ASSISTED REPRODUCTIVE HEALTH TECHNOLOGY OPTIONS AVAILABLE TO COUPLES UNABLE TO SIRE CHILDREN ON THEIR OWN

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Introduction

A bioethicist called William B. 1988 in his book *fertility treating* published by New York State Force on Life has categorized the new reproductive technologies as; artificial fertilization artificial insemination invitro fertilization and embryo transfer alternative technology using male and female gamete cells and cloning or gamete reproduction.

Lissa G. 1978 was the first to introduce this process in her book *High-tech reproductive technology* explains how this fertilization occurs artificially than naturally while fertilization naturally occurs when male sperms (male genetic cells) are introduced into a woman’s body through an act of sexual intercourse and one of the sperm succeeds in penetrating the woman’s ovum (female genetic cells) and fertilizing it.

Artificial fertilization is brought about when sperm is not united with the female ovum through an act of sexual coition but by other means (Aigen, 1996). Artificial fertilization martially it can be either homologous- when use genetic cells of a married couple or heterologous- when use of genetic cells of individuals not married to each other. In our case here we divide artificial fertilization into two; artificial insemination and invitro fertilization. In artificial insemination by use of a cannula or other instruments sperms is introduced into woman’s body and fertilization within woman’s body while invitro fertilization sperm and ovum are placed in a Petridis (hence name invitro-in glass) and fertilized outside woman body (Bell, 1981).
M. Morrell June 21, 2011 defines artificial inseminations in her book *Artificial Insemination: Current and Future Trends* published by Swedish University of Agricultural sciences as whereby fertilization through transfer into woman’s genital tracts of previous sperms are collected through masturbation or intercourse using a perforated condom or surgical removal of sperm from the epididymis. Artificial insemination is used when a male is not able to ejaculate within the vagina; where in cases a man suffers from oligospermia (when sperm concentration is low hence less conception) or when some allergy that cannot be treated hormonally (Biggers, 1990). Today if sperms collected through this method are washed in the laboratory to remove antibodies and prostaglandins and also to capacitate the sperm for fertilizing the ovum. Sperms collected and iced (cryopreservation) can also help the widow conceive a child by her own husband’s sperm after his death. Heterologous artificial insemination is like traditional method where husband was not able to sire; another man could come in and fertilize his wife. Today it can be practiced for single ladies (Eunpu, 1995).

**In vitro fertilization and embryo transfer**

One reproductive technology which the Church has clearly and unequivocally judged to be immoral is in vitro fertilization or IVF. Unfortunately most Catholics are not aware of the Church's teaching, do not know that IVF is immoral and some have used it in attempting to have children. If a couple is unaware that the procedure is immoral, they are not subjectively guilty of sin. Children conceived through this procedure are children of God and are loved by their parents, as they should be. Like all children, regardless of the circumstances of their conception and birth, they should be loved, cherished and cared for (Dunkel; & Lobel, 1991). The immorality of conceiving children through IVF can be difficult to understand and accept because the man and woman involved are usually married and trying to overcome a "medical" problem (infertility) in their marriage. Yet the procedure does violence to human dignity and to the marriage act and should be avoided (Dyer; Et. Al, 1662). But why exactly is IVF immoral?
In vitro fertilization brings about new life in a petri dish. Children engendered through IVF are sometimes known as test tube babies. Several eggs are aspirated from the woman's ovary after she has taken a fertility drug which causes a number of eggs to mature at the same time. Semen is collected from the man usually through masturbation. The egg and sperm are ultimately joined in a glass dish where conception takes place and the new life is allowed to develop for several days. In the simplest case embryos are then transferred to the mother's womb in the hope that one will survive to term (Collins, 1994). Obviously IVF eliminates the marriage act as the means of achieving pregnancy instead of helping it achieve this natural end. The new life is not engendered through an act of love between husband and wife but by a laboratory procedure performed by doctors or technicians. Husband and wife are merely sources for the raw materials of egg and sperm which are later manipulated by a technician to cause the sperm to fertilize the egg (Edelmann, 1994). Not infrequently donor eggs or sperm are used. This means that the genetic father or mother of the child could well be someone from outside the marriage. This can create a confusing situation for the child later when he or she learns that one parent raising him or her is not actually the biological parent. In fact the identity of the donor whether of egg or sperm may never be known depriving the child of an awareness of his or her own lineage (Daar, 2014).

