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Ethical Implications of Artificial Reproductive Technologies

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Abstract

This paper seeks to explore the philosophical and ethical implications of artificial reproductive technologies. Over the past few decades, advances in assisted reproductive technologies have enabled individuals, especially infertile couples, to bear children in increasingly complex ways, leading to a range of ethical issues. The work sees artificial reproductive technological procedures from a utilitarian point of view. Utilitarianism, which is a form of consequentialism, holds that acts are never right or wrong in themselves, but only because of their consequences. Hence, it avers that the amount of good brought into being must be for the greatest possible number of people. Given the utilitarian posture of assisted reproductive technologies, one wonders if the procedures of the assisted reproductive technologies take cognisance of the dignity of the human person, who should not be treated as a means to an end but as an end in itself. The work adopted qualitative method in collecting and analysing non-numerical data on assisted reproduction. The paper discovers that true to its utilitarian tendencies, assisted reproductive technologies have brought about the greatest good for the greatest number of individuals, but their irrational use threatens to disrobe man and to treat him as a machine. The study revealed that assisted reproduction bring about the separation of conception from sexual intercourse thereby causing disorientation of marital values and bond, and distorted identity and parenthood. The paper concluded that ART should be rejected because it is riddled with ethical problems. It recommended employment of Natural Reproductive Technology (NaProTechnology) to effectively address the ethical dilemmas posed by artificial reproductive technologies in order to protect the rights of all parties involved.

Key Words: Artificial, Ethics, Implications, Reproduction and Technology.

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Introduction

For couples who strongly desire a child, the inability to have one produces a strange mixture of emotions, anger, frustration, and disappointment, which may reach the point of despair after a prolonged struggle with infertility. Because of the sense of 'shame' and 'pity' some societies attach to

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childlessness, most couples in this condition feel depressed and getting pregnant becomes practically an obsession for them. This desperation can lead couples to do even the unthinkable their bids to overcome the anomaly. Hence, the principle of the end justifies the means is readily employed.

For example, it is not uncommon for most couples to be totally engrossed in their desperation for a child, some to the point of not being able to take care of other important aspects of life, such as their physical and mental health, social and spiritual relationship and personal development. It is also not uncommon for people to go deeply into debt in a pursuit of the latest round of reproductive technology just to satisfy the desire for a child. In view of the emotional distress some childless couples undergo, especially in some African cultures, the advent of technological interventions in the reproductive process promises remedies. With the assistance of reproductive technologies, such as artificial insemination, in vitro fertilization, surrogacy, etc., many couples can now smile home with a child of their own.

Reproductive technologies involve medical interventions in the processes of reproduction: ovulation, fertilization, and implantation of the fertilized eggs into the uterus. For Scott & Joy (2011, 23), it "refers to medications given women to stimulate egg production with the intention of egg retrieval; the handling of sperm, such as for insemination; and assisted reproductive technologies". These technologies represent the miracle of life for couples who have often spent years trying to have a child of their own.

Seen from a utilitarian point of view, reproductive technologies have brought about the greatest good for the greatest number of individuals. Utilitarianism holds that the amount of good brought into being must be for the greatest possible number of people. For the utilitarians, "the rightness or wrongness of an action is determined, by the goodness and badness of their consequence" (Edwards, 1967, 206). It is therefore, a form of consequentialism: the view that acts are never right or wrong in themselves, but only because of their consequences. But does the end justify the means?

Given the utilitarian posture of assisted reproductive technologies, one wonders; are the vulnerable minority involved in the procedures thereof not enslaved or exploited? Is human sexuality not being distorted? Do the procedures of the assisted reproductive technologies take cognisance of the dignity of the human person, who should not be treated as a means to an end but as an end in itself? This

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work elects itself to analysing the ethical implication and the challenges posed by artificial reproductive technologies, which stem from the inherently intimate nature of artificial reproductive technologies, the distortion of human sexuality, and the potential for exploitation of vulnerable individuals such as infertile couples, human embryos and the outrageous use of reproductive technologies for commercial gain.

