In 1998, HG Bishop Serapion of Los Angeles published a series of articles in the El Kiraza journal of which HH Pope Shenouda is the editor in chief (9). HG Bishop Serapion who is a physician by background acknowledges that in vitro fertilization is a legitimate option for couples who cannot achieve a pregnancy by normal means including medical and surgical options. In vitro fertilization is acceptable only if the gametes are from husband and wife. No donor oocyte or spermatooza should ever be used under any circumstances. Surrogacy is fully unacceptable.

In a small number of other publications of other Bishops in Egypt, in vitro fertilization remains an acceptable option, gamete donation is not.

Sex Selection

Ethicists are divided in two camps: those who feel that sex selection is a choice of couples and those who believe that this would be a biased intervention with negative consequences (10). The Coptic Orthodox Church has not specifically addressed this issue to my knowledge.

Cloning or Somatic Cell Nuclear Transfer

Somatic cell nuclear transfer or cloning is an issue that has divided more ethicists in the Western world (11, 12). Cloning could be performed for reproductive reasons. This type of cloning is known as reproductive cloning. To our knowledge, no human beings have been successfully cloned. Although it is not impossible, it is extremely difficult to do so. Most medical societies including the American Society for Reproductive Medicine does not accept cloning from an ethical point of view even if it becomes technically possible. Cloning for the production of stem cells is known as therapeutic cloning which is acceptable to some medical societies (12). The Coptic Church does not accept reproductive or therapeutic cloning.

REFERENCES


3. The Vatican view on human procreation

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INTRODUCTION

The gift of life which God the Creator has entrusted to man calls him to appreciate the inestimable value of what he has been given and to take responsibility for it: this fundamental principle must be placed at the centre of one's reflection in order to clarify and solve the moral problems
raised by artificial interventions on life as it originates and on the processes of procreation. Thanks to the progress of the biological and medical sciences, man has at his disposal ever more effective therapeutic resources; but he can also acquire new powers, with unforeseeable consequences, over human life at its very beginning and in its first stages. Various procedures now make it possible to intervene not only in order to assist but also to dominate the processes of procreation. These techniques can enable man to "take in hand his own destiny", but they also expose him "to the temptation to go beyond the limits of a reasonable dominion over nature"(1). They might constitute progress in the service of man, but they also involve serious risks.

**Science and technology at the service of the human person**

God created man in his own image and likeness: "male and female he created them" (Gen 1: 27), entrusting to them the task of "having dominion over the earth" (Gen 1:28). Basic scientific research and applied research constitute a significant expression of this dominion of man over creation. Science and technology are valuable resources for man when placed at his service and when they promote his integral development for the benefit of all; but they cannot of themselves show the meaning of existence and of human progress. Being ordered to man, who initiates and develops them, they draw from the person and his moral values the indication of their purpose and the awareness of their limits.

The rapid development of technological discoveries gives greater urgency to this need to respect the criteria just mentioned: science without conscience can only lead to man's ruin.

**Fundamental criteria for a moral judgment**

The fundamental values connected with the techniques of artificial human procreation are two: the life of the human being called into existence and the special nature of the transmission of human life in marriage. The moral judgment on such methods of artificial procreation must therefore be formulated in reference to these values.

Advances in technology have now made it possible to procreate apart from sexual relations through the meeting in vitro of the germ-cells previously taken from the man and the woman. But what is technically possible is not for that very reason morally admissible. Rational reflection on the fundamental values of life and of human procreation is therefore indispensable for formulating a moral evaluation of such technological interventions on a human being from the first stages of his development.

