



Women against new reproductive technologies, who's on service of whom?

Ángela Aparisi Miralles

Are there human beings without dignity? Does human dignity respond to a scientific or economic interest? A theme of great complexity in which it's important to deepen bravely in the interests underlying the new reproductive technologies and their consequences on the status of human life.

In 1978, the first human being produced in a test tube was achieved. Since then, new reproductive technologies have achieved extensive diffusion. However, it is easy to see that the introduction in our Western societies of artificial reproduction has meant a radical change in the way we understand ourselves. The human being is no longer conceived, but produced, as happens with objects. The modern ideal of man's dominion over nature is carried to the extreme. The author points clearly that today we have clear actuality, director of the Human Rights Institute of the University of Navarra on the words of Saint Simon, who, brandishing the slogan of modernity, asserted that man can and should "use nature as they please".

The spread of these techniques has contributed to the extension of a "new pragmatism" that, before any technical and medical possibility, puts the patient's decision and the results of the action to any ethical principle. This factor, among others, has determined that despite the radical change with the new reproductive technologies in the conception of human beings and their origin, have been introduced in Western societies with little discussion or at least not with the accuracy this would require. Other themes perhaps less significant, have received

much more attention. Few have deepened into it, for example, in the logic that inspires them, in the view of women and motherhood on which they are based and, ultimately, in their budgets and consequences on the status of human life.

Specifically, in regard to the treatment of women, these techniques have been supported by a justificatory speech, leaning heavily on a particular vision of this. That speech is based on certain assumptions, or sayings presented as "indisputable truths". However, when analyzed in some detail, it's discovered that far from being neutral or "factual data", we are in many cases, before ideological constructs, inaccuracies or even clear reductionism. In this sense, science questions and analyzes the parameters and ideological, cultural and social aspects of that part is not falling into a new Dark Ages, but rejects their idolatry and seek necessary exercise of reason.

So I try to analyze some of these assumptions, especially regarding the vision of the main target of these techniques, women. Also, I will discuss some consequences of these techniques, especially for the female body.

Infertility as the inability of fulfillment

The first thing which will stop me is the fact that new artificial human reproduction techniques spread in the shadow of sterility message that implies for women, inability to personal fulfillment. Sterility, at other times was a "social embarrassment" or a lack of femininity, is sometimes valued as a failure of individual fulfillment. In many cases, it also presents an impediment for carrying out a project of family life. The failure to achieve the child is not understood as an acceptance of the nature of the woman-and the internal logic of the conception-itself but as a failure of his body and being a woman.

From this perspective, for some, the desire to have children has unquestionably a legitimate need for personal fulfillment. As Cambrón points out, "the impossibility (for infertility or infertility) to accomplish that desire will be experienced as a biological supreme disgrace." This often results on a sad obsession.

At the same time, it should be noted that our society is full of contradictions about motherhood. Some infertile women undergo, with great emotional and physical cost to IVF without anyone assuring them success. Other fertile women miscarry for convenience. While achieving the conception, in the first case, as an essential requirement of personal fulfillment, in the second case the child usually appears as an overwhelming obstacle to the realization of the vital project.

In both cases we find the need of transforming desires or personal preferences-and therefore subjective demands- in real and legitimate legal requirements. It's about clear examples of the current trend to expand unduly the content of certain rights, leading to the proliferation of requirements which cannot be classified as legal.

In this sense, in relation to maternity cases of postmenopausal women, Mariapia Garavaglia noted that desires are no rights, and that children are not consumer goods. Don't forget that the child is an individual with its own entity and an unconditioned ontological value. Their otherness must always be safe.

But this reality is denied on numerous occasions: many women who undergo artificial reproduction techniques don't accept the son of an unconditional way, but as a requirement for individual and marital conduct itself. This is proved when it's noted that for some, the pursuit of motherhood at all costs doesn't notice the sacrifice of human lives, the embryos that are frozen or discarded in the way of the in vitro reproduction. The desire of the child, presented as a right, comes to justify killing other children, who are holders of a genuine right.