For the sake of clarity, artificial (assisted) reproductive technology includes all fertility treatments in which either eggs or embryos are manipulated outside the body. The procedures involve surgical or other stimulated removing eggs from a woman's ovaries, combining them with sperm in the laboratory, and returning them to the woman's uterus or donating them to another woman. Procedures where only sperm are manipulated, such as intrauterine inseminations (IUI), are not considered under this definition.

Artificial Reproductive Technologies in Perspectives

Science and technology, especially in the area of human reproduction, have done a lot to help infertile couples smile home with a child of their own. Though these technologies can enable man take his destinies into his own hands, they can equally expose him to the temptation of going beyond the limits of reasonable domination over nature.

In the light of the foregoing, the Roman Catholic Church opposes any procreative technique which severs reproduction from sexual intercourse. Thus, the Church opposes even the homologous artificial insemination or in vitro fertilization, where the husband and wife provide the gametes, and the resulting embryos are implanted in the wife's uterus. The Church holds that the unitive and generative functions of sexual coition must not be separated. In *Instruction on the respect for human life in its origin and on the dignity of procreation (donum vitae),* the Church equally considers embryos to be human persons, and their destruction to be impermissible homicide (*Donum Vitae*, part I, A. 5). Affirming the personhood of the human embryo**,** the Catholic Church avers that embryos are human lives that, given the chance to grow, would develop into a man or a woman. Thus, the Vatican document on the *Declaration on Procured Abortion* asserts: "right from fertilization is begun the adventure of human life and each of its capacities requires time...to find its place and to be in a position to act" (Flannery, 1975. p. 470). Similarly, the Church holds that in vitro fertilization dissociates the unitive and procreative aspects of the conjugal act and infringes on the child's right to

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be "carried in the womb, brought into the world and brought up within marriage" (*Donum Vitae*, 1987, 1). These artificial reproductive interventions would likely lead to practices that deprive people of clarity about their origin and as such, can lead to identity crisis.

May (2000), corroborating the above stand of the Church maintains that when new human life comes to be as a result of homologous artificial insemination or homologous in vitro fertilization, it comes to be as the end product of a series of actions, transitive in nature, undertaken by different persons in order to make a particular product, a human baby. And when these new reproductive technologies are employed, one cannot deny that the child comes into existence in the manner of a product of making. Therefore, with the use of these technologies, it is true to say that the child is "made," not "begotten" (May, 2000, 81). Similarly, Noonan (1970), arguing on the potentiality of the human embryo and the gamete to become a human person, avers that if a spermatozoon is destroyed, one destroys a being which had a chance of far less than 1 in 200 million of developing into a reasoning being, possessed of the genetic code, a heart and other organs, and capable of pain. If a foetus is destroyed, one destroys a being already possessed of the genetic code, organs and sensitivity to pain, and one which had an 80 percent of developing further into a baby outside the womb who, in time, would reason.

The Church's stance on contraception as postulated here places huge responsibilities on couples' conjugal acts, to guard it against utilitarian motives. But it seems to be tied to the physiology of sex than the intentions between the couple performing the act. Human sex should not be reduced to its physiological features. It must be noted that majority of human sexual acts are naturally ordered to the enhancement of ties between partners and do not necessarily result in procreation. Therefore, to understand human sex, there is need to as well look at its effects on the whole person and not only on its biological outcome. The whole person's development as a sexual being in relationship with others, as one could infer from the document, appears to be less important than where and when a man ejaculates. Hence, the intention of the couple's act should not be subjugated to a consideration of its physical structure.

In Islam, all forms of assisted reproduction are allowed. However, the two Muslim sects, Sunnis Muslims and Shi a Muslims differ on gamete donation. For the Sunni Muslims, artificial insemination or in vitro fertilization is permitted in so far as the sperm and oocyte are those of the husband and his wife and the embryo is planted into the wife's uterus during an existing marriage contract. Shi a

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Muslims on the other hand, though agree with the Sunni Muslims in principles and practice, allow for gamete donation (Serour, 2008).