**Teachings of the Magisterium**

On its part, the Magisterium of the Church offers to human reason in this field too the light of Revelation: the doctrine concerning man taught by the Magisterium contains many elements which throw light on the problems being faced here. From the moment of conception, the life of every human being is to be respected in an absolute way because man is the only creature on earth that God has "wished for himself " (16) and the spiritual soul of each man is "immediately created" by God; (17) his whole being bears the image of the Creator. Human life is sacred because from its beginning it involves "the creative action of God" (18) and it remains forever in a special relationship with the Creator, who is its sole end (19). God alone is the Lord of life from its beginning until its end: no one can, in any circumstance, claim for himself the right to destroy directly an innocent human being (20). Human procreation requires on the part of the spouses responsible collaboration with the fruitful love of God; (21) the gift of human life must be actualized in marriage through the specific and exclusive acts of husband and wife, in accordance with the laws inscribed in their persons and in their union (22).

I. Respect for human embryos

At the Second Vatican Council, the Church for her part presented once again to modern man her constant and certain doctrine according to which: "Life once conceived, must be protected with the utmost care; abortion and infanticide are abominable crimes" (23). More recently, the Charter of the Rights of the Family, published by
the Holy See, confirmed that "Human life must be absolutely respected and protected from the moment of conception" (24).

II. Interventions upon human procreation

By "artificial procreation" or "artificial fertilization" are understood here the different technical procedures directed towards obtaining a human conception in a manner other than the sexual union of man and woman. This Instruction deals with fertilization of an ovum in a test-tube (in vitro fertilization) and artificial insemination through transfer into the woman's genital tracts of previously collected sperm.

A preliminary point for the moral evaluation of such technical procedures is constituted by the consideration of the circumstances and consequences which those procedures involve in relation to the respect due the human embryo. Development of the practice of in vitro fertilization has required innumerable fertilizations and destructions of human embryos. Even today, the usual practice presupposes a hyperovulation on the part of the woman: a number of ova are withdrawn, fertilized and then cultivated in vitro for some days. Usually not all are transferred into the genital tracts of the woman; some embryos, generally called "spare", are destroyed or frozen. On occasion, some of the implanted embryos are sacrificed for various eugenic, economic or psychological reasons. Such deliberate destruction of human beings or their utilization for different purposes to the detriment of their integrity and life is contrary to the doctrine on procured abortion already recalled. The connection between in vitro fertilization and the voluntary destruction of human embryos occurs too often. This is significant: through these procedures, with apparently contrary purposes, life and death are subjected to the decision of man, who thus sets himself up as the giver of life and death by decree. This dynamic of violence and domination may remain unnoticed by those very individuals who, in wishing to utilize this procedure, become subject to it themselves. The facts recorded and the cold logic which links them must be taken into consideration for a moral judgment on IVF and ET (in vitro fertilization and embryo transfer): the abortion-mentality which has made this procedure possible thus leads, whether one wants it or not, to man's domination over the life and death of his fellow human beings and can lead to a system of radical eugenics.

Nevertheless, such abuses do not exempt one from a further and thorough ethical study of the techniques of artificial procreation considered in themselves, abstracting as far as possible from the destruction of embryos produced in vitro. The present Instruction will therefore take into consideration in the first place the problems posed by heterologous artificial fertilization (II, 1-3), * and subsequently those linked with homologous artificial fertilization (II, 4-6).** Before formulating an ethical judgment on each of these procedures, the principles and values which determine the moral evaluation of each of them will be considered.

**HETEROLOGOUS ARTIFICIAL FERTILIZATION**

Why must human procreation take place in marriage?

Every human being is always to be accepted as a gift and blessing of God. However, from the moral point of view a truly responsible procreation vis-à-vis the unborn child must be the fruit of marriage.

For human procreation has specific characteristics by virtue of the personal dignity of the parents and of the children: the procreation of a new person, whereby the man and the woman collaborate with the power of the Creator, must be the fruit and the sign of the mutual self-giving of the spouses, of their love and of their fidelity.(34) The fidelity of the spouses in the unity of marriage involves reciprocal respect of their right to become a father and a mother only through each other. The child has the right to be conceived, carried in the womb, brought into the world and brought up within marriage: it is through the secure and recognized relationship to his own parents that the child can discover his own identity and achieve his own proper human development. The parents find in their child a confirmation and completion of their reciprocal self-giving: the child is the living image of their love, the permanent sign of their conjugal union, the living and indissoluble
concrete expression of their paternity and maternity (35).

