

# **The Dignity of the Human Embryo: Bioethical Implications of the New Bio and Reproductive Technologies**

FAUSTO B. GOMEZ, O.P.

It has been said that medicine advanced more in the 20<sup>th</sup> Century than in all the preceding centuries taken together. This unparalleled medical progress was mainly due to the incredible advancement of science and technology, in particular as biotechnology or technology applied to life.

In the 21st Century biotechnology continues progressing by leaps and bounds, in particular biotechnology applied to human life at its beginning. The unprecedented biotechnological breakthroughs have led some authors to speak of a coming utopia, of heaven on earth, or of "heaven in a chip" (B. Kosko, 2000). Wise men and women question us: *Will biotechnological interventions on human life, on the human embryo, be a panacea for our illnesses and health problems, or a journey into the night of relativism, meaninglessness and unhappiness?*

The problems in biotechnology are not only scientific but also ethical. After all, the human being, as Aristotle said, is "an ethical being." Facing the present and coming biotechnological development, the question that keeps challenging us is this: *What can be done technically, can it be done ethically, or should it be done?*

In our article, we shall develop the following topic: "The Dignity of the Human Embryo: Bioethical Implications of the New

Bio- and Reproductive Technologies.” We will address three main questions: first, *who is the human embryo?* Second, *does the human embryo deserve the respect due to the human person?* Third, *what are the bioethical implications of technological interventions on the human embryo?* We shall close with a final question: *What is our responsibility regarding human embryos?*

Within a global context – the context of biotechnology –, we will present our general notes from a philosophical-ethical and theological perspective.<sup>1</sup>

We begin our journey by facing the first main question: *Who is the human embryo?*

## 1. THE HUMAN EMBRYO

In the past – up to the middle of the 20<sup>th</sup> Century –, there was no major problem with the human embryo, except of course in relation to abortion. Today the human embryo is on center stage.<sup>2</sup>

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<sup>1</sup> Among the authors that have helped us reflect on the subject, we mention, in particular, the following: Lino Ciccone, *Bioética. Historia. Principios. Cuestiones* (Madrid: Ediciones Palabra S.A., 2006); Ramón Lucas Lucas, *Explícame la bioética* (Madrid: Ediciones Palabra, S.A., 2005); Juan de Dios Vial Correa and Elio Sgreccia, Eds., *The Identity and Status of the Human Embryo. Proceedings of the Third Assembly of the Pontifical Academy for Life*: Vatican City: February 14-16, 1997 (Vatican City: Libreria Editrice Vaticana, 1999); Elio Sgreccia and Jean Laffitte, Eds. *The Human Embryo before Implantation. Scientific Aspects and Bioethical Considerations. Proceedings of the Twelfth Assembly of the Pontifical Academy for Life* (Vatican City: Libreria Editrice Vaticana, 2007); Donald G. McCarthy, Ed., *Reproductive Technologies, Marriage and the Church* (Braintree, Mass.: The Pope John Center, 1988); Niceto Blázquez, *Bioética fundamental* (Madrid: BAC, 1996). Fausto B. Gomez, O.P., Ed., *Celebrating the Gospel of Life: Basic Issues in Bioethics* (Manila: University of Santo Tomas, 2006). Cf., in particular, the magisterial *Instruction on Respect for Human Life in its Origin and on the Dignity of Procreation* (Donum Vitae) by the Vatican Congregation for the Doctrine of the Faith (Vatican City 1987).

<sup>2</sup> The world of the human embryo is plagued by euphemisms, such as “termination of pregnancy,” “pre-embryo,” “pro-choice,” “reproductive health,” etc. The human embryo is someone, a he or a she – better, a *thou* – not an “it” or an object. When referring to the human embryo, therefore, we prefer to speak, of a *he* or a *she*, and not of *it*.

### ***The Human Embryo on Center Stage<sup>3</sup>***

By 1950, artificial insemination (AI) began to be regularly practiced. By 1969, the centrality of the human embryo became apparent with the eruption of *in vitro fertilization* (IVF), or extra corporeal conception in a petri dish in the laboratory. With IVF came the possibility of intervening on the human embryo. Not much later, abortion was de-penalized in some countries and thus eliminating or destroying the human embryo became legal and even, for some, ethically licit. In 1978, Louise Brown became the first child successfully conceived *in vitro* with *embryo transfer* (IVF-ET). In IVF-ET, the human embryos remaining after fertility treatment and not re-implanted were – and are – destined to embryonic stem cell research, or frozen in liquid nitrogen for future transfer to a womb – the mother's, or a surrogate mother –, or to be adopted or eliminated. By 1984, gamete intra fallopian transfer, or conception in the body of the mother, *in vivo* (GIFT) became technically possible. By 1997, Dolly the Sheep was cloned. Then came genomics, or the study of the human genes, genetic engineering, gene therapy, human cloning, pre-implantation genetic diagnosis (PGD), etc.

Other problems related to the human embryo continued to be there: the existence and increase of abortifacients that end the life of the human embryo or fetus in the womb, the morning-after-pill (RU-486), the intrauterine device (IUD), anti-pregnancy vaccines, contraceptives...

From a biological perspective, *who is the human embryo?*

### ***The Human Embryo: Initial Stages of Development***

The human being is called a human embryo through his/her initial stages of development – during the first eight weeks. His/her life starts at fertilization, or conception: the fusion of the nucleus of the sperm cell (with 23 chromosomes) and of the ovum cell (also with 23 chromosomes) to form the zygote (one cell with 46 chromosomes) with a unique genetic patrimony, a unique human genome, which is different from the mother's and the father's. The structure and organs of the fetus, the infant and the adult are already present in the zygote. Thus, as Fr. Kevin O'Rourke put it, "the zygote at the time of fertilization is not a potential human being; rather it is a human being with active potential."