In this sense, many have denounced the fact that these techniques greatly lessens the value of a son because this becomes assimilated to an object to produce, whose entity as subject is underrated. A woman undergoing these techniques manifested in a panel discussion the desire of the child: "If you want to live with a child, then you can deal with the adoption... but if you want to produce a child, which is my case, then adoption is excluded."

Besides this, it seems important to insist that the child is always another, someone who's not produced to satisfy a need, but a life that is accepted in all its richness. In this sense, we can highlight the decision of the Constitutional Chamber of the Supreme Court of Justice of Costa Rica, on March 15, 2000, which declared the

unconstitutionality of Decree that approved the Regulation of Assisted Reproduction Techniques. In recital IX says: "Technique In Vitro Fertilization and Embryo Transfer (...) injures human life. The human embryo is a person from the moment of conception, so it cannot be treated as an object. For research purposes, be subjected to selection processes, preserved frozen, and the essential for the Chamber is constitutionally legitimate not to be exposed to an uneven risk of death. "

In another sense, the Spanish Law 35/1988 of 22 November on Assisted Fertilization states in Article 2.4 your: "The woman receiving these techniques may request to be suspended at any time of its conclusion, and must be addressed his petition". It makes entirely dependable the life of the son, on the desire of the mother.

Reducing motherhood to biological motherhood.

Secondly, the reason of the child as a requirement for personal fulfillment is based on a reductionist model of motherhood: only mother who conceives. As Tubert points out, it is still possible to observe the persistence of a cultural heritage that works, in fact, as a fact on which IVF is based: the idea that biological motherhood is the essential realization of femininity, a woman is not really if you do not have biological children.

Against this, it's essential to highlight a reality: motherhood is more than a biological process. Furthermore, you can be a mother without having been biologically. In this sense, the infertile woman who wants to be a mother should not have to choose between being biologically or fall into despair. The solution is to know that you can develop your motherly sense even if not biologically speaking mother.

In this affect, some recent feminist theories have made a profound criticism of the reduction of motherhood to a purely biological dimension. They have also highlighted the inconsistencies of technological mentality of the child at all costs, even risking their own lives. They noted that the technology of in vitro reproduction, delving into the modern biomedical model ignores the necessary comprehensive protection of physical and mental health of the mother.

Levi-Strauss said, it should be noted that motherhood and fatherhood are constructions, to some extent, not only cultural and biological. Indeed, the human being is a biological reality, but at the same time exceeds pure biology. Among other things, it is characterized by its ability to create their social environment. Between the answers a person gives to internal and external situations, some correspond to their nature, and other to the cultural context and the exercise of their freedom. Motherhood and fatherhood aren't exclusively biological realities. Involve, above all, a spirit of unconditional delivery, be responsible for the life of another. The essence of motherhood and fatherhood is then forwarded not only to the organic process of reproduction but to the transmission that defines and inserts the child in a social group, as a subject cared by himself and responsible for their own life.

New techniques of artificial reproduction, are thought as the solution to the suffering caused by infertility.

Thirdly, and in relation to the above, it seems easy to see that in the social discourse on assisted reproduction techniques is used the sensitive argument is legitimate to cure the suffering that is generated by infertility. The existence of this suffering is a reality. We can't ignore the pain that may involve, for a man or woman, being infertile. However, several issues should be noted:

a) First, the same techniques, announcing as possible obtaining a son, generate demand, which otherwise wouldn't exist. In this sense, Testard noted that, with the spread of artificial reproduction, "couples who almost had forgotten their sterility recover old procreative desires and enroll in saturated waiting lists quickly." In many cases, they are the same expectations generated which enhance and strengthen demand, thereby increasing the suffering, especially if the desired result is not achieved.

b) Secondly, and despite the kindness of that objective, eliminate suffering, these techniques, in many cases, they turn against the same subjects who apparently pursued help and, more specifically, against the main target of them, women. As is well known, new reproductive technologies involve serious risks to the physical integrity. In fact, the internal logic of artificial reproduction techniques ignores the physical and mental health of women. These are issues that are relegated for the sake of logic of profit and success at all costs.