In Igbo - Nigerian worldview, just as it is in many other African countries, children are regarded as the uniting link between the living and the dead and the guarantee of the continuation of the family from one generation to the next. In such cultures,"anyone who dies without leaving behind a child or close relative to remember him or pour out libations for him is a very unfortunate person" (Mbiti, 1975, 105). As a result of that, a man can go to any length to have a child of his own. For cultures in this thought pattern, in vitro fertilization and other artificial reproductive technological interventions to fecundity could be a welcome development, the consequences notwithstanding.

Fadare & Adeniyi (2015) agree that there is high rate of infertility the world but stress that it predominance in developing countries Africa and Asia. For them,

> In Nigeria, studies have shown that tubal problems secondary to sexually transmitted diseases, postpartum pelvic infections, unsafe abortions, genital mutilation, and childhood marriage and its complications are some of the common causes of female factor infertility. Male factor infertility has also been well investigated in Nigeria with some studies recording 11.4% and 42.2% of infertility being caused by male factor alone. The psychological, social, and economic problems associated with infertility in low or middle income country (LMIC) are immense ranging from the breakdown of marriages, physical violence, rejection by the society, and poverty. (Fadare & Adeniyi, 2015 online)

They testify that artificial reproductive technologies have contributed immensely to alleviation of the plight of those in reproductive afflictions. However, they point to some basic ethical issues the interventions have generated such as the unnatural means of conception, inequitable access to ART due to its high cost, lack of regulatory body, safety of the procedure, and fate of the embryos surrogacy, sex selection, and gamete donation.

Being more specific, Roy, Dupras & Ravitsky (2017) raised concern over the procedures of assisted reproduction and maintain that it poses a lot of health risks. They write:

> The use of assisted reproductive technologies (ART) has increased significantly, allowing many coping with infertility to conceive. However, an emerging body of evidence suggests that ART could carry epigenetic risks for those conceived through the use of these technologies. In accordance with the Developmental Origins of Health and Disease hypothesis, ART could increase the risk of developing late-onset diseases through epigenetic mechanisms, as superovulation, fertilization methods

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> and embryo culture could impair the embryo's epigenetic reprogramming. Roy, Dupras & Ravitsky (2017, online)

All this consolidate the fact that artificial reproductive technologies a lot of ethical challenges which this paper sees as crystallizing to the question of human dignity.

3. Infertility and the Dawn of Reproductive Technologies

Infertility could be seen as the inability of a woman to conceive and carry a child to term. For Sher (2005), it is "the inability to conceive after one full year of normal, regular heterosexual intercourse without the use of contraception" (Sher, 2005, p. 287). There are basically two classes of infertility: primary and secondary infertility. In primary infertility, the patients have never conceived, whereas secondary infertility refers to the condition of patients who have previously conceived but are experiencing difficulties in achieving further conceptions (Sutton, 1993). Infertility, whether primary or secondary, produces the feeling of failure and pain on the part of the couple.

In the past, the basic options for infertility were either to accept one's fate and go on with life or to adopt. Many choose this latter option, and adoption fulfils most of their hearts' desires. For others, however, there is still a desire for a child from their loins. It is this desire to have a child of one's own, that makes most infertile couples try many other options which include reproductive technologies as remedies to reproductive problems.

Artificial Reproductive Technologies, according to Shannon (1997), include "arrays of techniques and medications, arrangements and procedures designed to help an individual or couples mitigate the challenges of infertilities and thus reproduce and have children of their own" (90). These medical technologies have offered humanity the assurance that all hope is not totally lost in the face of the difficulties of infertilities and human reproduction. Through these means, a permanently infertile couple might still be able to conceive their own biological children. For Ekwutosi (2008, p.160), "advances in medical technology, such as artificial insemination and in vitro fertilization have opened new possibilities for infertile couples, while challenging traditional notions of family". Some of these improvements have given rise to the artificial or mechanical means of introducing the male sperm into the woman for fertilization purposes. Thus, birth control and medicine have now brought about the possibility of sex without reproduction, as well as methods of reproduction without sex, including artificial insemination by donor, in vitro fertilization, and surrogate embryo transfer.