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<sup>3</sup> See Lino Ciccone, *o.c.*, pp. 74-76.

In a very real sense, Bishop Jacques Berthelet says, "the embryo is one of us."<sup>4</sup> The zygote, therefore, is not something but someone!

The one-cell zygote divides into 2, 4, 8, 16...cells developing in a "progressive differentiation" until reaching maturation through a continuing process. In his/her biological dimension, the human embryo is not just a cluster of cells, but a new living organism of the human specie, a human being during his/her stages of development.

From a philosophical/theological perspective, *who is the human embryo?*

### ***The Human Embryo: Body-Soul***

The human embryo is the union of body and soul, or body-soul. The body is the corporeal component whiles the soul, the spiritual. *Does the human embryo – the zygote – have a soul at his/her initial stage?*

In classical philosophy, the body is the matter and the soul is the form, the substantial form: the soul informs and animates the body. The origin of the human body may be scientifically proven: it begins with fertilization. The origin of the soul cannot be positively documented scientifically, neither can it be denied!

We think we can affirm that God directly, immediately creates the spiritual soul of the human embryo at the moment of conception. Although this is not a doctrine of faith, there is today a growing consensus on *immediate animation*. This is fully consistent with the biological reality of the embryo. Fr. O'Rourke is convinced that "there is sufficient philosophical knowledge for a definition (by the Church) of ensoulment at the time of fertilization,"<sup>5</sup>

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<sup>4</sup> Most Rev. Jacques Berthelet, C.S.V., President of the Canadian Conference of Catholic Bishops, *Statement on the Passage by the House of Commons of Bill C-13, An Act Respecting Assisted Human Reproduction*: October 29, 2003, go to [kokesch@cccb.ca](mailto:kokesch@cccb.ca). Kevin O'Rourke, O.P., "The Human Embryo as a Person," in Fausto B. Gomez, O.P., Ed., *Celebrating the Gospel of Life: Basic Issues in Bioethics* (Manila: UST Publishing House, 2006), p. 94. Although embryo is understood properly of the human being in the mother's womb through the first eight weeks, we take it in a more general meaning to include also the fetus, or life after the first eight weeks.

<sup>5</sup> Kevin O'Rourke, O.P., "The Human Embryo as a Person," *l.c.*, p. 97. Cf. Janet E. Smith, "Pastoral Concerns," in Donald G. McCarthy, Ed., *Reproductive Technologies, Marriage and the Church*, *l.c.*, p. 76, where she writes: "I find it hard to think that the soul is infused at any time other than conception."

We continue our journey by facing the next question: *Is the human embryo an individual human being?*

### ***The Human Embryo: Individual Human Being***

The human embryo is an individual human being from conception: "Every embryo – and hence also the human embryo – constantly maintains his proper identity, individuality and uniqueness. He remains the same individual without interruption, throughout the process, which begins with the fusion of the gametes, even while becoming more complex in his totality."<sup>6</sup>

Philosophy in the Christian tradition speaks of the individual as a being indivisible (*"indivisum in se"*) and different from any other being (*"divisum a quolibet alio ente"*). The human embryo is an individual with a unique identity, different from all others, and unrepeatable: he or she – like every other human being – has a unique genetic make-up or code, his/her DNA (Deoxyribo Nucleic Acid). He or she is a subject with the same identity through his/her life.

Some biologists and bioethicists do not accept this classical description of the human being as an individual: the human embryo – they argue – may not be unique after all for there is the possibility of monozygotic twins, up to the 14<sup>th</sup> day from fertilization. *How can we say that we have one individual first, and then two individuals?*

In the first phases of the cell multiplication of the zygote, the embryonic cells are *totipotent*, which means that, if they separate they may give rise to a second embryo, genetically identical to the first embryo. This happens in the case of monozygotic twins (it may occur once in around 250 zygotes). As Ciccone puts it: "the fact that a cell (totipotent) separates does not affect the identity of the embryo, who began at fertilization and continues thereafter without modification."<sup>7</sup>

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<sup>6</sup> A. Serra, "El estado biológico del embrión humano. ¿Cuándo comienza el ser humano?" in Ramón Lucas Lucas, Ed., *Comentario interdisciplinario a la "Evangelium Vitae"* (Madrid: BAC, 1996), p. 590.

<sup>7</sup> Cf. Lino Ciccone, o.c., pp. 69 and 78. See Patrick Lee and Robert P. George, "The First Fourteen Days of Human Life," *The New Atlantis*, No. 13, 2006, pp. 61-67: <http://www.thenewatlantis.com/-03/13/2007>.

The fact of division into twins fails to contradict the originality of the original embryo. What happens in the genesis of twins is not that one individual is converted into two, but that from one individual another is generated. One could say that this second individual is produced by agamic (asexual, parthenogenetic) reproduction. A unitary biological situation, a human individual, has given rise by division to another human individual.<sup>8</sup>

Some authors who deny individuality until after impossibility of twinning speak of these living human beings as pre-embryos. *Pre-embryo*, however, is a term without biological or philosophical foundations: "In the embryo, there is no antecedent or consequent biological phase. What precedes the embryo are the gametes, what follows is the born child."<sup>9</sup> Embryologists Ronan O'Rahilly and Fabiola Muller say: the term pre-embryo is "scientifically inaccurate and erroneous."<sup>10</sup>

The human embryo then is an individual human being.