But it's dramatic that based on these assumptions, new reproductive techniques cannot ensure the solution to the great expectation created. According to reports provided by the most prestigious centers in the US and Australia, the average success rate of these techniques is around 10 %. Testard argues that it is necessary to analyze in detail the preparation of these statistics, because it's often not included in them the many patients undergoing hormonal stimulation and who have failed to conceive.

Also some situations emerge as successes not giving birth to a live child, but the mere conception, regardless of abortions. If so, the average rate would be at an even lower level. In this sense, the cruel irony is that while reproductive technologies are "sold" as a miraculous solution for all those women who cannot conceive naturally, only a small percentage may get a son. Consequently, the vast majority of women who come to the new reproductive techniques go as they came: without a biological child. We can ask the following questions: in what situation women in the reproductive techniques have failed? Is the failure of the technique a life failure?

### Infertility as a disease

Fourth, the appeal to the need to eliminate suffering usually is linked to the consideration that infertility is always a pathology (whatever its cause). As Cambrón points, researchers and physicians have built a new discourse on sterility considering it as pathology, "it seeks to legitimize the use of the same techniques and contribute indirectly to promote demand for seed."

Under this, it has spread the message that we are facing a medical treatment or therapy. This view is largely following the demands of funding of these techniques for public health. In this sense, for example, the Spanish Law 35/1988 of 22 November on Assisted Fertilization, in its explanatory memorandum it refers to the techniques referred to as a "treatment for infertility". Furthermore, Article 1.2. Of the same law states that "assisted reproduction techniques have as a fundamental purpose medical action to human infertility".

Researching a little more, you can verify that the new techniques are based on the assumption that the non-achievement of the child is basically a disease of women. And she who, to the social collective, carries the weight and the menace of infertility is. For centuries, cultural traditions haven't allowed to not even suspect that the man could be sterile. Virility-fertility relationship has been and still is so strong that it has come to assimilate infertility with impotence. Proof of the permanence of this is that research on male infertility are poorly developed. Moreover, in many cases, to male problems like "oligospermia" and "astenospermia"- it's medicalized directly the body of the woman, with the intention to get through the new reproductive techniques, a successful outcome. This occurs when these techniques are used because sperm are incapable by themselves, to fertilize an egg.

But it can, strictly speaking, be regarded infertility as a disease? The issue is important because consideration as such or not depends largely, being classified as therapy. And that will have consequences in the field of moral and legal legitimacy. Well, even though, as noted, infertility is always presented as a disease, reality shows that it isn't.

Infertility attributed to women may be due to deficiency or inability to ovulate, impregnate or gestate. This failure may be congenital, or idiopathic occurrence. The latter refers to no known cause infertility. It's important to note that this group constitutes a third of all infertility cases. As noted Cambron, from a statistical point of view and medical, sterility although presented as something indeterminate, on that indeterminacy and imprecision, is the basis of the justification of reproductive techniques. Moreover, it might be added that the very definition of infertility is dependent upon the sophistication of the technology available in the market. In this sense, Koch says: "When a new reproductive technology is introduced in the market, changes the definition of infertility".

It's obvious that a human sexual relationship is not mechanically follow by a conception. On the other hand, it seems clear that in the human species, attend a multiplicity of factors, including psychological, to determine that the design is never something already stablished. Therefore, infertility can't be considered generally as a disease. Only it shows the extent to conceive as a project. It is then impossible, no matter how complex and diverse reasons, to satisfy a desire. In this sense, it could stay that, except in very specific cases, infertility can be not a health issue but a characteristic of the person.

Furthermore, even if that sterility has a known pathological origin, artificial fertilization techniques are never therapy. The technique used isn't intended, in any case, cure. It's rather a replacement of the interpersonal relationship of procreation by the technical production ratio human beings. The woman undergoing the process of IVF will be as sterile as she was. Moreover, in many cases, promotion in a situation of sterility, artificial reproduction techniques can produce, indirectly, a lack of interest and resources directed to basic research of the real causes of infertility.

