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Reflection on Cloning: A Document of the Pontificia Academia pro Vita

by

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On February 27, 1997, the journal *Nature* published the work of a research team at Edinburgh's Roslin Institute. The article had an unusual effect on public opinion and ethics committees, nationally and internationally.

"Nothing new," we might object. Since the 1930s, experiments have attempted to produce identical individuals by twin-splitting, and then by cloning. Indeed, the technique of twin-splitting is spreading in the pursuit of multiple production of select exemplars and is used for human beings, too. On October 13, 1993, Jerry Hill and Robert Stillman, two American researchers produced human embryos by twin-splitting.¹ This experiment, never conducted before, has made possible the use of the artificial pellucid membrane, but negative reaction to the ethical debate has caused a halt.

Cloning has also been used in the zootechnical field, with mixed results. Nuclei taken from mouse embryos older than the eight-cell stage, from totipotent embryonic stem cells or from inner cell-mass cells, fail to produce viable embryos. However, other species, such as the cow and the sheep, have met with greater success. Adult sheep clones were the first to be produced by using donor nuclei from early morula (8-16 cells) stage embryos.

The DNA in the somatic cells of the higher forms of animal life,

having already undergone the imprinting of differentiation, was thought to never again recover the original totipotentiality and the ability to direct the development of a new individual.

There is a new aspect in the Wilmut and coll.'s experiment: they used the nucleus of a differentiated cell which had been established from older, more mature embryos and, remarkably, one viable lamb has been derived from a cell line that was established from the udder of a six-year-old ewe.

After 277 oocyte-donor nucleus fusions, only twenty-nine of them started to develop as embryos and only one reached birth: the lamb called "Dolly".

As of this writing, the precise conditions under which this process can occur remain to be elucidated; the factors determining the success of the technique still need to be established.

According to Stewart, the key seemed to be to discover a method to make the donor nuclei more compatible with the cytoplasm of the recipient oocyte.² But, Wilmut e coll. cannot exclude the possibility that there is a small proportion of relatively undifferentiated stem cells which are able to support the regeneration of the mammary gland during pregnancy.

Among national and international authorities' reactions, we think it useful to point out the document of the Pontificia Academia pro Vita.³ This document is different from others in that it is based on a "no consequentialist" approach to the matter.

The Document

At the beginning of the document, the Pontificia Academia pro Vita explains the reasons for examining what has been noted as a disturbing event:

The event (the cloning) has rightly caused concern and alarm. But after an initial phase of unanimous opposition, some have wished to call attention to the need for guaranteeing freedom of research, for not demonizing progress. The prediction has been made that the Catholic Church herself will one day accept cloning. (PV 1)

It is true: after initial reactions of conviction, an examination has begun of the medical and scientific justification for cloning. One example is the possibility of women suffering from serious mitochondrial disease having children free of the disease.⁴ How? The nucleus of her embryo has to be implanted in a donor's oocyte. Other examples are the preparation of immunocompatible differentiated cell lines from an embryo, so that

everyone has reserves of therapeutic cells, which would increase the chances of being cured of various diseases, as well as male infertility. In this case, the problem is not simply the desire to have children but also to ensure that these children carry the father's genes.

The medical and scientific justifications for twin-splitting are two: 1) the reduction in the number of fertilized oocytes in in vitro fertilization, cloning can be used to increase the number of embryos that can be transferred in the woman's womb; 2) the production of two embryos with the same genoma for pre-implantary diagnosis.

There is anthropological significance in the prospect of applying these practices to man. The Pontificia Academia pro Vitae notes:

(a) "In human cloning the necessity for any society begins to collapse: that of treating man always and everywhere as an end, as a value and never as a mere means or simple object" (PV 3). Cloning represents an attack on the independence of the individuality of the human being as a person and degrades him. A child has the right to be procreated, not produced, and the creation of human clones for the purpose of preparing therapeutic material or the use of cloning as a means of combating sterility is not within the dignity of created life. This is true even if embryo-cloning is accepted without any cloned babies born: "A prohibition of cloning which would be limited to preventing the birth of a cloned child, but which would still permit the cloning of an embryo-fetus, would involve experimentation on embryos and fetuses and would require their suppression before birth, a cruel, exploitative way of treating human beings. In any case, such experimentation is immoral because it involves the arbitrary use of the human body as a mere research tool...because even in the case of a clone, we are in the presence of a 'man', although in the embryonic stage" (PV 3).