*Is he or she a person?*

### ***The Human Embryo: A Person***

The human embryo is not merely an individual (indivisible), but an individual person, that is, an individual of a rational nature – with intelligence, will and freedom. St. Thomas Aquinas says: "Every individual of rational nature is a person" (*Omne individuum rationalis naturae dicitur persona*). Following the famous dictum

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<sup>8</sup> Ramón Lucas Lucas, "The Anthropological Status of the Human Embryo," in *The Identity and Status of the Human Embryo*, Eds. Juan de Dios Vial Correa and Elio Sgreccia (Vatican City: Libreria Editrice Vaticana, 1999), p. 197. Lucas Lucas continues: "When bacteria divide and originate others, we do not conclude that the first was not an individual, and the same reasoning applies with respect to the phenomenon of twins. See also Kevin O'Rourke, O.P., "The Embryo as a Person," *I.c.*, p. 95.

<sup>9</sup> Ramón Lucas Lucas, *Explícame la bioética*, *I.c.*, p. 126.

<sup>10</sup> Ronan O'Rahilly and Fabiola Muller, *Human Embryology and Teratology* (New York: John Wiley and Sons, 1994), p. 55; quoted by Kevin O'Rourke, O.P., "The Embryo as a Person," *I.c.*, p. 95, footnote 34. Here Fr. O'Rourke writes: "Moreover, monozygotic twinning may occur well after implantation and the formation of the primitive streak."

of Tertullian ("A man who will be a man is already a man"), John Paul II asked: "How could a human individual not be a human person?"<sup>11</sup>

Some philosophers and bioethicists distinguish, with Tristram Engelhardt, between persons and non-persons. *Non-persons* for them, such as embryos and fetuses, infants, the profoundly mentally retarded and the hopelessly comatose are members of the human species without standing in the moral community: they cannot warrant blame or praise, or are not capable of self-consciousness or rationality.<sup>12</sup>

We are convinced that the human embryo – like the infant and the mentally disabled – is a person because he or she possesses a rational nature and not necessarily because he/she is able to carry out certain functions or activities, or able to perform some acts that indicate self-consciousness and self-possession. After all, there is a difference between being a rational being and manifesting rationality. All human beings have rationality (*ad esse*), but not all manifest it (*ad agere*). "The status of the person does not come after passing a test" (Eduardo Ortiz). Writes R. Spaemann: "An embryo is the child of his or her parents from the first moment of existence. As a member of the human community he or she is a member of the community of persons, and as a member of the

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<sup>11</sup> St. Thomas Aquinas, *Summa Theologiae*, I. 29, 3 ad 2; Tertullian, *Apologeticum*, IX, 8; John Paul II, *Evangelium Vitae*, EV, 60. The Pontifical Academy for life affirms: "There is no significant reason to deny that the embryo is already a person in this (pre-implantation) phase." (13th General Assembly, March 23, 2006, *Final Communiqué*; in *Bioethics Notes and News*, Vol. XVIII, No. 2, April-June, 2006, p. 90). Personhood is said of the human individuals by reason of their nature: they are members of the human specie (cf. Benedict Ashley O.P. and Kevin O'Rourke, O.P., *Ethics of Health Care*, 3rd Ed., Washington: Georgetown University Press, 2002, p. 23). The human embryo is a person: "embryonic biological life is already human life and personal life." "If the embryo were not a human individual from the beginning, he or she could never become a person" (Ramón Lucas Lucas, *Explicame la bioética, l.c.*, p. 133.)

<sup>12</sup> Tristram Engelhardt, "Some Persons are Human, Some Humans are Persons, and the World is What We Persons Make it," in *Philosophical Medical Ethics* (Boston: Reidel, 1977), pp. 183-194.; quoted by Kevin O'Rourke, O.P., "The Human Embryo as a Person," in *Celebrating the Gospel of Life: Basic Issues in Bioethics, l.c.*, p. 91. Truly, "depriving retarded or debilitated human beings of moral personhood is a grave injustice" (Kevin O'Rourke, O.P., *The Human Embryo as a Person, l.c.*, p.97).

community of persons he or she is person, quite independently of any properties.”<sup>13</sup>

Human embryos possess human nature and, therefore, are human beings, and human beings are persons: there are no *pre-embryos* and no *non-persons* and no *potential* (or *possible*) *persons*. Ethically speaking then human embryos – individual persons – deserve unconditional respect.

From a theological perspective, *how do we describe the human embryo?*

### ***The Human Embryo: Creature and Child of God***

In Christian perspective, the human embryo is a creature and a child of God. As a human person, the human embryo is the natural image of God by creation (Gen 1:26), and God’s graced image by the redemption of Jesus Christ in the Spirit (Eph 1:10; I Tim 2:4-6). Thus, the human embryo is not only a creature of God but also God’s son or daughter, and – in Christ – a brother/sister of all other children of God. Benedict XVI says: “As one created in the image of God, each individual human being has the dignity of a person.” A lovely text from Pope John Paul II:

Human life is sacred and inviolable at every moment of existence, including the initial phase, which precedes birth. All human beings, from the mother’s womb belong to God who searches them and knows them, who forms them and knits them together with his own hands, who gazes on them when they are tiny shapeless embryos and already sees in them the adults of tomorrow whose days are numbered and whose vocation is even now written in the “book of life” (cf. Ps 139: 1, 13-16). There, too, when they are still in their mothers’ womb – as many passages of the Bible bear witness

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<sup>13</sup> R. Spaemann, “When does the Human Being Begin to Be a Person,” in *The Human Embryo before Implantation. Scientific Aspects and Bioethical Considerations*, Eds., Elio Sgreccia and Jean Laffitte (Vatican City: Libreria Editrice Vaticana, 2007), p. 303. A dog, for instance, is a dog not because he barks; rather, he barks because he is a dog. Is the little dog just born not a dog because he does not know how to bark yet? (Cf. Ramón Lucas Lucas, *Explicame la bioética*, l.c., p. 26). Some authors say that human embryos ought to be treated as persons. We prefer to say that they are human beings and, therefore, human persons.