This can mean a lack of knowledge of health problems or dispositions toward health problems which could be inherited. It could lead to half brothers and sisters marrying one another, because neither knew that the sperm which engendered their lives came from the same donor (Lammers 1998). But even if the egg and sperm come from husband and wife serious moral problems arise. Invariably several embryos are brought into existence only those which show the greatest promise of growing to term are implanted in the womb. The others are simply discarded or used for experiments. This is a terrible offense against human life. While a little baby may ultimately be born because of this procedure, other lives are usually snuffed out in the process. IVF is also expensive costing at least $10,000 per attempt. Over 90% of the embryos created perish at some point in the process. In a desire to hold down costs and enhance the odds of success, doctors sometimes implant five or more embryos in the mother's womb (Donchin, 1996).
This may result in more babies than a couple wants. In Canada one woman gave birth to five children engendered by IVF. She had wanted only one so she sued her doctor for wrongful life demanding that he pay for the cost of raising the four children she did not want (Ginsburg & Racowsky 2012).

To avoid the problems of carrying and rearing too many babies after several have been implanted, doctors sometimes engage in something euphemistically called fetal reduction or selective reduction. Here they monitor the babies in utero to see if any have defects or are judged to be not as healthy as the others. Then they eliminate those less desirable babies by filling a syringe with potassium chloride maneuvering the needle toward the selected baby in the womb with the aid of ultrasound and then thrusting the needle into the baby's heart. The potassium chloride kills the baby within minutes and he or she is expelled as a miscarriage. If it cannot be determined that one baby is less healthy than the others some doctors simply eliminate the baby or babies who are easiest to reach (Donchin, 1996). Again we see the unspeakable diminishing of the value of human life which can arise from this procedure. Not everyone who has had a child through IVF has used donor eggs or sperm collected the sperm through masturbation or killed extra unwanted babies in the course of the pregnancy. Yet there is still a moral problem with the procedure itself (Sher, Davis & Stoess 2013).

Within vitro fertilization male sperm and female ovum is placed in a petri dish (hence the name in vitro in a glass) and subsequent fusion of sperm and ovum and fertilization occur outside the woman’s body. This method was discovered in the late 1970s by Patrick S. etal in their book *Embryo transfer procedure for in vitro fertilization-IVF* published by an advanced fertility center of Chicago. After invitro fertilization (IVF), then it can be transferred into a woman’s uterus (embryo transfer-ET) or frozen for research. Apart from the purpose given in artificial insemination, this method is used for the woman whose fallopian tube has been damaged infertility problems; avoid affecting a child with genetically inherited health issues.
The technology was put forward by the society for the study of reproduction in the article named, *viable female and male mice from two fathers produced using stem cell technology* published on December 9, 2010 which relate more with artificial insemination than in vitro fertilization and embryo transfer through their development was stimulated by research into in vitro fertilization and embryo transfer. They are not variants of in vitro fertilization in a much as fertilization occurs outside the body (Edwards, 1969).

Sperm intra-fallopian tube transfer (SIFF). It is used as an alternative to homologous artificial insemination (AIH) in this procedure the woman’s ovaries are hyper-stimulated; this is coupled with a laparoscopy under general anesthesia to inject a washed and prepared concentrated of the husband’s sperm (or that of a donor, if necessary) into the fallopian tubes so that conception can occur there. Another procedure of special interest is GIFT. This is similar to IVF in that the woman’s ovaries are hyper stimulated to produce multiple eggs, which are retrieved either by laparoscopy or ultrasound-guided Trans-vaginal procedures. An egg (or a group of eggs) is placed into a catheter with sperm (provided either by masturbation or use of perforated condom during the intercourse) that have been treated and capacitated with an air bubble separating ovum from sperm to prevent fertilization from occurring outside the woman’s body. The catheter is then inserted into her fallopian tube the ovum and sperm are released from catheter and fertilization can then occur within the body of a woman (Edwards, 1969).