(b) The individuals obtained by cloning have the same donor's genome, so they are not biologically different from other human beings. And even if this duplication of body structure does not necessarily imply a perfectly identical person, due to psychological development, culture and environment always leading to different personality, we cannot deny that the presence of a unique genome is fundamental to the individual's dignity and rights. This individuality is present in spite of cloning: "The spiritual soul which is the essential constituent of every subject belonging to the human species and is created directly by God, cannot be generated by the parents, produced by artificial fertilization or cloned" (PV 2).

(c) If the cloned person knows himself to be the copy of another human being (even if a biological copy), this fact paves "the way to the clone's radical suffering, for his psychic identity is jeopardized by the real or even by the merely virtual presence of his 'other' " (PV 2). The cloning

is prejudicial to the "right not to know", that is, the right to plan one's own life without conditioning, and extinguishes the individuality of the human being.

Nor can we suppose that a conspiracy of silence will prevail, a conspiracy which, as Jonas has already noted, would be impossible and equally immoral; in fact the cloned person "was produced because he resembles someone who was worthwhile cloning" (PV 3) and he will be the object of expectations and attention which will constitute a true and proper attack on his personal subjectivity.

These reasons against cloning can be found in the documents of the European Council, the European Parliament and the World Health Organization. The Pontificia Academia pro Vita adds other reasons concerning not only the consequences but also the object of cloning.

Cloning represents "a radical manipulation of the constitutive relationality and complementarity which is at the origin of human procreation in both its biological and strictly personal aspects" (PV 3). A clone-embryo has to be transferred in a denucleated oocyte and a female womb is required to bring to term its development. In this way, the personal, unitive, two-in-one flesh dimension of marital love is rejected and replaced by a technological act, and the basic relationships of the human person – filiation, consanguinity, parenthood – are perverted. "A woman can be the twin sister of her mother, lack a biological father and be the daughter of her grandfather" (PV 3).

The total technological power over procreation and the confusion of parentage are already present in artificial procreation, but cloning causes the radical rupture of these bonds and it is the worse form of genetic manipulation. For this reason cloning "...is an extreme form of artificial procreation in comparison to other legally approved forms, such as in vitro fertilization, etc. As we have said, the reason for its rejection is that it denies the dignity of human procreation" (PV 4).

Finally, cloning is an offense to the creaturely human status and to natural order. The wish of the future "parents" and the technical intervention substitute for the Creator's will and increase the anti-God and anti-life mentality. "The proclamation of the 'death of God' in the vain hope of a superman, produces an unmistakable result: the 'death of man'. It cannot be forgotten that the denial of man's creaturely status, far from exalting human freedom, in fact, creates new forms of slavery, discrimination and profound suffering. Cloning risks being the tragic parody of God's omnipotence. Man, to whom God has entrusted the created world, giving him freedom and intelligence, finds no limits to his action, dictated solely by practical impossibility..." (PV 3).

The reduction of man to the biological component and the wish to

produce selected human beings will increase the conviction that “the value of man and woman does not depend on their personal identity but only on those biological qualities that can be appraised and therefore selected” (PV 3).

Human Rights and Freedom of Research

At the end of the document, the Pontificia Academia pro Vita remembers that the condemnation of cloning is urgent and not appealable:

Halting the human cloning project is a moral duty which must also be translated into cultural, social and legislative terms. The progress of scientific research is not the same as the rise of scientific despotism, which today seems to be replacing the old ideologies. In a democratic pluralistic system, the first guarantee of each individual's freedom is established by unconditionally respecting human dignity at every phase of life, regardless of the intellectual or physical abilities one possesses or is deprived” (PV 3).

This condemnation of cloning must prescind from the justifications for the desire to clone, even if the justification is the prevention of mitochondrial disease. In this case, we have artificial reproduction with eugenic purposes, too.

In reply to those who lament that prohibition of cloning is a violation of researchers' autonomy, the Pontificia Academia pro Vita says: “The scientist cannot regard the moral rejection of human cloning as a humiliation; on the contrary, this prohibition eliminates the demiurgic degeneration of research by restoring its dignity. The dignity of scientific research consists in the fact that it is one of the richest resources for humanity's welfare” (PV 4).

To enable biomedical science to maintain its relationship with the true welfare of man and society and to clarify the limits of scientific research, it is not sufficient – even if necessary – to make laws. Instead it is right and proper – as John Paul II writes in the Encyclical letter *Evangelium Vitae* – “A contemplative outlook on man himself and the world, with a vision of reality as God's creation and in a context of solidarity between science, the good of the person and of society.”

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