– they are the personal objects of God’s loving and fatherly providence.<sup>14</sup>

The human embryo then is an embodied spirit, an individual person with an immortal soul, a creature and child of God destined to eternal life.

Hopefully, we are now ready to face the second main question: *Does the human embryo deserve the respect due to the human person?*

## 2. RESPECT OF THE DIGNITY AND RIGHTS OF THE HUMAN EMBRYO

The words *person*, *dignity* and *respect* form a sequence. The word “person” is the name of dignity, “nomen dignitatis” (St. Thomas Aquinas). The word “respect” is connected with the word “dignity.” The word “dignity,” moreover, is closely linked to the word “rights.”<sup>15</sup>

### *Respect of Human Embryos*

Because he or she is a human being, the human embryo ought to be respected by all other human beings. *Respect* evokes reverence, esteem, and recognition. Respect of every human being, or of the human person, is the fundamental principle of any kind of ethics, including in particular bioethics, or the ethics of life.

Respect for others is manifested in the practice of the ethical principles of justice and love. *Justice* means to give to each person his or her rights: human beings are essentially equal and, therefore, “Equal cases deserve equal treatment.” To be just with the embryo means to respect his rights, his life, the integrity of his/her body, and his/her right to adequate health care.<sup>16</sup>

Full human respect of others – of human embryos – goes beyond justice and enters the orbit of love. *Love* is another term for respect. The authentic attitude towards a person is love – true

<sup>14</sup> John Paul II, *EV*, 61; Benedict XVI, *Message for the World Day of Peace*: January 1, 2007.

<sup>15</sup> Cf. Felisa Elizondo Aragón, “La dignidad de la persona, tema de catequesis,” *Teología y Catequesis*, No. 66 (1998), pp. 89-106.

<sup>16</sup> Cf. Pablo Arango Restrepo, MD, *Necesidad de los principios. ¿Pero cuales principios?* 2005.

love includes justice —, basically because the human person is called to love, and only love makes us realize that the other — the human embryo, too — is another “I,” a brother or a sister: we have to be then in solidarity with him or her.<sup>17</sup> It is unfortunate, even saddening, that some of those respected scientists and bioethicists who speak of the unborn children as “non-persons,” describe “the others,” as “moral strangers.”

Respect of every human person means recognition of his/her *dignity*.

### ***Respect of the Dignity of Human Embryos***

Human dignity refers to the excellence, nobility, goodness, and perfection of the human person. It may be described, with Paul Conner, O.P., as “an objective excellence that indicates superior meaning and value in comparison to all other created things.”<sup>18</sup>

All human individuals belonging to the human species, all human persons possess human dignity, an absolute value. All humans have equal constitutive or ontological or essential dignity: unborn and born children, men and women, adult and old persons. Pope Benedict XVI says: “God does not differentiate between the newly conceived infant still in his or her mother’s womb and the child or young person, or the adult and the elderly person. God does not distinguish between them because he sees an impression of his own image and likeness.”<sup>19</sup>

All living beings possessing human nature — including those who cannot exercise their intelligence, freedom — are equal in cons-

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<sup>17</sup> Cf. T. Melendo Granados, “La dignidad de la persona,” in Dr. Aquilino Polaino-Lorente, Ed., *Manual de bioética general* (Madrid: Rialp, S. A., 1997), pp. 64-67.

<sup>18</sup> Paul Conner, O.P., “Human Dignity, Universal Standard of Good and Evil,” *The National Catholic Bioethics Quarterly*, Vol. 4, No. 2 (Summer 2004), p. 269. According to Saint Thomas Aquinas, the word “dignity” is reserved exclusively to the most excellent beings, namely, God, angels and humans. “Persona significat id quod est perfectissimum in tota natura” (S. Th., I, 29, 3). Indeed, as E. Kant says the human person possesses dignity, which has no price but value, and ought to be treated always as end, never as means.

<sup>19</sup> Benedict XVI, *Address to the XII General Assembly of the Pontifical Academy for Life*: Vatican City: February 27, 2006.

titutive dignity. The equal dignity of the human embryo should be reflected in appropriate laws.<sup>20</sup>

In faith perspective, the excellence of human dignity refers to his/her origin (from God), end (God) and nature (image of God). For the Christian, the foundation of human dignity is God who, out of love, creates every human being, redeems him/her through Christ, and renews him or her in the Holy Spirit. The three sources of human dignity are: every human being is the image of God, a child of God, and destined to eternal life with him. Truly, the human person possesses "a singular dignity"; he/she is "the only creature that God has wanted for its own sake."<sup>21</sup>

All humans are equal and have to be treated as such, including in particular the defenseless. Moreover, the human embryos, the weak, the disable and the poor are to be treated with *preferential love*.

We continue our journey by asking: *Do human embryos have equal human rights?*

### ***Respect of the Rights of Human Embryos***

Every human being possesses unique dignity. Human *rights* derive from human dignity. In fact, human dignity may be described as the possession of human rights, which are innate to every person and, therefore, cannot be lost until after the death of the person. The human embryo has the same dignity as other human beings and, therefore, possesses the same rights, which are – as John XXIII says – "universal, inviolable and inalienable."

It is important to note that human rights and *duties* are co-relative: "To one man's right there corresponds a duty in all other persons, the duty, namely, of acknowledging and respecting the right in question."<sup>22</sup> The human embryo, however, does not have duties attached to rights: he or she is not yet able to exercise his intellect and will. However, all other human beings capable of exercising their intellect and will have the duty to respect the dignity and rights of the embryo.<sup>23</sup>

<sup>20</sup> Cf. John Paul II, *EV*, 60; Lino Ciccone, *o.c.*, pp. 86-87.