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There are basically two principal categories of human artificial reproductive technologies. They include: human cloning and artificial fertilizations.

The term Cloning is derived from the Greek word *klon*, which means twig or offshoot (Hansen and Schotsmans, 2001). It is the process of creating an identical copy of something that could include plants, animals and human beings. Rovik (1978) describes it as a process by which one could, without the union of two sex cells, produce a plant, animal, a human being and do so in such a way that the offspring would be the exact replica, the identical twin, in effect of the plant, animal or the person cloned. For Peschke (2009), cloning is a mode of asexual reproduction used for animals. In the one form, the reproduction is brought about by the division of an embryo in its early stages in two or more embryos, in the other by the exchange of the cell nucleus of an ovum through the nucleus of the cell of an adult animal. The embryo or ova thus treated are transferred to the uterus of a female animal and there stimulated to grow (Peschke, 2009). When this process of reproduction is successful, the clone has the same genetic identity as the same organism or organisms from which it is cloned. Hence, it is the artificial reproduction of the exact genetic copy of a living organism.

Human cloning is an assisted reproductive technological method that is normally carried out with the goal of creating "a genetically identical copy of an existing or previously existing human; a replication of genetically identical or near identical human beings" (Holand, 2003, 193). In its procedure known as nuclear transfer, the nucleus of a mature but unfertilized egg is removed by micro surgery or by irradiation, and replaced by the nucleus of a specialized body cell of an adult organism. This new nucleus brings to the egg cell a complete set of forty-six chromosomes, which would have ordinarily been accomplished in natural processes by the summing of twenty-three chromosomes of a sperm cell with twenty-three chromosomes of the egg cell. When the egg cell has divided a few times, it is placed into the womb of a healthy human and incubated (Pazhayampallil, 2004).

There are three basic forms of cloning: Embryonic, Somatic Nuclear Cell Transfer (SCNT) and Therapeutic cloning.

Embryonic cloning involves the taking of an early pre-implantation embryo and separating out the cells, which develops to form genetically identical foetuses. The individual cells are allowed to grow on their own and then introduced into the womb of a woman, who carries them to term and

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subsequently born. Embryonic cloning produces identical twins or triplets or more by replicating the process that nature uses to accomplish the same goal (Ekennia, 2003).

On the other hand, Somatic Nuclear Cell Transfer, is the scientific reproductive method used to copy an adult organisms' genomic deoxyribonucleic acid (DNA) into another organism. Its procedures according to S. Holland, involves the extraction of the nucleus of an egg cell and its replacement with a nucleus taken from the cell of the organism to be cloned (Holland, 2003). This means that the nucleus of a mature but unfertilized egg is removed and replaced with a nucleus obtained from a specialized cell of an adult organism. If it begins to divide normally, it is transferred into the uterus of a woman. Granted all the hereditary material of a cell is contained within its nucleus, the re-nucleated egg and the individual into which this egg develops are genetically identical to the organism that was the source of the transferred nucleus.

Cloning is said to be therapeutic, when it involves ''the attempt to clone a cell of a seriously ill person, e.g. with liver cirrhosis, and let it grow as an embryo in order to use its tissue for restoring the liver of that sick person" (Peschke, 2009, p. 302). In this procedure, human stem cells are used to study human development and to treat diseases. The purpose of this form of cloning, according to Sher (2005), is to generate embryos for the purpose of research, mainly by harvesting the early embryonic stem cells that have the potential to develop into different tissue types, depending on the environment into which they are delivered and the stimulus evoked.

The second basic category of artificial reproduction is artificial fertilization. This occurs when male sperm unites with the female ovum through some other artificial means other than sexual coition. This type of fertilization includes the artificial inseminations and all forms of in vitro fertilizations.