Does heterologous artificial fertilization conform to the dignity of the couple and to the truth of marriage?

The desire to have a child and the love between spouses who long to obviate a sterility which cannot be overcome in any other way constitute understandable motivations; but subjectively good intentions do not render heterologous artificial fertilization conformable to the objective and inalienable properties of marriage or respectful of the rights of the child and of the spouses.

HOMOLOGOUS ARTIFICIAL FERTILIZATION

Since heterologous artificial fertilization has been declared unacceptable, the question arises of how to evaluate morally the process of homologous artificial fertilization: IVF and ET and artificial insemination between husband and wife. First a question of principle must be clarified.

What connection is required from the moral point of view between procreation and the conjugal act?

a) The Church's teaching on marriage and human procreation affirms the "inseparable connection, willed by God and unable to be broken by man on his own initiative, between the two meanings of the conjugal act: the unitive meaning and the procreative meaning. Indeed, by its intimate structure, the conjugal act, while most closely uniting husband and wife, capacitates them for the generation of new lives, according to laws inscribed in the very being of man and of woman"(38). This principle, which is based upon the nature of marriage and the intimate connection of the goods of marriage, has well-known consequences on the level of responsible fatherhood and motherhood. "By safeguarding both these essential aspects, the unitive and the procreative, the conjugal act preserves in its fullness the sense of true mutual love and its ordination towards man's exalted vocation to parenthood"(39). The same doctrine concerning the link between the meanings of the conjugal act and between the goods of marriage throws light on the moral problem of homologous artificial fertilization, since "it is never permitted to separate these different aspects to such a degree as positively to exclude either the procreative intention or the conjugal relation" (40). Contraception deliberately deprives the conjugal act of its openness to procreation and in this way brings about a voluntary dissociation of the ends of marriage. Homologous artificial fertilization, in seeking a procreation which is not the fruit of a specific act of conjugal union, objectively effects an analogous separation between the goods and the meanings of marriage. Thus, fertilization is licitly sought when it is the result of a "conjugal act which is per se suitable for the generation of children to which marriage is ordered by its nature and by which the spouses become one flesh"(41). But from the moral point of view procreation is deprived of its proper perfection when it is not desired as the fruit of the conjugal act, that is to say of the specific act of the spouses' union.

b) The moral value of the intimate link between the goods of marriage and between the meanings of the conjugal act is based upon the unity of the human being, a unity involving body and spiritual soul. (42) Spouses mutually express their personal love in the "language of the body ", which clearly involves both "sponsal meanings" and parental ones (43). The conjugal act by which the couple mutually express their self-gift at the same time expresses openness to the gift of life. It is an act that is inseparably corporal and spiritual. It is in their bodies and through their bodies that the spouses consummate their marriage and are able to become father and mother. In order to respect the language of their bodies and their natural generosity, the conjugal union must take place with respect for its openness to procreation; and the procreation of a person must be the fruit and the result of married love. The origin of the human being thus follows from a procreation that is "linked to the union, not only biological but also spiritual, of the parents, made one by the bond of marriage"(44). Fertilization achieved outside the bodies of the couple remains by this very fact deprived of the meanings and the values which are
expressed in the language of the body and in the
union of human persons.
c) Only respect for the link between the meanings of the conjugal act and respect for the unity of the human being make possible procreation in conformity with the dignity of the person. In his unique and irrepeateable origin, the child must be respected and recognized as equal in personal dignity to those who give him life. The human person must be accepted in his parents' act of union and love; the generation of a child must therefore be the fruit of that mutual giving (45) which is realized in the conjugal act wherein the spouses cooperate as servants and not as masters in the work of the Creator who is Love. In reality, the origin of a human person is the result of an act of giving. The one conceived must be the fruit of his parents' love. He cannot be desired or conceived as the product of an intervention of medical or biological techniques; that would be equivalent to reducing him to an object of scientific technology. No one may subject the coming of a child into the world to conditions of technical efficiency which are to be evaluated according to standards of control and dominion. The moral relevance of the link between the meanings of the conjugal act and between the goods of marriage, as well as the unity of the human being and the dignity of his origin, demand that the procreation of a human person be brought about as the fruit of the conjugal act specific to the love between spouses. The generation of a child - or at the very least an openness to the transmission of life - is a necessary prerequisite from the moral point of view for responsible human procreation. But this good intention is not sufficient for making a positive moral evaluation of in vitro fertilization between spouses. The process of IVF and ET must be judged in itself and cannot borrow its definitive moral quality from the totality of conjugal life of which it becomes part nor from the conjugal acts which may precede or follow it (48).