<sup>21</sup> Vatican II, *GS*, 24; John Paul II, *Veritatis Splendor*, *VS*, 13.

<sup>22</sup> John XXIII, *Pacem in Terris*, nos. 39 and 91.

<sup>23</sup> Cf. Ramón Lucas Lucas, *Explicame la bioética, l.c.*, pp. 85-86.

Speaking of the rights of the human embryo, we need to underline three: the right to life, the right to bodily integrity and the right to adequate health care.

The embryo's *right to life* is the most fundamental: without it the other rights do not matter. John Paul II writes:

The inviolability of the person finds its primary and fundamental expression in the inviolability of human life. Above all, the common outcry, which is justly made on behalf of human rights – for example the right to health, to home, to work, to family, to culture – is false and illusory if the right to life, the most basic and fundamental right and the condition for all other personal rights, is not defended with maximum determination.<sup>24</sup>

The basic principle of a truly consistent life-ethic is this: *human life – the right to life – must be defended from the moment of conception* (against abortion) to natural death (against euthanasia and the death penalty). It is interesting to note here the growing tendency to defend the right to life as an unconditional right. Hence, fighting nonviolently against the abortion of the embryo is better promoted when the death penalty is also fought against.

Human life, then, must be defended from its beginning, in conception, to its end, with death, and also in between beginning and end: against forced poverty, and violence, and injustice, and the exploitation of the environment.

In faith perspective, life is sacred, a gift of God: “to me, therefore, you shall be sacred; for I the Lord am sacred” (Lv 20:26). Like the life of other human beings, the life of the embryo ought not

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<sup>24</sup> John Paul II, *Christifideles Laici*, no. 38; cf. John XXIII, *Pacem in Terris*, no. 9; CCC, 2270. “From the moral viewpoint, over and above any consideration of the human embryo’s personality, the mere fact of being in the presence of a human being (and even the doubt of this would suffice) would demand full respect for the embryo’s integrity and dignity. Any conduct that might in some way constitute a threat or an offence to its fundamental rights, and first and foremost the right to life, must be considered seriously immoral. (Pontifical Academy for Life (PAV), 13th General Assembly, *The Human Embryo in the Pre-Implantation Phase, Final Communiqué* (Vatican City, March 23, 2006); in *Bioethics Notes and News*, Vol. XVIII, No. 2 (April-June, 2006), p. 9.

be prolonged uselessly, but allowed to end when end comes, not earlier (as in embryonic *euthanasia*).

Human embryos are not respected when they are eliminated as means in the search for cure for other human beings; or when they are eliminated because they do not have or will not have when born the so-called "quality of life" required by others; or they do not possess the characteristics demanded by their parents – genetic or legal –, or when they have a certain sickness and immoral eugenics is negatively applied to them through selective abortion. Health care professionals must be healers, and when healing is not possible, they must give palliative and comfort care, but never directly kill.<sup>25</sup>

Strong words to ponder: "What cannot be tolerated is that public institutions and rich countries pretend to supply eugenic irresponsibility imposing by force to the poor countries eugenics of death, legalizing abortion, euthanasia and the massive sterilization to control world population."<sup>26</sup>

The embryo's *right to bodily integrity* means respect for his/her body, which is not a thing, nor a commodity but an essential component of the human person, his/her presence in the world. Vatican II says: "Each human person, in his absolutely unique singularity, is constituted not only by his spirit, but by his body as well. Thus, in the body and through the body, one touches the person himself in his concrete reality. To respect the dignity of man consequently amounts to safeguarding this identity of the man '*corpore et anima unus*'.<sup>27</sup>

For us Christians, the body (with the soul) of the human embryo is temple of the Holy Spirit and destined to rise up – after death – at the end of time and join his/her soul. We are *stewards* of our body and ought to be respectful of the body of every other human being. Moreover, in the body we also respect the Body of Christ really present in the Holy Eucharist and also the Church, which is the Mystical Body of Christ, or the People of God, to whom we all belong.

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<sup>25</sup> Cf. John Paul II, *EV*, no. 89.

<sup>26</sup> Niceto Blázquez, *Bioética fundamental*, l.c., p. 383.

<sup>27</sup> John Paul II, *Address to the Members of the 35th General Assembly of the World Medical Association* (Vatican City: October 1993; quoted in *Donum Vitae*, Introduction, 3. See Vatican II, *GS*, 14.

The human embryo – like any other human person –, has a *right to adequate health care*, at least to a “decent minimum.” Respecting the right of the embryos to adequate *health care* entails to give them reasonable health care, and, in the first place, not harm them: *Primum non nocere!*

In ethical perspective this right to health care is universal, but of course. In reality, it is not: while billions are spent on experimentation and research – at times not even substantially significant –, millions of human beings do not have primary health care. The human embryos, too, deserve medical treatments that are *beneficial* and *not too burdensome*. If treatment is *doubtful*, it must be given to them – again, like to other human beings – until the doubtful treatment becomes useless or futile.

Furthermore, the human embryo has the *right to be born within marriage* as fruit of the loving conjugal act of his/her parents, and the right to know his parents.