Artificial insemination is said to have taken place when a woman is fertilized by means other than the natural intercourse. Thus, by the use of instruments, semen is deposited in the woman's vagina, cervical canal, or uterus for fertilization. In artificial insemination therefore, impregnation is not through the natural coition but through artificial means. Fertilization occurs when the introduced sperm fuses with the woman's ovum.

Artificial Insemination could be homologous or heterologous depending on whose semen is used. It is said to be homologous if the semen of the husband of a woman is used. The sperm of the husband is

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usually collected through masturbation or during a natural intercourse using a perforated condom or through some other unnatural means (Mastroianni, 1995). The method is more common among married couples, especially where the husband suffers from impotency or oligospermia. On the other hand, artificial insemination is said to be heterologous when the semen is got from a man other than the husband of the woman. This method usually occurs in a situation where the man is infertile or the woman is unmarried. Some refer to it as artificial insemination by donor or artificial insemination by vendor since the sperm is provided by or bought from vendors (Annss, 1979).

The second aspect of artificial fertilization is in vitro fertilization (IVF). "In Vitro (literally, "in glass") fertilization (IVF), is the beginning of a new human being outside the mother's body" (Clowes, 2002). Its procedure, involves the externalization of both sperm and ovum in the laboratory, "where fertilization takes place before the fertilized ovum (the embryo) is planted in the woman's uterus" (Meilaender, 2013, 11). Naturally, fertilization in mammals, takes place in the living body of a female, and scientists call it in vivo fertilization. On the contrary, in vitro fertilization is the process of fertilization accomplished outside the body but in test tubes or petri dishes in a laboratory. Here, it is referred to as the technique for conception of a human embryo outside the mother's body; and the resulting embryo is implanted in the uterus for gestation. Hence a child born through this procedure is commonly called *Test tube Baby.*

This technique has been used extensively in animal embryological research for decades, but only since 1978 has it been successfully applied to human reproduction (Clowes, 2002, p. 234). In vitro fertilization is the brain child of Patrick Stepteo and Robert Edwards who started their investigations into the possibilities of producing babies through this technical means in 1968. Their investigations were successful, as Louise Brown, the first baby conceived in a Petri dish was born on July 25, 1978. Since then, over four million and still counting children conceived in this way are said to have been born worldwide (Russell, 2010). eClinicalMedicine (2023) reports that children conceived in vitro are on the rise.

In vitro fertilization treats infertility problems by by-passing diseased fallopian tubes, which prevents the ovum from passing through the tube where it could be fertilized and then descend to the uterus and thus becomes a gateway to human reproduction.

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In vitro fertilization, like artificial insemination could be homologous or heterologous depending on the source of the gametes. If the sperm is that of the husband of the woman, it is homologous, whereas if the gamete is from a source other than the wife or the husband or other sources other than the couple themselves, it is called heterologous in vitro fertilization.

Another artificial reproduction related issue is surrogacy, a term surrogacy from two Latin derivatives 'sub', which means 'in place of', and 'rogare', meaning 'to ask'. The words when joined together becomes 'subrogare', which means, 'to ask (someone) in place of another'. A surrogate is thus one who, or that which, is substituted for another. It is from this that the term surrogate motherhood is derived. A surrogate mother therefore, is ''a woman who bears a child on behalf of another woman, either from her own egg or from having a fertilized egg from the other woman implanted in her womb'' (Soanes, 2005, p. 1043). Describing surrogate motherhood, Clowes (2002) highlights that it involves the artificial insemination of a woman with a husband's sperm if his wife is infertile or does not want to carry a pregnancy to term for a variety of reasons (236). It could also be performed as a commercial engagement, by which the woman receives a fee or as a way of assistance to another woman or couple. In some cases, the surrogate is implanted with the couple's embryo after in vitro fertilization. The woman relinquishes the child to the contracting couple immediately after birth. This practice is equally referred to as "rent a womb" or "mercenary motherhood." From all indications, the child who is a by-product of this complex technological process has multiplicity of parenthood. Hence, it has at least two mothers and one father; and may even have up to three mothers and two fathers: a genetic or biological mother (who donated the ova), a gestational mother (who carried the baby), an adoptive mother; a genetic father and an adoptive father.