Actually, it's easy to see that the efforts in the study of the causes that trigger infertility today are very scarce. On the other hand, the presentation of artificial reproduction therapy to an alleged disease can lead to discard your iatrogenic causes (for example, use of intrauterine devices, contraceptive, wrong food, factors environmental, etc.) It also ignores that prevention is, in many cases, the best therapy.

But it is striking that, in this situation of "alleged" disease, to respond with intense medicalization of women. Even to the point of causing very serious risks. In fact, it has been reported on numerous occasions the speed with which the various techniques move from the experimental phase to the clinic. A mere formal consent of the woman -not seldom with insufficient information- allowed to use this woman as a testbed for new and sophisticated techniques, whose side effects are yet to be determined.

Everything is sacrificed on the altar of success, including women's health itself. For her, the new reproductive technologies always involve an intense and progressive aggression. For example, in the application of the technique of in vitro fertilization with embryo transfer (IVF-ET) can be distinguished, roughly four phases: the hormonal stimulation, egg retrieval, fertilization of eggs and transfer to a woman's body and, finally, to nesting in pregnancy.

a) Hormonal stimulation. It consists, firstly, in applying high doses of fertility hormone containing clomiphene, in order to induce ovulation. Today the similarity between this drug and Diethylstilbestrol of prohibited use is studied. Moreover, the substances used for follicular maturation and antiestrogens are fundamentally gonadotropins. Usually applied in combination with clomiphene. Subsequently, ovulation is induced with human chorionic gonadotropin.



Although these hormonal treatments may be indicated in women who have little or no ovarian activity, it has been found that many doctors apply to women who ovulate spontaneously, with the aim of trying to improve yields. Therefore, they use some have described as “therapeutic obstinacy”. Especially if one considers that it’s applications that are in many ways still experimental, because its side effects are still being studied. Among them is ovarian hyper stimulation, which often leads to polycystic ovaries.

The French biologist Testard, one of the most prestigious figures in this field- currently has put into question the use of clomiphene, after finding evidence of the dangerousness of this substance.

b) The second phase of the process involves extracting eggs. Various techniques can be used. The first is the follicle puncture with a needle, practicing a laparoscopy under general anesthesia. The needle is guided to the follicle and the other abdominal incision by forceps with which the egg is attached is inserted. The other method involves inserting the needle through the abdominal wall, guided by an ultrasound machine without general anesthesia.

Both procedures are not risk free. In this sense, says Klein eighteen deaths of women undergoing IVF program appear to be related to puncture the follicle, by inserting the needle through the abdominal wall.

c) The third stage of the procedure is the fertilization of the eggs and transfer them to the body of the woman. After obtaining embryos by mixing the eggs with the sperm, they are transferred to the woman's uterus. They move through the vagina through a catheter. Once carried out the process, the woman should undergo continuous checks to ensure that embryos continue to develop.

d) Once transferred the embryo to the uterus, if nesting is achieved, it’s passed to the stage of pregnancy. Among the complications that can occur at this time is abortion. This possibility is two to three times more frequent than in normal pregnancies. There’s also greater likelihood of ectopic pregnancy and multiple pregnancies, because they often transfer more than one embryo to the uterus of

the mother to increase the percentage of success. The problem arises when nest all or most of the transferred embryos, as this may pose a serious risk to the mother. The answer to this situation is often called "embryonic reduction", the euphemism for abortion of embryos is considered "surplus". Finally, it should be noted that in the event that the pregnancy has progressed successfully, delivery usually occurs by caesarean section.

In short, we can say that these techniques, the female body achieves a very high degree of handling and no stranger to serious risks. In this regard, the Report of the National Commission on Assisted Human Reproduction, published in 1998, recognized the existence of real physical and psychological risks to women.

### The public nature of the woman's body

Subjected to these techniques, the female body becomes a public place, a true "living" laboratory where anything goes as long to achieve the intended purpose, which is identified with success. Sometimes your body will not only be the instrument to ensure the offspring, but will also be used for other purposes, such as improving reproductive techniques themselves or obtaining biological material for research.

Thus, a process as is the conception of a human being, which is naturally characterized by being inserted in a strictly intimate and private- field acquires a radically public. It is the woman who must psychically take this profound transformation of reality. Sometimes you won't be able, which will cause deep suffering. There's no shortage of testimonies from women in this regard.