To respect the human embryo entails to consider him or her not as a thing or something, but as someone; not as an object, but as a subject; not as it, but as he or as she – or, better, as *thou!*

Our journey continues! We are now ready to face the third main question: *What are the bioethical implications of technological interventions on human embryos?*

### 3. BIOETHICAL IMPLICATIONS OF INTERVENTIONS ON HUMAN EMBRYO

Bio- and reproductive technologies are the technologies applied to human life at its beginning, or to the life of the unborn child. These biomedical technologies include the following: genetic engineering, gene therapy, *in vitro* fertilization with embryo transfer ((IVF-ET), assisted *in vivo* fertilization, like gamete intra fallopian transfer (GIFT) and tubal ovum transfer (TOT), artificial insemination, prenatal diagnosis, cloning (therapeutic or reproductive), embryonic stem cell research, surrogate motherhood, contraception, sterilization, etc.

Hereafter, we shall only present some general comments on biotechnological interventions on the human embryo focusing on experimentation, the important distinctions between therapeutic and non-therapeutic experimentation, and informed and proxy consent.

*What is the ethics of technology and biotechnology?*

### ***Ethics of Technology and Biotechnologies***

*Technology* is applied science. Science and technology are directed to improving our lives in the world, and, therefore, ought to be at the service of the human person, of his/her life. Pope Pius XII says: "Scientific knowledge has its own value in the domain of medical science... a value which should by no means be minimized... This does not mean, however, that every method ... becomes lawful by the fact that it increases and deepen our knowledge." Pope John Paul II asked scientists to put their knowledge at the service of moral truth.

We read in the *Catechism of the Catholic Church*:

Basic scientific research, as well as applied research, is a significant expression of man's dominion over creation. Science and technology are precious resources when placed at the service of man and promote his integral development for the benefit of all. By themselves however they cannot disclose the meaning of existence and of human progress. Science and technology are ordered to man, from whom they take their origin and development; hence they find in the person and in his moral values both evidence of their purpose and awareness of their limits.<sup>28</sup>

*Scientific progress* to be truly good must be integrated into authentic human development. It must be ethical: the scientist or

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<sup>28</sup> CCC, no. 2293. John Paul II, *Address to the Pontifical Academy of Sciences* (Vatican City: October 28, 1994). Pius XII, *Address to First International Congress of Histopathology*: September 13, 1952; quoted by Albert S. Moraczewski, O.P., "Human Experimentation and Research," in Edward James Furton, Ed., *Ethical Principles in Catholic Health Care* (Boston, Mass.: The National Catholic Bioethics Center, 1999), p.121. Science and technology are ordered to the service of humanity and subordinated to moral principles and values that respect and promote human dignity and rights (cf. Pontifical Council for Justice and Peace, *Compendium of the Social Doctrine of the Church*, (Vatican City: Libreria Editrice Vaticana, 2004), no. 458; see also, *Ibid.*, nos 456-457, 459-460. See also Ignacio Carrasco de Paula, "Science, Ethics and the Value of Life," in Fourth World Meeting of Families, *The Christian Family: Good News for the Third Millennium. Acts of the International Theological-Pastoral Congress* (Manila: Archdiocese of Manila, 2003), pp. 188-195.

the physician is an ethical human being and ought to behave as such.<sup>29</sup>

“Science without a conscience can only lead to man’s ruin” (*Donum Vitae*). Philosophical – and theological – ethics gives a conscience to science and technology.

I remember the words of Albert Camus: “Men die and are not happy.” Many are unhappy precisely because they have to die and do not find meaning to death or to suffering – or to life itself. Science and technology do not give the meaning of life, suffering and death! True science and technology respect the dignity of the human person and his/her rights, and the integrity of creation.

With John Paul II, “we have to persuade ourselves of the priority of ethics over technology, of the primacy of the person over things, of the preeminence of the spirit over matter.”<sup>30</sup>

*What is the ethics of experimentation and research on human embryos?*

### ***Experimentation and Research on Human Embryos***

Biotechnological, biomedical techniques are applied to and experimented upon unborn children. *Experimentation* is directed to the diagnostic and therapeutic progress in the treatment of human embryos, while *research* is ordered to the increase of scientific knowledge. Experimentation on human embryos may be therapeutic or non-therapeutic.

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<sup>29</sup> The Church of course favors good scientific progress, for this is “a credit to human reason, for man is called to be the lord of creation and it honors the Creator, source of all life who entrusted the human race with stewardship over the world” (John Paul II, *Address to the Pontifical Academy of Sciences*: October 28, 1994).

<sup>30</sup> Congregation for the Doctrine of the Faith, *Donum Vitae, l.c.*, Introduction; John Paul II, *Address to UNESCO*: June 2, 1980. “Technology, while it is indicative of increased knowledge and the increased mastery of man of his environment, is not, in itself, the means of finding our answer to the riddle of life... We may say that technological progress only serves to make it brutally clear that there are areas inaccessible to man and that man is incapable of finding the final solution to the problem... Progress as such is obviously incapable of making man happy, and can be no more than a relative moral value” (Mark Oraison, *Morality for Moderns*, Trans. J. F. Bernard (Garden City, New York: Doubleday & Company, Inc., 1972), pp. 54-55, 58.)

*Therapeutic experimentation* is, or at least may be beneficial to the embryo, at his/her service: it may prevent or cure an illness. The Vatican Instruction *Donum Vitae* states: "In the case of experimentation that is clearly therapeutic, namely, when it is a matter of experimental forms of therapy used for the benefit of the embryo itself in a final attempt to save its life, and in the absence of other reliable forms of therapy, recourse to drugs or procedures not yet fully tested can be licit."<sup>31</sup>

*Non-therapeutic experimentation*, on the other hand, is an experimentation that is non-beneficial to the embryo involved: it is not ordered to his/her well-being or health or life, but to the service and possible benefit to other human persons, or to the increase of knowledge. *Donum Vitae* affirms: "Experimentation on embryos which is not directly therapeutic is illicit... The informed consent ordinarily requires for clinical experimentation on adults cannot be granted by the parents, who may not freely dispose of the physical integrity or life of the unborn child."<sup>32</sup>

Non-therapeutic interventions also include interventions on the so-called *improvement of the human biological condition*. In the context of the genome, the DNA (Dioxiribo-Nucleic Acid, principal carrier of genetic information) and the promise it holds regarding hereditary characteristics and their transmission to successive generations, with the possibility of opening new paths of research for therapeutic purposes, John Paul II says: "All interference in the genome should be done in a way that absolutely respects the specific nature of the human species, the transcendental vocation of every human being and his incomparable dignity."<sup>33</sup>

*Informed consent* is one of the most significant ethical principles in bioethics: the subject of research, the patient has a right to adequate information on the experimentation or research being done on him or her; he/she must understand the information, and must freely decide whether to participate or to withdraw once the research has started.