**Cloning or Agametic Reproduction.**

It is also called somatic cell nuclear transfer. It is non-fertilization process. It involves fusing the nucleus of a somatic (body) cell with enucleated oocyte that is oocyte deprived of maternal genome. This procedure generates a human being whose genetic endowment is identical to that of human being whose somatic cells were inserted into denucleated human ovum. This method was discovered by Ian Wilmud in his book *Stanford Encyclopedia of Philosophy* first published Wednesday, September 17, 8 by New York Stem Cell Foundation Laboratory.
Following reports of the cloning of Dolly the sheep in Scotland there is increasing speculation about cloning human beings. Cloning is a complex procedure by which scientists take a body cell such as a skin cell (somatic cell) and render the cell's nucleus into a primitive state so it is capable of guiding the development of another human being under the right conditions (Ericksen, 1996). The nucleus of an egg is removed and replaced by the nucleus of the somatic cell. The egg is then given an electrical charge and new life begins to grow. No one has yet engendered a human being through cloning but many scientists believe that this is only a question of time. There are a number of reasons why someone would try to engender a new human life through cloning. None would be morally legitimate. For example a couple may want to use a cell from a dying child to clone another baby as a way of perpetuating the life of the first child. Obviously this would not be a continuation of the dying child but the bringing into being of a new child.

The dying child would become the progenitor of a new life without having agreed to it the new child would not be treated as a unique individual with his or her own identity but as an extension of another person (Shannon 4). A man or woman might also want to have a baby without getting married or involving a parent of the opposite sex. Some homosexual people have said that cloning would be a perfect way to have children because they would not have to marry someone of the opposite sex. This would be terribly unfair to the child depriving him or her of a natural father and mother. Some may want to clone themselves thinking that they are so intelligent and successful that a child with their attributes would be a great gift to society.

This would be an act of supreme selfishness that would also deprive a child of a mother and a father. Anticipating that one day the cloning of a human being might be attempted, Donum Vitae said this: attempts or hypotheses for obtaining a human being without any connection with sexuality through twin
fission' cloning or parthenogenesis are to be considered contrary to the moral law since they are in opposition to the dignity both of human procreation and of the conjugal union. Most disturbing of all, some researchers want to use cloning to create human beings solely for experimentation and destruction. They propose to supply genetically matched tissues for treating various diseases by making human embryos from patients' body cells then dissecting these developing embryos for their "spare parts." Some even speak of growing genetically altered headless or brainless human clones as organ farms; arguing that such creatures could be exploited for any needed organs because they would not have the status of persons. The main reason why the Catholic Church is against cloning is because it goes against the process of reproduction and child bearing (Nagy, et al. 2012).

The gift of life which God the Creator and Father 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 (French, 1986). 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. They might constitute progress in the service of man but they also involve serious risks (Ericksen, 1996).

Many people are therefore expressing an urgent appeal that in interventions on procreation the values and rights of the human person be safeguarded. Requests for clarification and guidance are coming not only from the faithful but also from those who recognize the Church as an expert in humanity with a mission to serve the civilization of love and of life (Allen, 1993). The Church's Magisterium does not intervene on the basis of a particular competence in the area of the experimental sciences but having taken account of...
the data of research and technology it intends to put forward by virtue of its evangelical mission and apostolic duty the moral teaching corresponding to the dignity of the person and to his or her integral vocation. It intends to do so by expounding the criteria of moral judgment as regards the applications of scientific research and technology especially in relation to human life and its beginnings (Alpern, 1992). These criteria are the respect defense and promotion of man his primary and fundamental right to life his dignity as a person who is endowed with a spiritual soul and with moral responsibility and who is called to beatific communion with God. The Church's intervention in this field is inspired also by the Love which she owes to man helping him to recognize and respect his rights and duties. This love draws from the fount of Christ's love: as she contemplates the mystery of the Incarnate Word the Church also comes to understand the mystery of man by proclaiming the Gospel of salvation, she reveals to man his dignity and invites him to discover fully the truth of his own being. Thus the Church once more puts forward the divine law in order to accomplish the work of truth and liberation. For it is out of goodness in order to indicate the path of life that God gives human beings his commandments and the grace to observe them and it is likewise out of goodness in order to help them persevere along the same path that God always offers to everyone his forgiveness. Christ has compassion on our weaknesses: he is our Creator and Redeemer. May his spirit open men's hearts to the gift of God's peace and to an understanding of his precepts?

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 (Allen, 1993). 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. It would on the one hand be illusory to
claim that scientific research and its applications are morally neutral on the other hand one cannot derive
criteria for guidance from mere technical efficiency from research's possible usefulness to some at the
expense of others or worse still from prevailing ideologies. Thus science and technology require for their
own intrinsic meaning an unconditional respect for the fundamental criteria of the moral law: that is to
say they must be at the service of the human person of his inalienable rights and his true and integral good
according to the design and will of God (Alpern, 1992). 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. Our era needs such wisdom more than bygone ages if the
discoveries made by man are to be further humanized.

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