Conception in vitro is the result of the technical action which preseides over fertilization. Such fertilization is neither in fact achieved nor positively willed as the expression and fruit of a specific act of the conjugal union. In homologous IVF and ET, therefore, even if it is considered in the context of 'de facto' existing sexual relations, the generation of the human person is objectively deprived of its proper perfection: namely, that of being the result and fruit of a conjugal act in which the spouses can become "cooperators with God for giving life to a new person"(50). These reasons enable us to understand why the act of conjugal love is considered in the teaching of the Church as the only setting worthy of human procreation. For the same reasons the so-called "simple case", i.e. a homologous IVF and ET procedure that is free of any compromise with the abortive practice of destroying embryos and with masturbation, remains a technique which is morally illicit because it deprives human procreation of the dignity which is proper and connatural to it. Certainly, homologous IVF and ET fertilization is not marked by all that ethical negativity found in extra-conjugal procreation; the family and marriage continue to constitute the setting for the birth and upbringing of the children. Nevertheless, in conformity with the traditional doctrine relating to the goods of marriage and the dignity of the

Is homologous 'in vitro' fertilization morally licit?

The answer to this question is strictly dependent on the principles just mentioned. Certainly one cannot ignore the legitimate aspirations of sterile couples. For some, recourse to homologous IVF and ET appears to be the only way of fulfilling their sincere desire for a child. The question is asked whether the totality of conjugal life in such situations is not sufficient to ensure the dignity proper to human procreation. It is acknowledged that IVF and ET certainly cannot supply for the absence of sexual relations (47) and cannot be preferred to the specific acts of conjugal union, given the risks involved for the child and the difficulties of the procedure. But it is asked whether, when there is no other way of overcoming the sterility which is a source of suffering, homologous in vitro fertilization may not constitute an aid, if not a form of therapy, whereby its moral licitness could be admitted. The desire for a child - or at the very least an openness to the transmission of life - is a necessary prerequisite from the moral point of view for responsible human procreation. But this good intention is not sufficient for making a positive moral evaluation of in vitro fertilization between spouses. The process of IVF and ET must be judged in itself and cannot borrow its definitive moral quality from the totality of conjugal life of which it becomes part nor from the conjugal acts which may precede or follow it (48).
person, the Church remain opposed from the moral point of view to homologous 'in vitro' fertilization. Such fertilization is in itself illicit and in opposition to the dignity of procreation and of the conjugal union, even when everything is done to avoid the death of the human embryo. Although the manner in which human conception is achieved with IVF and ET cannot be approved, every child which comes into the world must in any case be accepted as a living gift of the divine Goodness and must be brought up with love.