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<sup>31</sup> *Donum Vitae*, I, 4.

<sup>32</sup> *Donum Vitae*, I, 4.

<sup>33</sup> John Paul II, *Address to the Academy of Sciences*: October 28, 1994. Cf. *Donum Vitae*, Introduction, 3.

Regarding those subjects or patients who are unable to give informed consent – like unborn children –, the parents or legal guardian is to give *substitute or proxy consent*. It must be underlined, however, that the consent they give on behalf of the unborn child must be for the *best interest or well-being* of this child. It is usually accepted that only minimal harm to children may be ethical. That the human embryo gives – as some contend – *presumed consent* to eliminate him/her for the good of humanity sounds a bit bizarre and wholly paternalistic.<sup>34</sup>

After the significant distinction therapeutic/non-therapeutic experimentation, informed/substitute consent, we are ready to face this question: *What is the ethics of experimentation and research on human embryos?*

### ***Ethical Guidelines***

We may formulate thus the general ethical guideline or principle: *Every intervention aimed at serving life, curing illness or simply improving the quality of precarious life is ethically justifiable and even at times obligatory*. On the other hand, *an intervention is not ethically justifiable if it destroys life or bodily integrity or treats the embryo as an object or as a means, or is disproportionately risky to his/her life, bodily integrity or health*.<sup>35</sup>

The reasons for the positive or negative interventions on the human embryo are grounded on the respect – or lack of it – of the dignity of the human embryo as a person. Respect for the dignity of the embryo – his nature, origin and end – is a universal ethical norm to judge good and evil. Vatican II says: “By his nature and uniqueness, the human person is the norm for all scientific research... He is and ought to be the beginning, the subject and the object of every social intervention” and – John Paul II adds – “of research.”<sup>36</sup>

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<sup>34</sup> Cf. David F. Kelly, *Contemporary Catholic Health Care Ethics* (Washington, D.C.: Georgetown University Press, 2004), pp. 248-249.

<sup>35</sup> Cf. Niceto Blázquez, O.P., *Bioética Fundamental* (Madrid: BAC, 1996), pp. 374-384.

<sup>36</sup> GS, 25; John Paul II, *Address to the Academy of Sciences*: October 28, 1994. Cf. Fausto B. Gomez, O.P., “Relevant Principles in Ethics and Bioethics,” in

Different bio/reproductive technologies (e. gr., embryonic stem cell research, human cloning, pre-natal diagnosis, surrogate motherhood and others) are evaluated ethically with the help of *concrete ethical guidelines or principles* that take into consideration the nature and circumstances of the technological procedure or medical technique. Thus, the general guideline or principle is mediated by other significant principles or guidelines. These include the following: non-maleficence (do not harm), beneficence (do good), justice (respect dignity and rights), love (be compassionate to all, principally the "little ones"), confidentiality (respect right to privacy), and truthfulness (speak the truth owed to human beings and say the truth resulting from scientific studies and researches).

Take the case of *surrogate motherhood* or the gestation of a child by a woman for another woman. *Does it not imply IVF or artificial insemination? Is it not contrary to the unity of marriage and the dignity of the procreation of the human person? Does it not erode the family as the foundation of society and the relationships between husband and wife, parents and child? Does it not violate the right of the child to be born of two, and not of three or four or even five "parents"?*

Take, for example, the case of *embryonic stem cell research*. The procedure, done to possibly help others in the future, involves the harvesting of cells from embryos. These embryos usually come from IVF or therapeutic cloning: both techniques are considered ethically wrong. Questions: *Does this non-therapeutic, destructive technique respect the right to life of the human embryo? May parents/guardians give informed consent for a technique that eliminates the embryo? Does a good end justify terribly bad means?*

Another example: the technique used in the reproductive technologies – fertility techniques – TOT (tubal ovum transfer) and GIFT (gamete intra fallopian transfer). The technique involves repositioning the ova and inserting additional sperm in fallopian tubes. *Do these techniques replace the conjugal act of the spouses (as happens in AIH, artificial insemination husband) or only "assist" therapeutically the natural conjugal act? Does it respect the two meanings of the conjugal act, that is, the unitive and the*

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his book *Promoting Justice, Love, Life* (Manila: University of Santo Tomas, 1998), pp. 50-65.

