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**CHRISTIAN PRINCIPLES FOR ASSISTED
PROCREATION: THE BIBLE AND BIOETHICS**

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“The broad principles of the word of God are to regulate the character and conduct of every genuine Christian.”

“If they make the broad principles of the word of God the foundation of character, they may stand wherever the Lord in His providence may call them...and yet not be swayed from the path of right.”

Ellen G. White¹

Introduction. Nearly three decades ago, I taught my first course titled “Christian Bioethics” in a Seventh-day Adventist College. The dean of the faculty in which I served questioned the wisdom of such a course. How, he wondered, could there possibly be Christian answers to the questions of biomedical ethics? Since there were no specific biblical passages directly relevant to the issues, he doubted the advisability of attempting to develop a Christian approach to such matters as euthanasia, human experimentation, abortion, and assisted procreation. He used a vivid metaphor. It would, he said, be like “trying to build a house without a hammer.”

During the intervening decades, I have concluded that my esteemed first dean was asking the right question but arriving at the wrong answer. If we cannot find a biblical approach to bioethics, then there is no integrity in claiming that bioethics can be Christian. But where would this leave my Seventh-day Adventist community of faith, dedicated as it is to following the Word of God and to providing the highest levels of health care? How could we presume to operate many health care institutions around the globe, including some that engage in path-breaking research, if we have no credible, biblical approach to the most pressing ethical issues of human biology and medicine?

My own conviction, and the essential thesis of this paper, is that the Bible does provide rich resources for bioethics, sufficient for the difficult questions we must face. But this is certainly not apparent unless we can learn to search for the broad principles of God’s Word. If the goal, as was suggested by my dean’s objections, is to find biblical passages that provide specific, normative answers for each of the bioethical issues, we are bound to be frustrated. But if we are imbued with the Spirit of Truth, if we take the whole Bible, including not only the rules but also the history, the poetry, and grand unifying themes into account, and if we attend centrally to the plan of salvation through Jesus Christ, then I believe we have the necessary resources for biblical bioethics.

In this paper I want to illustrate this thesis by taking a practical question of bioethics and asking what broad principles from Scripture should apply. The issue is that of medical treatment for human infertility through what have come to be called assisted reproductive technologies (or ART).

Assisted Procreation. Personal anguish may be intense when couples are unable to have their own children. From the time of ancient human stories to the present, married couples, desiring to have children but finding themselves to be infertile, have sought help. For centuries, couples relied on folk remedies, traditional rituals, and prayer. Only in recent decades has medical science offered an increasing array of assisted reproductive technologies to aid infertile couples. The two cases that follow may help to uncover some of the ethical complexity of ART:

Case 1: Mary (all the names used in this paper are, of course, fictitious) was only 22 years old, and preparing for a Seventh-day Adventist marriage when a rare tumor required the removal of her uterus. The surgeon was able to preserve Mary's ovaries, but not her uterus. Still, Mary's grief was deep because she and her fiancé, Tom White, had hoped to have children. She even offered to call off the marriage out of respect for her fiancé. Tom was his parents' only child, and he and Mary had hoped to perpetuate his family name. But Tom assured Mary that he loved her and wanted to go ahead with the marriage despite the fact that they would never have children of their own. They could, he assured her, attempt to adopt children. After about four years of marriage, when Mary and Tom were seriously considering the adoption of a child, Mary's older sister, Susan, spoke with Mary about a different possibility. Susan offered to be a surrogate gestational mother for Mary and Tom so that they could realize their hope of having a child who would be genetically their own. Susan already had three children, and she and her husband agreed that serving as a surrogate for Mary would be a very satisfying way to help her sister. After long and careful conversations with Susan and with the physicians at the fertility clinic, the Whites decided to seek in vitro fertilization (IVF) using their own gametes. The plan was to transfer the resulting embryos to Susan's uterus with the hope of a successful pregnancy. Tom's parents were made aware of the plan, and they offered to help cover the substantial expenses for the IVF procedures. IVF resulted in eight embryos, three of which were placed in Susan's uterus. The other five were frozen for possible later attempts. Susan became pregnant with one fetus, and in due time she gave birth to a healthy baby boy named William – the son of her sister and brother-in-law, and the cousin of her own three children. Now, two years later, Mary and Tom are considering whether to try for a second child. Susan is again willing to serve as a surrogate for gestation, and the entire family considers little William to be a gift of God, an answer to prayer made possible through modern medical technology.

Case 2: For several years, Carol and Bob Little had been unsuccessful in their attempts to conceive a child. After careful testing, it was discovered that Bob produced sufficient sperm with adequate motility, but Carol was incapable of producing ova. She was also found to have a heart condition that might make pregnancy more risky for her. Both Carol and Bob, who were in their mid thirties, worked at high-paying jobs, so the cost of IVF was something they could bear. After considering all their options, the Littles decided to seek the aid an ova "donor" – a young woman who would be paid for producing a number of ova

following the use of a medication that produces hyper-ovulation. The plan was to use IVF with Bob's sperm and the ova from the "donor." The resulting embryos would then be placed in the uterus of yet another woman, who would be paid for gestational services. (Carol had decided not to risk pregnancy, and she also felt it was important to continue her job in order to help pay for the IVF.) The plan succeeded: seven embryos resulted from the IVF; three of these were implanted in the surrogate; and pregnancy with a single fetus resulted. The remaining four embryos were frozen for possible future use. A baby girl was born, and the Littles were delighted. However, problems developed in the marriage. And four years after the birth of their daughter, the Littles sought a divorce. About two years after the divorce, Carol decided that she wanted to have another child -- a sibling for her daughter who now lived with her. Carol sought access to the four embryos that remained frozen at the fertility clinic where the Littles had gone for IVF. The agreement that both Bob and Carol signed prior to IVF stipulated that both of them must agree to any future use of the embryos. Bob was contacted, and he objected to Carol's plan. From his point of view, the embryos were genetically related to him, not to Carol, and he was unwilling to agree to any attempt to use them for another pregnancy. Carol sought a legal decision from the court. A law suit was filed on behalf of the *daughter* with the claim that she was the only person 100% related to the frozen embryos, and failure to permit them to be gestated and come to birth would deprive the daughter of her relationship with her siblings. The first court decided in favor of Bob Little on the grounds that the original agreement signed by both Bob and Carol was binding. The matter is now pending further legal appeals.