Duelli Klein, in a field study on the situation of women who had stopped programs artificial insemination without having achieved a son, confirms the existence of recurrent feelings of overreaching by doctors, lack of real information and even "trauma of being treated as living laboratories". The conviction that their bodies have been converted, somehow, into a tool subordinate to the laws of success and thus production notes.

On the other hand, it's important to insist that even when the cause of infertility is a male origin, such as the lack of mobility of sperm, the risk of treatment is borne by women. It's your body that takes all the weight of the process. Plaster produces a rupture of the balance between man and woman in the gestation process. The man always loses his place, both when the sperm is own as when it's from another man. In the latter case, the position of man is reduced to a mere spectator of a process that does not have the slightest role. The architect or "creator" of the child, if it reaches birth, is the doctor who uses the body as an instrument of women.

But the methods of artificial reproduction not only attack the physical dimension of women. Your psyche can also be affected because these techniques deepen the split between biological and psychological dimension of the person. While natural reproduction in two dimensions are called to integrate harmoniously in artificial reproduction this integration is radically impossible. A total breakdown occurs with naturally conception. The concept is transformed into a production process, the biological is broken off of the psychic. Women should totally give in the process, this must be subordinate to the power of a concrete and reductive way of understanding medicine. Together with other factors such as the displacement of the male figure in the process-, this means that, often, women are in conflict with themselves and family relationships. Very easily, the investment of emotions, family, money, social, and so does the woman is so radical that achieving the child can become an obsession, in which all the vital project commits.

The reduction of human suffering to a technical problem

Actually, when so immersed in a consumer society, the child is understood as a rather directly dependent on the choice of a lifestyle, reasons for understanding the logic of the nature of human procreation are eliminated. In this sense, Illich called "structural iatrogenic" to reducing the level of health that it represents the increasing inability to cope with essential experiences such as pain, disease, and death, and they generate a demand for manipulation. Pain loses its human dimension and becomes a technical problem. Lacking utterly meaningless, its eradication leads to losing sense on the same human life that suffers.

It's not to give an absolute sense of pain or not to put the means eradicated. However, it's important to leave a little space to find its meaning in human life, on the other hand life is inevitably linked to it.

In the case of women, the apparent pain for not getting a biological child is to be considered as absolutely deprived of sense, is identified as a disease that must be eliminated at all costs. Therefore, it is not the prior and necessary to investigate and locate the pain, detecting perhaps a different origin to lack of a biological child. There's no place for that in the social imagination. As Illich points out, in cases where it's resorted to IVF it's extremely rare that doctors ask for the meaning of suffering of a woman claiming a child. Typically, this pain should be referred directly to organ dysfunction. In the psychoanalyst language, patient demand usually not match the real or unconscious desire. For Lacan, demand always refers to a different satisfactions claims (in this case the child). It's, always, a demand for affection and love. It's therefore important to raise the need to replace the strictly medical-technical vision by listening and understanding of the patient's situation. In this regard, Lesley Doya argues that often reproductive technologies are used not only as a response to infertility. In fact, they often turn to them as a response (bio) technology to a crisis of life of a person.

Thus this explains the large number of women willing to undergo all sorts of risks in order to achieve the biological son. In this regard, several authors have argued the impossibility of recognizing a real time access to these new technologies freedom. Even claim that there is a material violence against women, violence smooth, invisible to the victims themselves.

They deserve to be mention here some ideas and quoted by Silvia Tubert in her book *Women unshaded. Maternity and technology*, obtained in field studies on specific cases of women attending the maternity ward of the Health City of Peace in Madrid in demand for in vitro fertilization:

"Everyone tells me: go for it, because if not, you'll regret it someday thinking you could have done it and you have not done."

"Tantas pruebas y cosas te traumatizan un poco, te cansan. Cuando la naturaleza no lo da, no hay que obligarla. Había decidido dejarlo, pero la doctora tuvo la gentileza de llamarme: he vuelto".

"In the village my family and people... told me to go to the doctor."

