

## Editorial Articles

# Ethical consideration of experimentation using living human embryos: The Catholic Church's position on human embryonic stem cell research and human cloning

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## Summary

Although the potential applications of human embryonic stem cells and therapeutic cloning hold promise for the alleged medical benefits, these technologies have posed profound ethical issues because they necessitate the destruction of human embryos. A fundamental point in the issues is the concept of the moral status of human embryos. The Catholic Church has held that human life begins at the moment of conception and therefore, has defended the dignity, inviolable right to life and integrity of human embryos. The Catholic Church has opposed human embryonic stem cell research and any kind of human cloning because they are contrary to the dignity of procreation, of conjugal union and of human embryos. Moreover, these techniques have the risk of creating a sub-category of human beings that are destined basically for the convenience of others. In conclusion, science and technology can never be independent of the criterion of morality, since technology exists for man and must respect his finality.

*Key words:* Catholic; Embryo; Embryonic stem cells; Embryo Research; Ethics.

## Introduction

Human embryonic stem (ES) cells were isolated and cultured in 1998 [1, 2]. These cells are characterized by prolonged undifferentiated proliferation (self-renewal) and by long-term potential to form one or more differentiated cell types [3]. The development of specialized cells and tissues by stimulating pluripotent ES cells offers the promise for potential therapeutic applications. Replacement cell therapy may be applicable to the currently incurable diseases including Parkinson's disease, heart diseases, diabetes, osteoarthritis and rheumatoid arthritis.

However, human ES cell research and human cloning projects have ignited profound ethical issues worldwide that involve ethical, social, public, political, legal and religious concerns because they necessitate the deliberate destruction of human embryos.

The Catholic Church has condemned the experimentations that rely on the destruction of innocent human embryos. This editorial article deals with the ethical issues inherent in human embryonic stem cell research and human cloning from the theological perspective.

### *1. Ethically diverse opinions on the moral status of human embryos*

Ethical opinions of the individuals on stem cell debate are divergent and the political responses to human ES cell research vary in different countries. The concept of the moral status of human embryos constitutes the fundamental key point behind arguments for and against human ES cells.

The Chief Medical Officer's Expert Group of UK divided the concepts of the moral status of human embryos into three groups [4]: First, there are those who believe that an embryo is a human being from the moment of its creation. Second, some argue that the embryo requires and deserves no particular moral attention whatsoever, considering that an early embryo is simply a collection of cells. The middle ground of

ethical opinion recognizes the special status of an embryo as a potential human being – the respect due to the embryo that increases as it develops – but accepts that it is justified to use early embryos for serious research purposes which may benefit others by balancing the benefits of the research against the stage of development of the embryo and the respect due to the embryo.

The Expert Group takes a stance of the ethical middle ground. They describe that the derivation of stem cells for research from early embryos no longer needed for infertility treatment (spare embryos) or created by in vitro fertilization (IVF) specifically for research does not raise any new ethical issues and that the potential benefits of the research justify the use of such embryos as a source of stem cells at the early stage of their development.

## *II. Catholic teaching on the dignity of human beings*

The Catholic Church has articulated the fundamental principles on life issues repeatedly in the documents including the *Declaration of Procured Abortion*, *Donum Vitae (Instruction on Respect for Human Life in Its Origin and on the Dignity of Procreation)* and *Evangelium Vitae (The Gospel of Life)*.

The tradition of the Church has always held that human life must be protected and favored from the beginning, just as at the various stages of its development [5]. The *Declaration of Procured Abortion* states [5], “From the time that the ovum is fertilized, a life is begun which is neither that of the father nor of the mother, it is rather the life of a new human being with his own growth. It would never be made human if it were not human already. To this perpetual evidence – perfectly independent of the discussions on the moment of animation – modern genetic science brings valuable confirmation. It has demonstrated that, from the first instance, there is established the program of what this living being will be: a man, this individual man with his characteristic aspects already well determined. Right from fertilization is begun the adventure of a human life, and each of its capacities requires time – a rather lengthy time – to find its place and to be in a position to act. Even if a doubt existed concerning whether the fruit of conception is already a human person, it is objectively a grave sin to dare to risk murder. The one who will be a man is already one”. The *Donum Vitae* [6] recalls the teachings found in the *Declaration of Procured Abortion*: “From the moment of conception, the life of every human being is to be respected in an absolute way because man is the only creature on earth that God has wished for himself and the spiritual soul of each man is immediately created by God; his whole being bears the image of the Creator. Human life is sacred because from its beginning it involves the creative action of God and it remains forever in a special relationship with the Creator, who is its sole end. God alone is the Lord of life from its beginning until its end: no one can, in any circumstance, claim for himself the right to destroy directly an innocent human being”. Accordingly, from the first moment of his existence, a human being must be recognized as having the rights of a person – among which is the inviolable right of every innocent being to life [6].

