the medically assisted procreation (as part of a parental project to mitigate natural infertility) and the prevention of homosexual parenthood issue are implicitly regulated by the new legal text. There is no overt reference to prevent homosexual couples having access to assisted human reproduction. Rather, in article 447, the legislation simply refers to the fact that authorization of genetic procreation techniques depends on the existence of a request from a couple formed by a man and a woman or a single woman. The interdiction preventing access of homosexual couples to medically assisted reproduction confirms the rule existing in the Romanian civil law where marriage between homosexual persons is forbidden, with judicial consequences on the paternity issue, even if homosexual couples living together is socially permitted as an exercise of a fundamental freedom of choice [22]. Technically, unlike a single man, a single woman involved in a lesbian relationship would be eligible for AHR, which makes the law criticisable for discriminating against male couples. However, in legal terms, the notion of 'single women' refers to women being not married, disregarding their sexual orientation. Let us note that article 337 is not concerned with moral issues, but rather with the question of parenthood, in legal terms interesting Inheritance Law and Family Law as well. To sum it up, it may be said that applicants for AHR may be either married women, either women not having a husband. Single male applicants are not eligible for AHR, which means that the cited legal text inserts a form of discrimination that future legal reforms are meant to erase.

The principle of reproductive autonomy is an important guiding principle of today's bioethics; nevertheless, ethical questions continue to be raised regarding how far the principle extends and to what extent the state should have a role in regulating reproduction. In the case of AHR, there are many parties that can potentially be affected. These may include, while not being limited to: (a) the embryo(s); (b) the resulting child; (c) the female undergoing the procedure; (d) the person who provided gametes for fertilisation; and (e) persons involved in a relationship with any of these parties, such as partners, husbands, wives, family, friends and so forth. The common public perception in contemporary Romanian society, as well as the traditional view of the Orthodox and Catholic churches, considers legal acceptance of homosexual parental couples inappropriate potential applicants for AHR, a view also reiterated in article 447 of the New Civil Code. The requirements for legal consent to AHR are established in article 442 from the New Civil Code. According to Article 442, "(1) The parents who, in order to procreate, wish to have access to the medically assisted reproduction techniques implying a donor have to express their consent in front of a notary public, in fully confidential conditions, beneficing from the notary's counselling on the judicial consequences of their choice. (2) The future parents' consent is judicially void in the case of their death, divorce or separation before the initiation of the medically assisted reproduction procedure. The parent's consent is revocable at any moment, in written, including in front of the medical staffs that ensures the medical assistance for the reproduction procedure."

While it is tempting to polarise the debate around the acceptability of these technologies as morally justified, it should be observed that the major changes wrought by the New Civil Code in the field of medically assisted reproduction may be grouped around the following issues: (a) the parents' consent to medically assisted reproduction has to be expressed in front of a notary public; (b) the information delivered by the medical staff are doubled by the notary public's counselling on the judicial repercussions for the paternity regime; (c) *parents' right of retract* after consenting to the medically assisted reproduction may be legally exercised at any moment before the initiation of the medical procedure; (d) parents' right of retract is exercisable in writing only (thus respecting the similarity of form principle, in the context in which the original consent has been delivered in writing); (e) opposed to the regime of the initial consent, and in order to ensure freedom of option (in accordance with the importance of the legal consequences of paternity), the retract of consent may take place in front of the medical staff involved in the reproduction process without a notary public; (f) the legal cases of consent insufficiency are related to death, divorce or separation of the future parents, as in these situations the existence of the paternal project is presumed to have ceased [23].

The New Civil Code regarding the admissibility of requests related to revealing the donors of genetic material, on one hand marks significant *progress,* while presenting *lacunae* on the other hand. The legal progress is represented by express authorization, in article 445, of the rejection of anonymity for medical reasons, concerning other persons' health. The lacunae are related to the lack of an explicit legal text authorizing revealing of the donor's identity, upon the conceived person's request, for reasons such as the individual's right to be informed on his or her biological origins or access to personal genetic history [24, 25].