Surrogacy could be altruistic or commercial, genetic or gestational. Surrogacy is said to be altruistic, when it is undertaking as a compassionate act, in other words, it is done out of empathy. No form of financial attachment is involved, though one cannot entirely rule out inherent emotional attachment between the gestational mother and the child, which may be a source of conflict in the nearest future. In commercial surrogacy, the gametes for conception are obtained from the couple, while the surrogate mother only contributes her womb and is paid to carry the pregnancy to term for the couple who contracts her. On the other hand, in genetic surrogacy, the surrogate mother contributes both her womb and egg, which is fertilized by the sperm of the woman's husband. This usually happens when

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the contracting woman is incapable of conceiving a pregnancy either as a result of her inability to produce eggs, damaged fallopian tubes, problems with the uterus or for some other medical grounds. In this case, the gestational mother is genetically related to the child, having contributed egg and as such has contributed half of the child's DNA (Rae & Riley, 2011). This form of surrogacy can as well be commercial. On another note, surrogacy is said to be gestational, when the surrogate mother has no genetic tie to the child she is carrying. She does not contribute genetically to the child since she does not provide the egg. The woman who is the contracting party has her eggs harvested through the same procedure used for in vitro fertilization. The eggs are then fertilized with the husband's sperm and the resulting embryos transferred to implant in a surrogate's womb. She carries the pregnancy to term, gives birth, and then hands over the custody of the child to the contracting party.

Ethical Implications of assisted Reproductive Technologies

Scientific and technological interventions in the process of human generation in recent years, no doubt, have offered new possibilities in the creation of humanism. They indeed, constitute progress in the service of man. However, these interventions are often used against its original purpose, which is the advancement of the human person. Hence, concerns are raised as to whether 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 are absolutely accorded to man through the assisted reproductive technologies. The question as to the ethical issues such reproductive interventions pose on the intrinsic meanings of sexuality, marriage, and parenthood, and from their possible economic and social repercussions abound.

The separation of conception from sexual intercourse

Scientific discoveries in the area of human fecundity have in the past brought about pregnancy without sexual intercourse, but now,the assisted reproductive technologies have gone further intocreating the possibility of conception without sexual intercourse. Through assisted reproduction, artificial means is used to substitute the conjugal act instead of facilitating its natural purpose. Thus, the inseparability of the unitive and procreative aspects of the conjugal act, as *Donum Vitae* avers, is threatened by the such reproductive interventions like,in vitro fertilization, artificial insemination (*Donum Vitae*, part II, 4, B). These procedures dissociate procreation from the sexual act and by so

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doing entrust the life and identity of the embryo into the power of the physicians, thereby establish the domination of technology over the origin and destiny of the human person.Reproductive cloning, for instance, has the prospect of turning procreation into manufacturing. With cloning, the total blue print of the cloned individual is selected and determined by human artisans, which would be a dehumanization and violation of human equality and freedom. With this domination, the dignity and equality common to parents and children as human persons are jeopardised. Benagiano, Carrara and Filippi (2010) identify separation of conjugal intimacy from reproduction as a major ethical issue of assisted reproduction.

Disorientation of marital values and bond

Assisted reproductive techniques such as surrogacy, while introducing a third party in marital affairs of spouses, infringe on the right of the child to be born of a father and mother known to him and bound to each other by marriage. They equally betray the spouse's right to become a father and mother only through each other. With these technologies, pregnancy is reduced to a simple manufacture, hence separating the child from the intimacy and love that ought to exist between mother and child. Women in this process are therefore seen as mere objects and the dignity of womanhood is compromised. The risk factor in these procedures, obvious in possible complications for the health of the woman calls for concern. The means of sperm procurement, which is usually through masturbation is in itself immoral and there is what one may call "technological adultery" especially when the gametes of a third person is involved. In the heterologous artificial insemination, the child is denied the right to be brought up in a normal and healthy family and may likely go through identity crisis, granted his/her origin is not known.