*procreative? Was the sperm of the husband transferred to the uterus of the wife obtained licitly?*<sup>37</sup> *On the other hand, does the technique involve too cumbersome and unattractive procedures?*

Consider, moreover, the current debate on pre-implantation genetic diagnosis (PGD). The procedure involves the analysis to detect the possible presence of disabilities or "abnormalities" in the cell extracted from embryos conceived in a laboratory. Questions: *Is PGD therapeutic and done with licit substitute consent? Is it done to help or heal the embryo now or later? Or is it done with the purpose of destroying the unborn child if he/she is less than "perfect"? Does it involve proportionate or disproportionate risks to the embryo?*<sup>38</sup>

*Alive or dead*, the human embryo is a human person and, therefore, ought to be treated just like other human beings, that is, with utmost respect. *Dead embryos* may be given for experimentation and research – like cadavers – after the required consent of the parents or guardians, except when the embryos are the result of direct abortion. Stem cells may be extracted from the remains of human embryos that resulted from not provoked miscarriages, or spontaneous abortions.<sup>39</sup>

The defenseless human embryos, then, may be healed, destroyed, used, commercialized, manipulated – and even frozen! One interesting but controversial question on interventions on human embryos is this: *What to do with spare embryos that come from bio-reproductive technologies, for instance, from IVF? Let them die? Give them for adoption? Is freezing of embryos wrong? Is unfreezing of cryo-preserved human embryos wrong? Is adopting the unfrozen embryo ethical?*<sup>40</sup>

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<sup>37</sup> Donald T. DeMarco, "Catholic Moral Teaching and TOT/GIFT," in Donald G. McCarthy, Ed., *Reproductive Technologies, Marriage and the Church, l.c.*, pp. 122-139.

<sup>38</sup> Cf. Fr. John Flynn, "Deadly Drive for Medical Perfection: Genetic Selection and Abortion Taking a Higher Toll," *Zenit.org*, New York: December 11, 2006. "Stem Cells Could Be Taken in Cases of Miscarriages, Says Bioethicist Adriano Bompiani," *Zenit.Org*, Rome: March 13, 2003.

<sup>39</sup> Cf. *Donum Vitae*, I. 4; Lino Ciccone, *o.c.*, p. 219; Ramón Lucas Lucas, *Explicame la bioética*, p. 156. See also *Donum Vitae*, I. 6.

<sup>40</sup> Cf. R. Lucas Lucas, *Explicame la bioética, l.c.*, pp. 159-166. The teaching of the Church argues strongly that IVF is ethically wrong: no respect for the human

Thus we come to the end of the journey and face the final question: *Can we do something to defend the defenseless embryo? What is our responsibility?*

#### 4. A CALL TO ACTION!

Looking at the human embryo from a philosophical-ethical and theological perspective, we see him or her as a unique and unrepeatable human being, who possesses the same dignity of any and every other human being: whether he or she is man or woman, young or old, black or white, rich or poor, and born or unborn child. We see the human embryo as a unit, a component of body and soul, an individual person, a son or daughter of God, a brother/sister in Christ.

Some authors and secular bioethicists believe that the Catholic Church's teaching on bio/reproductive technologies is quite *negative*, if not exclusively so! It appears to them – and to others – that the Church considers immoral and unchristian the interventions on the human embryo, from abortion to embryonic stem cell research, to *in vitro* fertilization, to artificial insemination, to surrogate mothering, to cloning...

The teaching of the Church might appear negative, but it is not. In fact, it is radically positive: it defends human dignity and rights of the unborn children, and obliges all human beings to respect that dignity and those rights, beginning with the right to life. In particular, the Church is in favor of all interventions on the human embryo that are positive, that is, those that respect the dignity and rights of the human embryo to life, to bodily integrity, to adequate health care, and to be born within marriage from a unitive and procreative act of the spouses.

The Church is *Teacher* and, therefore, has the duty to defend human life from the moment of conception to natural death. She defends the life of all, in the first place the life of the weak,

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embryo; no respect for sexuality or for the marital conjugal act, which must be unitive (and procreative), and inseparably corporeal/spiritual; no respect for the family. *Homologous* IVF, or In Vitro Fertilization Husband is wrong; *heterologous* IVF, or IVF with the sperm or the ovum – or both – from a donor is worse: there is no respect for marriage or family and, above all, the child's right to proper filial relationships (a child may have up to five parents: 3 mothers and 2 fathers) is not respected.

the sick, the poor, and the elderly. She preaches and teaches and tries to practice love, particularly preferential love for the defenseless, the poor and marginalized. It is a serious task of the Church to educate its members on life and its modern challenges. In particular, she has a grave responsibility, with every family, to form a true and certain conscience in her members.<sup>41</sup>

The Church is also *Mother*: understanding, humble, patient and compassionate. She is on the side of those who suffer, such as couples who cannot have children, and also those who have committed grave sins against others. However, her compassion is a true compassion, which is a manifestation of love of neighbor and never an abdication of the truth. God is Love and God is Truth. As human beings, as Christians and as members of a family – community of life and love –, we are asked to proclaim, celebrate and serve life.<sup>42</sup> *Am I my brother's keeper?* (According to R. Spaemann, this is “the answer of a murderer”). *Are you your brother's keeper?* (Yes, John Paul II answers, we all are our brothers' and sisters keepers).

Novelist André Brink writes: “There are two kinds of madness one should guard against: one is the belief that we can do everything; the other is the belief that we can do nothing.” As human beings, as Christians, as God's stewards, we try to do what we can: we care for our life and are advocates for life; we do not curse the darkness, but light a candle! We know that God is in charge not Satan, and that God cares for us – for all! We try to witness in our life the life of Jesus Christ, our Life.

And we pray! *Prayer* is an irreplaceable help to enlighten us, to strengthen us, and never to give up in our non-violent and compassionate struggle against the culture of death and for the culture of life; in our commitment to defend, above all, the life of all those human beings – like the human embryos – who cannot defend themselves. □

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<sup>41</sup> John Paul II writes: “The Church addresses people with full respect for their freedom. Her mission does not restrict freedom but rather promotes it. The Church proposes; she imposes nothing. She respects individuals and cultures, and she honors the sanctuary of conscience” (*Redemptoris Missio*, 39).

<sup>42</sup> John Paul II, *EV*, 92.