A commentary on the new regulation (Article 62 states that "(1) No one is allowed to make an infringement over the human species. (2) All eugenic practices aiming to organize a selection of the human beings are forbidden.") would have to encompass at least the following ideas: (i) regarding the issue of revealing the identity of donors of genetic material, the legal rule is that of maintaining anonymity (or of the confidentiality of this kind of information); (ii) the one exception for revealing genetic information is the conceived person's request or his or her descendants' for the therapeutic risk attached for the conceived person's, his or her descendants' or other persons' health; (iii) the present legislation does not authorize the request of revealing the identity of a donor of genetic material for other reasons, such as the individual's right to be informed on his or her biological origins, as an autonomous right unattached to the medical, therapeutic consequences [26, 27].

The reason why the Romanian legislation maintained these legislative lacunae is attached to the judicial status of the conceived child and the donor of the genetic material used in the reproductive process. Between the two persons, no legal status of paternity or maternal link is established according to law. All legal links of civil relationship – in the context of the parental project authorizing medically assisted human reproduction – are established between the consenting parents and the conceived child. In accordance with Article 446, "The father has the same rights and duties in relationship with the child conceived through the medically assisted reproduction implying a donor of genetic material as in the case of natural conception."

Contesting the paternity does not represent a legal reason for requesting the identity of the donor of genetic material. (As retained in Article 443 of the New Civil Code, "(1) No one is allowed to contest the paternity of a child for reasons related to his or her artificial conception and nor is the medically assisted conceived child able to contest his or her paternity on such grounds. (2) Nevertheless, the mother's husband may contest the child's paternity, under the conditions fixed by law, in cases in which he did not consent to the medically assisted reproduction implying a donor of genetic material.") Thus, patrimonial or inheritance reasons, for instance (the artificially conceived child's access to the patrimonial inheritance left by the deceased donor of genetic material) may not be invoked as legal reasons for the anonymity lift, as long as according to law the artificially conceived child is not considered to be the donor's descendent [28, 29]. There are however several legal uncertainties related to the potential delimitation, in a future legal text, of the "anonymity of the donor of genetic material" notion (where confidentiality represents the general rule) and the 'secret' on the modality of conception (the use of genetic practices), this information being revealed to the conceived person on the grounds of the individual's right to have access to information concerning his or her biological origins [30, 31].

5. Conclusive remarks

The progress registered by predictive medicine raises the question of establishing the measure in which predictive capacities of science may represent a threat to the Christian principle of equality between the human beings. While PGD is ethically controversial because it involves the screening and likely destruction of embryos; medically assisted procreation, on the other hand, raises questions over the medical realization of the infertile couples' intent of becoming parents, as well as on the ethical and juridical foundation of the notion of 'the conceived child's best interest'. All these recent interrogations on the mentioned Christian principles were meant to facilitate the establishment of legal rules representing a warranty of 'legal protection', as well as 'ethical guaranties'. Establishing a general legal framework for the exercise of biomedical activities in the text of the New Civil Code is also important from the angle of scientific research on genetic characteristics and interventions on genetic characteristics, as being a field in which each individual or collective decision reverberates on the status of future generations. That is one of the reasons why the legislation was preoccupied with the ethical content of principles such as the respect of human dignity, freedom of choice, equality and solidarity between human beings. In the area of biomedical activities such as eugenic practices, any moral ambiguity would prove to be unsatisfactory for the researchers and medical practitioners, as well as for each member of the society.

The person-centric nature of the religious debate on morality of pre-birth genetics and the moral status of embryos may be explained also by the intrinsic limits of the legal analysis. From the point of view of legal theory, the concept of the human embryo's personhood or legal capacity is poorly equipped to handle moral questions, as those related to the destruction of leftover embryos or the selective reduction of multiple embryos.

Disagreement about the moral appropriateness of creating new cell lines from leftover embryos created *in vitro* and donated for research purposes or from stored embryos that have been determined to be inactive is of long standing; the moral and religious debate is facilitated by the legal prohibition contained by article 63 of the New Civil Code on the creation of embryos for merely scientific purposes. Other ethical issues at stake include the implantation and 'selective reduction' of multiple embryos, and the permanent storage or destruction of unused but potentially viable embryos.

Systems of collection, storage, and use of cells of different types are, however, still in the early stages, for the Romanian Scientifics, both technologically and from a policy standpoint; thus, a number of scientific, practical, and ethical issues are still to be adjudicated during this progress. These issues include ensuring the broad availability of matches for those in need, development of bio-banks for storage of embryos, determining access for research into therapeutic use, refining consent forms, information, and procedures, and, finally, developing robust systems for confidentially labelling of bio-specimens.