**What moral criterion can be proposed with regard to medical intervention in human procreation?**

The humanization of medicine, which is insisted upon today by everyone, requires respect for the integral dignity of the human person first of all in the act and at the moment in which the spouses transmit life to a new person. It is only logical therefore to address an urgent appeal to Catholic doctors and scientists that they bear exemplary witness to the respect due to the human embryo and to the dignity of procreation. The medical and nursing staff of Catholic hospitals and clinics are in a special way urged to do justice to the moral obligations which they have assumed, frequently also, as part of their contract. Those who are in charge of Catholic hospitals and clinics and who are often Religious will take special care to safeguard and promote a diligent observance of the moral norms recalled in the present Instruction.

**CONCLUSION**

The spread of technologies of intervention in the processes of human procreation raises very serious moral problems in relation to the respect due to the human being from the moment of conception, to the dignity of the person, of his or her sexuality, and of the transmission of life. With this Instruction the Congregation for the Doctrine of the Faith, in fulfilling its responsibility to promote and defend the Church's teaching in so serious a matter, addresses a new and heartfelt invitation to all those who, by reason of their role and their commitment, can exercise a positive influence and ensure that, in the family and in society, due respect is accorded to life and love. It addresses this invitation to those responsible for the formation of consciences and of public opinion, to scientists and medical professionals, to jurists and politicians. It hopes that all will understand the incompatibility between recognition of the dignity of the human person and contempt for life and love, between faith in the living God and the claim to decide arbitrarily the origin and fate of a human being.

In particular, the Congregation for the Doctrine of the Faith addresses an invitation with confidence and encouragement to theologians, and above all to moralists, that they study more deeply and make even more accessible the faithful the contents of the teaching of the Church's Magisterium in the light of a valid anthropology in the matter of sexuality and marriage and in the context of the necessary interdisciplinary approach. Thus they will make it possible to understand ever more clearly the reasons for and the validity of this teaching. By defending man against the excesses of his own power, the Church of God reminds him of the reasons for his true nobility; only in this way can the possibility of living and loving with that dignity and liberty which derive from respect for the truth be ensured for the men and women of tomorrow. The precise indications which are offered in the present Instruction therefore are not meant to halt the effort of reflection but rather to give it a renewed impulse in unrenounceable fidelity to the teaching of the Church.

In the light of the truth about the gift of human life and in the light of the moral principles which flow from that truth, everyone is invited to act in the area of responsibility proper to each and, like the good Samaritan, to recognize as a neighbour even the littlest among the children of men (Cf. Lk 10: 29-37). Here Christ's words find a new and particular echo: "What you do to one of the least of my brethren, you do unto me" (Mt 25:40).

**REFERENCES**

2. POPE PAUL VI, Discourse to the General Assembly of the


18. POPE JOHN XXIII, Encyclical Mater et Magistra, III: AAS 53 (1961) 447; cf. POPE JOHN PAUL II, Discourse to priests participating in a seminar on "Responsible Procreation", 17 September 1983, Insegnamenti di Giovanni Paolo II, VI, 2 (1983) 562: "At the origin of each human person there is a creative act of God: no man comes into existence by chance; he is always the result of the creative love of God".


22. Cf. Pastoral Constitution Gaudium et Spes, 51: "When it is a question of harmonizing married love with the responsible transmission of life, the moral character of one's behaviour does not depend only on the good intention and the evaluation of the motives: the objective criteria must be used, criteria drawn from the nature of the human person and human acts, criteria which respect the total meaning of mutual self-giving and human procreation in the context of true love".

23. Pastoral Constitution Gaudium et Spes, 51.


27. The obligation to avoid disproportionate risks involves an authentic respect for human beings and the uprightness of therapeutic intentions. It implies that the doctor "above all ... must carefully evaluate the possible negative consequences which the necessary use of a particular exploratory technique may have upon the unborn child and avoid recourse to diagnostic procedures which do not offer sufficient guarantees of their honest purpose and substantial harmlessness. And if, as often happens in human choices, a degree of risk must be undertaken, he will take care to assure that it is justified by a truly urgent need for the diagnosis and by the importance of the results that can be achieved by it for the benefit of the unborn child himself" (POPE JOHN PAUL II, Discourse to Participants in the Pro-Life Movement Congress, 3 December 1982: Insegnamenti di Giovanni Paolo II, V, 3 [1982] 1512). This clarification concerning "proportionate risk" is also to be kept in mind in the following sections of the present Instruction, whenever this term appears.