Koch describes what he understands as the problem of "access to infertility". Or in other words the right to take reality itself. Their denial has meant that women who "give up" without having risked everything, even the most experimental treatments, must accept their degree of "guilt." They are always seen as at least partly responsible for their situation.

Legal protection of the right to life and health of women

No one disputes that one of the functions of the rule of law is to ensure, as resulting demand for the right to life and the health of its citizens. In this sense, the Spanish Constitution guarantees in Article 15, "the right to life and to physical and moral integrity", which implies a commitment to the promotion and real enjoyment of the means to maintain health.

This means in turn, that control products and techniques available on the market in relation to its safety on human health. It also involves the establishment of legal sanctions for those infringing the physical and mental integrity of citizens.

As seen, the Spanish legislation assimilates, wrongly, new reproductive technologies are therapy. Thus, it's understood that the woman is subjected to these techniques to cure or relieve disease. It starts from the basis that these techniques are always voluntary, so that women should take on the inevitable side effects.

In fact, the Law 35/88 doesn't provide for the possibility of injury to women may occur. Add to this the fact that women who undergo in vitro fertilization often ignore because of the lack of information provided, the real risks of physical and psychological injuries, inseparably connected with new reproductive technologies is added. Often the medical team, with the aim of increasing the chances of success, takes decisions that have little to do women, although those decisions affect their physical integrity. Then the woman, with a mere formal consent, may be exposed to interventions that carry significant risks and which are not yet contrasted side effects.

Conclusion

We are facing a very complex issue and shouldn't be treated superficially. It's important to deepen valiantly in the interests underlying the new reproductive technologies, the logic that inspires them, their consequences on the status of human life and vision of women on which they're based.

According to the above, surprisingly, from various instances the use of these techniques is enhanced, and even public funding is demanded, on behalf of an alleged right to liberty and women's health. It's not known well, involving real life and attacks on women's health. In fact, governments should question the fundamentally economic unconditional support they provide to artificial reproduction techniques.

Instead, they should devote major items of economic research of the origins of infertility and its real therapy resources.

On the other hand, if it really wants to give a child to a family and this is cared by itself, it would be much more consistent that public authorities support a more effective way of making processes. Because the economic costs and red tape make it difficult, sometimes impossible to get that many children have something that's not just a desire but a real right: a family.

In this regard the streamlining and institutional support and making processes would be desirable, and even public subsidy.

Are there human beings without dignity?

Angela Aparisi Miralles

A few weeks ago it was made public the report of the Advisory Committee on Ethics in Scientific and Technological Research on stem cell investigation. This report, although about other issues, intends to actually answer a nagging question: what should we do with the embryos are currently frozen in Spain?

As is well known, and is expressly stated in the official text, in Spain there are thousands of frozen human embryos left over from in vitro fertilization processes. The Law on Assisted Reproduction Techniques, one of the most permissive in the world, states that embryos left over from in vitro fertilization, not transferred to the uterus, are going to be kept frozen for up to five years. However, the law does not clarify their fate.

The report admits that the use of these embryos for research (mainly extracting their stem cells) generated ethical problems. However, compared to other alternatives, recommended its use for the derivation of stem cells, which involves their destruction. In this regard, the report argues that the human embryo has value, but ponderable over other values. Therefore, it states that "the law must be amended in order to establish an adequate legal framework with regard to stem cell research from human supernumerary embryos." These recommendations involve in practice, denial of dignity of the human embryo.

Our Western legal culture is built on a clear sense: the distinction between person and thing, between subject and object. Was a breakthrough-and a great humanization for Law- assume that the human individual, every member of the human family, deserves unconditional respect, which means, among other things, it's not instrumental. In this sense, as Kant understood that dignity means that human beings "aren't merely subjective ends whose existence, are as a result of our action, has a value for us, but are impartial ends, that's, things whose existence is an end in itself, and such an end, that place cannot be any other purpose for which they should serve as a means." And in another fragment of his *Groundwork of the Metaphysics of Morals* he said: "Everything that has a price can be replaced by something equivalent, whereas what is above all price and therefore doesn't support equivalent that has dignity".