The ethical values attached to the human being are grounded on the principle of bodily integrity, as a facet of human dignity, to respect the rules of bioethics. In the common sense of the phrase, the person's 'right to bodily integrity' implies the legal prohibition of all non-consented biomedical interventions, excepting those representing medical emergencies in the therapeutic interest of third parties (for avoidance of an epidemic disaster, for example). In accordance with article 64 of the New Civil Code, "The human body is inviolable. Each person has a right to physical and psychical integrity. No intervention over the person's bodily integrity is conceivable outside the legal, exceptional limits." It is thus from this perspective that future laws of bioethics are meant to generate a more explicit meaning for notions such as 'bodily integrity', 'therapeutic necessity' or 'legitimate interest of third persons'.

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References

[1] M. Ryan, Journal of Medicine and Philosophy, **20** (1995) 419-430.
[2] J. Robertson, American Journal of Law and Medicine, **29** (2003) 439-442.
[3] N. Messer, Christian Bioethics, **15** (2009) 31-53.
[4] J. Parker, Theological Studies, **56** (1995) 763-770.
[5] J.-C. Larchet, *The Ethics of Procreation in the Teaching of the Holy Fathers*, Romanian translation, Sofia, Bucureşti, 2003, 84-86.
[6] L. Turner, Kennedy Institute of Ethics Journal, **13** (2003) 193–218.

[7] R.J. Cook, B. Dickens and M.F. Fathalla, *Reproductive health and human rights; integrating medicine, ethics and law*, Oxford University Press, Oxford, 2003, 69–70.

[8] I. Turcu, *Dreptul sănătății. Frontul comun al medicului şi al juristului*, Wolters Kluwer, Bucureşti, 2010, 237.

[9] H.T. Engelhardt, *The Foundations of Christian Bioethics*, Romanian translation,, Deisis, Sibiu, 2005, 48-49.

[10] H. Widdows, Bioethics, **25** (2011) 83-91.

[11] B.E. Rollin, *Science and Ethics*, CambridgeUniversity Press, Cambridge, 2006, 87.

[12] O.C. Snead, Symposium Transcriptions Catholic University School of Law, **39** (2005) 479-488.

[13] J.-C. Larchet, *Creştinul în fața bolii, suferinței şi a morții*, Sofia, Bucureşti, 2004, 79-81.

[14] H. Curzer, Howard. Journal of Medicine and Philosophy, **29** (2004) 533-562.

[15] B. Dickens and R.J. Cook, Int. J. Gynecol. Obstet., **96** (2007) 70-71.

[16] J. Robertson, Journal of Medical Ethics, **2** (2003) 213-216.

[17] F. Pasquele, Yale Journal of Law and the Humanities, **73** (2002) 1-32.

[18] B. Hofmann, Medical Humanities, **34** (2008) 19-24.

[19] B. Olaru, Romanian Journal of Bioethics, **8** (2010) 45-54.

[20] B. Dickens, Medicine and Law, **27** (2008) 179-190.

[21] D. Tapinos, *Prévention, précaution et responsabilité civile*, L'Harmattan, Paris, 2008, 129.

[22] R. Chester, New England Law Review, **39** (2005) 583-607.

[23] A. Bugada, L. Grynbaum and C. Guettier, *Prevention des risques*, Presses Universitaires d'Aix-Marseille, Marseille, 2006, 78.

[24] J.D. Ohlin, Columbia Law Review, **105** (2005) 209-249.

[25] S.R. Munzer, Harvard Journal of Law and Technology, **21** (2007) 123-177.

[26] R. Korobkin, Stanford Law and Policy Review, **18** (2007) 161-190.

[27] R. Korobkin, University of California Los Angeles Law Review, **54** (2007) 605-630.

[28] K. Devolder, Bioethics, **167** (2005) 170-176.

[29] J. Robertson, University of Texas School of Law: Public Law and Legal Theory Research Papers, **112** (2006) 1-38.

[30] J. Brand-Ballard, Kennedy Institute of Ethics Journal, **13** (2003) 231–258.

[31] M.G. Buta, P. Chirilă and A. Rebeleanu, Romanian Journal of Bioethics, **8** (2010) 129-135.