29. Cf. POPE JOHN PAUL II, Address to a Meeting of the Pontifical Academy of Sciences, 23 October 1982: AAS 75 (1983) 37: "I condemn, in the most explicit and formal way, experimental manipulations of the human embryo, since the human being, from conception to death, cannot be exploited for any purpose whatsoever".


31. Cf. POPE JOHN PAUL II, Address to the Participants in the Convention of the Pro-Life Movement, 3 December 1982: Insegnamenti di Giovanni Paolo II, V, 3 (1982) 1511: "Any form of experimentation on the foetus that may damage its integrity or worsen its condition is unacceptable, except in the case of a final effort to save it from death". SACRED CONGREGATION FOR THE DOCTRINE OF THE FAITH, Declaration on Euthanasia, 4: AAS 72 (1980) 550: "In the absence of other sufficient remedies, it is permitted, with the patient's consent, to have recourse to the means provided by the most advanced medical techniques, even if these means are still at the experimental stage and are not without a certain risk".

32. No one, before coming into existence, can claim a subjective right to begin to exist; nevertheless, it is legitimate to affirm the right of the child to have a fully human origin through conception in conformity with the personal nature of the human being. Life is a gift that must be bestowed in a manner worthy both of the subject receiving it and of the...
subjects transmitting it. This statement is to be borne in mind also for what will be explained concerning artificial human procreation.

34. Cf. Pastoral Constitution on the Church in the Modern world, Gaudium et Spes, 50.
37. Cf. POPE PIUS XII, Discourse to those taking part in the 4th International Congress of Catholic Doctors, 29 September 1949: AAS 41 (1949) 560; Discourse to those taking part in the Congress of the Italian Catholic Union of Midwives, 29 October 1951: AAS 43 (1951) 850; Code of Canon Law, Can. 1134.
40. POPE PIUS XII, Discourse to those taking part in the Second Naples World Congress on Fertility and Human Sterility, 19 May 1956: AAS 48 (1956) 470.
41. Code of Canon Law, Can. 1056. According to this Canon, the conjugal act is that by which the marriage is consummated if the couple "have performed (it) between themselves in a human manner".
42. Cf. Pastoral Constitution Gaudium et Spes, 14.
46. Cf. Pastoral Constitution Gaudium et Spes, 50.
47. Cf. POPE PIUS XII, Discourse to those taking part in the 4th International Congress of Catholic Doctors, 29 September 1949: AAS 41 (1949) 560: "It would be erroneous ... to think that the possibility of resorting to this means (artificial fertilization) might render valid a marriage between persons unable to contract it because of the impedimentum impotentiae".
48. A similar question was dealt with by POPE PAUL VI, Encyclical Humanae Vitae, 14: AAS 60 (1968) 490-491.
49. Cf. supra: I, 1 ff.
52. POPE PIUS XII, Discourse to the Italian Catholic Union of Midwives, 29 October 1951: AAS 43 (1951) 850.
53. POPE PIUS XII, Discourse to those taking part in the 4th International Congress of Catholic Doctors, 29 September 1949: AAS 41 (1949) 560.
58. Pastoral Constitution Gaudium et Spes, 50.
60. Cf. Declaration Dignitatis Humanae, 7.
61. Joseph Caed. Ratzinger (The actual Holy Pope), Instruction on respect for human life in its origin and on the dignity of procreation replies to certain questions of the day, Given at Rome, from the Congregation for the Doctrine of the Faith, February 22, 1987, the Feast of the Chair of St. Peter, the Apostle.