By virtue of its substantial union with a spiritual soul, the human body cannot be considered as a mere complex of tissues, organs and functions, rather it is a constitutive part of the person who manifests and expresses himself through it [6]. The living human embryo is – from the moment of the union of the gametes – a human subject with a well defined identity, which from that point begins its own coordinated, continuous and gradual development, such that at no later stage can it be considered as a simple mass of cells [7].

Although some people try to justify abortion by claiming that the result of conception, at least up to a certain number of days, cannot yet be considered a personal human life [8], any discrimination based on the various stages of life is no more justified than any other discrimination [5].

## *III. The Catholic Church's position on artificial procreation*

The Catholic Church has affirmed the moral evil of every procured abortion (No. 2271) [9] and remain opposed to artificial reproductive technologies because they are illicit and in opposition to the dignity of procreation and of the conjugal union [6].

Pope John Paul II has recently pointed out that the techniques of artificial reproduction actually open the door to new threats against life [8]. In fact, the sense of the humanity of the fetus has recently been undermined or distorted by reductive understandings of the human person and by laws which introduce scientifically unfounded qualitative stages in the development of conceived life [10]. Pope John Paul II warns us that the acceptance of abortion in the mind, in behaviour and even in law itself, is a telling sign of an extre-

mely dangerous crisis of the moral sense, which is becoming more and more incapable of distinguishing between good and evil, even when the fundamental right to life is at stake [8].

Furthermore, the Catholic Church has condemned the experimentations such as human embryonic stem cell research and human cloning that rely on the destruction of early human embryos because it is a part of Church's mission to pass moral judgments even in matters related to politics, whenever the fundamental rights of man or the salvation of souls requires it (No. 2246) [9].

#### *IV. Catholic perspective on human embryonic stem cell research*

The evaluation of the morality of abortion is to be applied also to human ES cell research that hinges on the deliberate killing of human embryos.

One must uphold as licit procedures carried out on the human embryo which respect the life and integrity of the embryo and do not involve disproportionate risks for it, but are directed towards its healing, the improvement of its condition of health, or its individual survival [6]. In contrast, all research, even when limited to the simple observation of the embryo, would become illicit were it to involve risk to the embryo's physical integrity or life by reason of the methods used or the effects induced [6]. If the embryos are living, whether viable or not, they must be respected just like any other human person; experimentation on embryos which is not directly therapeutic is illicit [6].

Given the moral judgment by the Church's teachings, the creation of human embryos for the research purposes and the derivation of ES cells from early human embryos both *in vivo* and *in vitro* as disposable biological material are morally illicit and immoral. These manipulations of human embryos interfere with the dignity, integrity and identity of them because human embryos obtained *in vitro* are human beings and subjects with rights: their dignity and right to life must be respected from the first moment of their existence [6].

To use human embryos or fetuses as the object or instrument of experimentation or as providers of organs or tissue for transplants in the treatment of certain diseases constitutes a crime against their dignity as human beings having a right to the same respect that is due to the child already born and to every human person [6, 8]. Spare embryos should not be treated as objects of experimentation, be mutilated or destroyed with the excuse that they are superfluous or incapable of developing normally [6]. The utilitarian ethics that the ends justify the means at the expense of the life of human embryos contradicts the Catholic Church's teachings that affirm that the killing of innocent human creatures, even if carried out to help others, constitutes an absolutely unacceptable act [8].