This idea was, somehow, embodied in the Preamble to the Universal Declaration of Human Rights of 1948: "Freedom, justice and peace in the world are based on the recognition of the inherent dignity and of the equal and inalienable rights of all members of the human family." Today, especially in the field of bioethics, all international legal texts presuppose the principle of human dignity. For example, the Convention on Human Rights and Biomedicine of the Council of Europe, only in its Preamble refers to human dignity three times, and Article 1 begins by highlighting that "the parties to this Convention shall protect the dignity and identity of every human being..." Similarly, Recommendation 1046 adopted in 1986 by the Assembly of the Council of Europe-relative to the use of embryos and fetuses for diagnostic, therapeutic, scientific, industrial and noncommercial

purposes recognized, in its paragraphs 5 and 8 that "is human life from conception". And in point 10 he argued: "The embryo and the human fetus should benefit in all circumstances the respect for human dignity".

Recognition of the principle of human dignity would, among others, have the following consequences in relation to the subject at hand:

a) It's a condition itself and inherent in every human being. Therefore, it makes no sense saying that there are human beings without dignity. Thus, the Preamble to the Convention on Human Rights and Biomedicine of the Council of Europe states "the need to respect the human being, not only as an individual but also their membership in the human species," recognizing the importance of ensuring the dignity. And in its first article it also relates to the protection of the dignity of every human being.

b) The human dignity entails the ethical requirement of its non-instrumental and non-commercialization of its parts. Therefore, it's understood as a fundamental principle of the primacy of the human being against any kind of social or economic interest. With regard to the principle of non-instrumental of human beings, Article 2 of the Convention on Human Rights and Biomedicine he states that "the interest and welfare of the human being shall prevail over the sole interest of society or science".

The peculiarity of today

However, today we are facing a situation that could be described, at least like "peculiar". The desire to have biological children has meant that thousands of human individuals, who no one has consulted, are in liquid nitrogen tanks with a highly uncertain fate. What would be, in this situation, the solution more in keeping with human dignity?

The first thing we propose is rigorously ethical and legal permissibility of the freezing of human embryos. There is no right to a child, as this is not an object. There is only the desire to have biological children, and this desire, as all desires



must have limits. Nonfreezing human beings is one of them. In this regard, the Italian law expressly prohibits artificial reproduction freezing and embryo experimentation.

Secondly; since frozen embryos-regardless of their health status, viability...- are human beings, they deserve to be treated according to their dignity. This implies respect, which requires no manipulation while you have your life. Thus, the uncertainty about the viability of life should not be the decisive criterion for legal protection. It's also uncertain the life of a cancer patient or an elderly dying, and it would still be worthy of respect. The dignity of every human individual cannot be made dependent on the "uncertain" character of his life. Uncertainty belongs to the plane of our knowledge, and however, is being debated is the ontological status of human life.

Human cloning: scientific or economic interest?

Luis Maria Gonzalo

The information that lately has been aired on the alleged birth of the first cloned human, disclosed by Dr. Brigitte Bousselier and his team of the Raelyn sect (which has been the funniest scientific joke, according to Claude Vorilhon, founder of that sect) they have renewed debate on human cloning .

Human cloning, is the production of genetically identical humans to the parents, has been universally rejected. At the United Nations in November to discuss this issue, all countries rejected human reproductive cloning. There was no consensus, however, regarding the therapeutic human cloning, which seeks to produce cloned human embryos to obtain cells or tissues that can be transplanted into a patient. In this case, thirty-six countries, including the US. UU. And Spain, rejected; but another twenty, led by Germany and France, showed support. In fact, in some countries like the UK, the Netherlands and Singapore they have allowed it.

About therapeutic cloning

Some consider therapeutic cloning as a preferable alternative to the use of embryonic stem cells (CME), which usually are usually obtained from embryos left

over from in vitro fertilization. The reason for this preference is that CMEs produce immune response in the host, although initially it was expected that they would be rejected (although the rejection reaction is less intense than when an adult has transplanted organ). However, if used CME obtained from cloned embryos, such rejection is not given, since the genetic makeup is identical to that of the receiver.