Distorted identity and Parenthood

Assisted reproductive interventions like surrogacy, cloning, etc, would create identity and individuality problems to the child-by-product of such complex procedures, who would have multiplicity of parenthood. The child has at least two mothers and one father; and may even have up to three mothers and two fathers: a genetic or biological mother (who donated the ova), a gestational mother (who carried the baby), an adoptive mother; a genetic father and an adoptive father.Genetical and hereditary traits would always rear their heads. Many scholars aver that a child's genetic

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inheritance will always play out in his or her future life.Even some health situations like epilepsy and insanity traceable to a biological parent constitute a risk factor to a child produced through these procedures.

The destruction of the human embryo

Assisted reproductive technologies like the IVF procedures involve the creation of many embryos, most of which will never be born but are eliminated through selective abortion or are frozen. Many scientists are anxious to employ 'spare' embryos as human 'leftovers' that result from in vitro fertilization for research purposes. According to Clowes (2002), one of the many ugly ethical problems that IVF have created is an alleged need for "pregnancy reduction" abortion (Clowes, 2002, p. 234). Defective embryos are thereby seen as biological waste and are thus discarded, whereas they are in active potentiality and have genetic code of the human person.

Economic and social challenges

Some feminists see artificial reproductive procedures as exploitative to women. Bartholet (1993), corroborating this stand, holds that IVF, which bombards a woman's body with powerful hormones and then invades the body to harvest eggs, is a prime example of such an exploitative technology, hence posing a significant health risk to the woman. It holds out the false promise of success when the chance of taking home a baby is actually quite low (Bartholet, 1993).One study found that women treated with infertility drugs have a risk of ovarian cancer that is 2.5 times higher than that of women in the general population (Beauchamp & Walters, 2014). Commercial interests might engage in offering genetically certified and guaranteed embryos for sale. Health risks to the clone and the woman who receives the embryo are equally major factors in human cloning. The tendency to lessen the worth of individuals and diminish human value and respect for the sanctity of human life, would be the order of the day through, especially through reproductive cloning.

The huge financial and emotional costs of IVF are equally risk factors. Women who undergo the IVF procedures live with psychological burdens, obvious in the emotional ups and downs inherent in the cycle of hope and disappointment; the disruption of work and, often, personal relationships. The women are also subjected to the feeling of humiliation and depersonalization that may result from the submission to painful and embarrassing invasions of their bodies.

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Evaluation

Artificial reproductive technologies, have a utilitarian or consequentiality approach to fecundity. Utilitarianism as a system of normative ethics most generally is described as the doctrine, which states that "the rightness or wrongness of an action is determined, by the goodness and badness of their consequence" (Edwards, 1967, p. 206). So, it is a form of consequentialism: the view that acts are never right or wrong in themselves, but only because of their consequences.Will the action produce happiness or unhappiness? In utilitarianism, everything else is only good or bad according to its tendency to produce happiness or unhappiness. It sees morality as human creation, serving human ends.

From the forgoing, it goes without saying that the suffering of spouses who cannot have children or who are afraid of bringing a handicapped child into the world is a suffering that everyone must understand and properly evaluate. On the part of the spouses, the desire for a child is natural: it expresses the vocation to fatherhood and motherhood inscribed in conjugal love. This desire can be even stronger if the couple is affected by sterility which appears incurable. Artificial reproductive technologies seem to have provided answers to these numerous challenges and pains. Hence, many families who have been in pains of childlessness, through these procedures, have smiled home with children of theirs.