Research on human ES cell lines that have already been established by other researchers or are commercially obtainable and the use of the differentiated cells obtained from such human ES cell lines do not avoid moral complicity in the proximate material cooperation in the production, manipulation and deliberate destruction of human embryos on the part of producing or supplying them [7, 11]. The *Donum Vitae* [6] describes that the moral requirements must be safeguarded, that there be no complicity in deliberate abortion and that the risk of scandal be avoided. Pope John Paul II has stated that any procedure which tends to commercialize human organs or to consider them as items of exchange or trade must be considered morally unacceptable, because to use the body as an object is to violate the dignity of the human person [12].

In contrast, The Holy See supports research on stem cells of post-natal origin since this approach is a sound, promising, and ethical way to achieve tissue transplantation and cell therapy that could benefit humanity [13]. This is the direction that research must follow if it wishes to respect the dignity of each and every human being, even at the embryonic stage [12].

#### *V. Catholic perspective on human cloning*

The Holy See supports and urges a worldwide and comprehensive ban on human embryonic cloning for both reproductive and scientific purposes [13]. Any type of cloning is considered illicit, no matter what techniques are used or what aims are pursued. Human cloning is in opposition not only to the dignity of human procreation and the conjugal union, the personal dignity, integrity and identity of the human being [6] but also to the principle of equality among human beings and the principle of non-discrimination [14]. Moreover, the illicitness of cloning is derived from the relationship of domination over the corporeity of the cloned subject, since it involves asexual, agametic reproduction and, in short, from the offence to the Creator's design [15].

More recently, a therapeutic cloning by somatic-cell nuclear transfer has been proposed in order to overcome possible immunological incompatibility when the recipients undergo cell therapy. This technique for obtaining organs for transplants is also not morally acceptable insofar as it involves the manipulation and destruction of human embryos [12].

In addition, it is not permissible to use women as a source of ova for conducting cloning experiments because the human body is an integral part of every individual's dignity and personal identity [14]. In another ethical aspect, human cloning has the risk of creating a sub-category of human beings that are destined basically for the convenience of certain others, which would be a new form of racism [13].

## VI. Freedom of scientific research

The advances in artificial reproductive technologies have posed profound moral problems, the situation of which gives us the opportunity to contemplate the significance of the freedom of scientific research in relation to the respect for the dignity and right to life of human embryos from the moment of conception.

The Catechism of the Catholic Church [9] states: (1) "It is an illusion to claim moral neutrality in scientific research and its applications. On the other hand, guiding principles cannot be inferred from simple technical efficiency, or from the usefulness accruing to some at the expense of others or, even worse, from prevailing ideologies (No. 2294)", (2) "Science and technology by their very nature require unconditional respect for fundamental moral criteria. They must be at the service of the human person, of his inalienable rights, of his true and integral good, in conformity with the plan and the will of God (No. 2294)" and (3) "Research or experimentation on the human being cannot legitimate acts that are in themselves contrary to the dignity of persons and to the moral law... Experimentation on human beings is not morally legitimate if it exposes the subject's life or physical and psychological integrity to disproportionate or avoidable risks (No. 2295)".

Thus, technology can never be independent of the criterion of morality, since technology exists for man and must respect his finality [5]. Given the application of the above norms to the experimentations on human embryos, it is evident that human ES cell research and human cloning projects that hinge on the sacrifice of human embryos should be subject to limits or be prohibited in the light of the moral viewpoints.

## Conclusions

Although the Church's Magisterium has defended the sacredness and inviolability of human embryonic life, people do not weigh the grave moral illicitness of the deliberate killing of human embryonic life due to the widespread abortion-mentality. It is not too much to say that the continuing abortion debate has extended over the debate about both human ES cell research and human cloning with advances in artificial reproductive technologies.

Resolving these issues and arriving at any consensus worldwide seems almost impossible at present and even in the future because there are various opinions concerning the moral status of human embryos. However, the Catholic Church has thrown light of Revelation on the issues concerning the experimentations using human embryos that we are now faced with. Awareness of the Catholic moral principles will lead to our giving priority to scientific research and technology that respects the dignity of human embryos rather than to those that devalue and violate human life at any stage from conception. The Catholic Church will play a crucial role in inspiring us to esteem human embryonic life from the moment of conception by making us recall her traditional moral teachings.

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