The cloned embryos obtained by nuclear transfer: an oocyte previously prepared core is extracted and is replaced by the nucleus of a cell of the intended recipient of the CME.

Are recent the experiences of cloning?

Although it's in recent years when the media's released (especially since Wilmut and his team put the birth of the cloned ewe lamb Dolly in 1997), is an investigation that already has more than half a century of history.

Indeed, Briggs and King began in 1943 this type of experimentation in Philadelphia, and in 1952 obtained the first cloned frogs. To do this, they used cores obtained from a blastocyst frog. In mammals it was Willadsen the first that got cloned sheep in 1986. The difference in this regard to cloning Wilmut, who was also in lambs, this was got with a nucleus of an adult cell, which represented a significant scientific novelty it showed that the nucleus of adult cells can be reshaped so that many silent genes can re-express if external conditions (such as presenting the cytoplasm of the oocyte) are adequate. Also might be possible to clone adult individuals, news greeted with joy by lesbian groups who saw the possibility of having identical daughters and without human intervention.

Successes and failures of cloning

The cloning technique has been exposed in a simplified form, it can lead to a misconception about their chances. On the one hand, it's a method that requires sophisticated techniques and quite means and, secondly, to the equipment and experience have means of making multiple attempts to achieve a case.

For example, Wilmut got the lamb Dolly after 434 tests. Brought this to the case of man, it's that for that a human embryo clone would be necessary to sacrifice many embryos.

### Difficulties in human cloning

One of the just discussed: technical difficulty, which has extensive experience in animals. Another difficulty is that, for now, in the attempts that have been made to produce human clones, hasn't achieved the embryo reached the blastocyst stage (which is necessary to obtain CME). Thus, a team Advanced Cell Technology, in Worcester (Massachusetts), announced that human clones exceeded the morula stage, but died upon reaching blastocysts.

Above these scientific- technical difficulties, are the bioethical implications. Both reproductive and therapeutic cloning involve sacrificing many lives to satisfy the whim of one or the attempt to cure a sick others. Perhaps such ethical implications have little importance for materialists; but it does.

### Chrematistic scientific implications

When the genesis and development of the discussion on human cloning research and CME has shown quite clear that along with the scientific interest of the subject, there are other interests among economic. Just look at that among, the most interested in obtaining the approval of therapeutic human cloning are several biotechnology companies.

But along with the chrematistic interest, you cannot deny that there's also a scientific interest, since cloned embryos can provide good services to advance our knowledge in the development of the early stages of human life. So, Wilmut and his team at the Roslin Institute have applied the appropriate permissions to start these experiences.

## Embryonic and adult stem cells

It's relatively recent the discovery of stem cells (stem cells). He began to suspect its existence from the work of Till and McCulloch (1961), which showed that in the bone marrow are clone-genic precursors that give rise to multilineal colonies hematopoietic spleen, and that some of their cells are able to form new spleen colonies. Today, it is known that all tissues, including the nervous, have undifferentiated cells that can lead not only to their own tissue cells where they reside but also to other different. For example, bone marrow are different not only blood cells but also other different, even neurons. That is, multipotent.

Compared stem cells from adult to embryonic stem cells, is that the latter have greater capacity and mitotic cells give rise to more different types. At first glance, they have advantages over adult stem cells, but they are rather disadvantages.

The greater capacity for division has the disadvantage CME it is difficult to control, so it can produce true tumors, and makes it more difficult pluripotency to differentiate into cells of the tissue to be regenerated. With adult stem, however, cells having less proliferative capacity, there's almost no risk of giving rise to tumor formation and, moreover, implanted in the tissue to be regenerated, their multi-potency is more easily oriented towards the generation of cells of that tissue. A third item also makes no clone preferable to CME is that, as from the same individual to be transplanted to be, present no problem of rejection.

If this is the state of the potential of stem cells for therapeutic purposes, it's understood that it makes sense to focus research on adult stem cells and not insist on experiences with embryonic stem cells derived from cloned embryos, in some cases, or un-cloned, in others.