In that case therefore, the tenets of utilitarianism and its antecedence of the end justifies the means, could be said to have proven its mettle. However, to assess anything morally, there is the need to consider its impact on the interests of people. Will the item under assessment do good? Cause harm? Treat people fairly? Respect them as autonomous agents? What impact will it have on the community as a whole? These are the fundamental questions of ethical assessment (Steinbock, 2014).

Does the joy of having a child of one's own through any means whatsoever justify the risks and guilt that accompany the processes of getting the child? This challenges the practicability of the application of utilitarianism, which holds that "the welfare of the society is the achievement of the desired goals, the general satisfaction of preferences, wants and wishes" (Machan, 1977, p. 94). In line with this, it is difficult to know whether or not some actions will contribute to the well-being of the members of the community as the utilitarians would want us to believe. In that case, one may ask: how can we

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accurately determine the amount of happiness that in vitro fertilization is likely to yield? Granted the theory of utilitarianism cannot guide one's conduct in terms of whether maximum happiness is being enhanced, to that extent, it fails prey to the criticism that it cannot provide useful guidelines to conduct and as such, the theory is bound to be unsuccessful.

Furthermore, utilitarianism tends to violate the common-sense ethical precepts. Assessed from its tenets, it would often be morally correct to kill, lie, steal, or cheat granted that by so doing, the greatest happiness of the greater number of persons will be promoted. In view of this therefore, the procedures of in vitro fertilization, which involve the deliberate elimination of embryos could be said to be justified since there is "the wanted child" at the end. This places embryos and indeed human life in a very precarious situation.

It is necessary therefore, to recall a general principle regarding the determinants of morality of every human act. For an action to be right the end must be right, which is to say that it must be consistent with the good of the human person, and it is likewise necessary that the means be right, which is to say that it too must be in conformity with the whole good of the persons and consistent with the end (Omoregbe, 2002). This principle being the case ought to be applied in the context of human procreation. In the artificial reproductive processes, the end is very noble: helping an infertile couple to become parents. The means, which are: the procedures of the technologies, third party involvement and the disregard of the status of the human embryo are questionable.

6. Conclusion

The right to reproduce belongs to both fertile and infertile people. This does not mean that restrictions on assisted reproduction are never justified, but rather that restrictions need to be justified, balancing the interests of patients, offspring, and society as a whole.

The non-marital ways of engendering human life as it is obvious in reproductive technologies brings about a dehumanizing treatment of the child as a product inferior to their producers and subject to quality controls and not as persons equal in dignity to their parents. The new human life which comes to be as a result of artificial reproductive technologies becomes the end product of a series of actions, undertaken by different persons just to make a particular product, a human baby. Through these

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reproductive technological procedures to fecundity therefore, human embryos are treated as mere objects of experimentation, which is morally illicit.

The benefits of the assisted reproductive procedures notwithstanding, modern man should be wary of the danger of reducing the earth to a desert, the person to an automaton, often introducing death where nature wishes life. There is need therefore for states to have legislations in place to protect the embryo and make embryonic stem-cell research a felony, for an uncontrolled application of the reproductive technologies could lead to unforeseeable and damaging consequences for civil society. Concern is being raised on the activities of quacks who may take undue advantage of the lack of regulations on the engineering technologies to exploit desperate clients. Similarly, it could as well become an avenue for child trafficking, baby - factories and even the putting up of some personal human parts, ranging from the sperm, wombs and ovaries as commodities for sale.

In the light of the above therefore, this work recommends as follows:

1. Natural Procreative Technology (NaProTechnology) should be employed as alternative to in vitro fertilization and other artificial reproductive procedures. NaProTechnology, which is an integrated diagnostic and multi-level therapeutic approach to infertility promises to be a better option and could resolve the ambiguities in fertilization in women (Velez, 2012). In NaProTechnology, the abnormalities of the reproductive cycle are identified and corrected, when possible, thereby giving room for infertile women to conceive and bear children.
2. Legal adoption should be encourage as it fills the gap created by infertility and is devoid of moral issues caused by ART.

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