These two cases could hardly be called typical. Some might even find them rather strange, though they do represent actual cases. My hope, however, is that they may be useful as a prisms to show some of the ethical color and complexity that arises with ART. The goal is to set forth basic biblical principles that can apply to cases like that of the Whites and the Littles. If they had sought biblical guidance for their decisions about ART, what counsel could they have received? Or if they sought care from a Seventh-day Adventist infertility clinic that wanted to offer services only in keeping with biblical faith, what care should they have received?

Even a brief survey of Christian statements of ethics regarding ART will reveal widely divergent positions among those who claim the Bible as a decisive source for guidance.² Christians typically accept the moral authority of the canonical Bible, but they differ, sometimes dramatically, in the way they interpret Scripture for ethics. They also differ in the degree to which other sources of moral authority, such as human reason, personal experience, and ecclesiastical tradition, are taken into account. This is illustrated clearly by Roman Catholic rejection of ART. Before turning to examples of biblical principles, it may be instructive to consider the Catholic position briefly, because it is a memorable demonstration of an ethical position that claims to be Christian, and is admirably thoughtful. But it is also clearly not biblical.

Roman Catholic rejection of ART. The Roman Catholic Church, especially in its pronouncement *Donum Vitae*, has rejected nearly all forms of ART as unacceptable ruptures of the unitive and procreative functions of married human sexuality.³ The conclusion of *Donum Vitae* eloquently reminds readers that much is at stake: “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.”⁴

Acknowledging the remarkable power that medical science has gained over human procreation in recent decades, the writers of *Donum Vitae* caution against the serious moral risks such power represents. The moral danger of ART, according to this document, does not stem from the fact that such interventions are *artificial*. Rather, evaluation of ART must be based on its relationship to human dignity as created by God. From this perspective, human beings have God-given dignity, and thus the right to life, from the moment of conception until death. And the transmission of human life through the act of procreation must also be preserved according to the will of God.

Two primary objections to ART emerge from the Roman Catholic moral tradition. The first has to do with the ensoulment of the embryo. From the time that human gametes first unite in the production of a new zygote, a new, fully protectable and immortal human soul is present. For this reason, any form of ART that endangers human embryos is morally unacceptable. In the words of *Donum Vitae*: “[A]ll research, even when limited to the simple observation of the embryo, would become illicit were it to involve risk to the embryo’s physical integrity or life by reason of the methods used or the effects induced.”⁵ From this point of view, if human embryos are produced *in vitro*, they must be protected and given the opportunity to come to birth. No “spare” embryos may be discarded. And cryopreservation, or freezing of embryos is also forbidden even though the goal may be the conservation of the embryo’s life, because the act of freezing exposes the embryo to added risks of harm, including the risk of death.

The second major objection of the Roman Catholic tradition to ART relates to the nature and purpose of sexual procreation in marriage. Responsible procreation can only occur within the boundaries of marital fidelity. This means, among other things, that a husband and wife can only become parents through the gift of love to each other. No third parties, such as surrogates and sperm or ova “donors,” should be involved. Even artificial insemination using the sperm of the husband is rejected because this would break the connection between the unitive act of sexual intercourse and the procreative purpose of such intercourse. Based on their understanding of “natural law,” the Catholic tradition holds that all human procreation must be the result of sexual congress between a husband and a wife, and must always combine both the capacity for “love making” and the potential for “baby making.” This teaching entails the well-known prohibition of all forms of artificial contraception. Another practical effect is to rule out virtually all forms of ART. Even if both sperm and ova come from the married couple, IVF is rejected because it separates the act of fertilization from a *specific act* of sexual intercourse, and thus goes against the Catholic interpretation of natural law. IVF is also rejected because

“Such fertilization entrusts the life and identity of the embryo to the power of doctors and biologists, and establishes the domination of technology over the origin and destiny of the human person.”⁶

The strict insistence of Roman Catholic teaching that every child has a “right” to be conceived as “the fruit of the specific act of conjugal love of his parents”⁷ has encountered major critiques even from contemporary Catholic moral theologians. For example, Lisa Sowle Cahill, a leading Catholic ethicist in the United States, has emphasized the importance of all procreation occurring within the context of the loving relationship of a married couple.⁸ All acts intended to facilitate human conception should be evaluated ethically in terms of how they flow from this marital relationship of love and how they support its fidelity. Thus, Cahill suggests that procedures such as homologous IVF (in which only the gametes of the spouses are involved) should be assessed in terms of the complete relationship of the marriage. She argues that “An each-and-every-act analysis of the ‘inseparability’ of sex, love and procreation distorts the valid unity among them by tying that unity to specific sexual acts rather than to the marital relationship.”⁹

Similarly, Thomas Shannon, another Roman Catholic moral theologian, contends that the traditional Catholic view places too much emphasis on specific sexual acts and too little emphasis on the whole relationship of married couples. Shannon’s point is that infertile married couples who seek ART *are* demonstrating their openness to procreation within the context of marital fidelity. He challenges the moral reasoning that insists human procreation must include a specific act of coitus: “Why the physical integrity of the [sexual] act should take moral priority over the intention of the husband and wife to become mother and father through the use of their own genetic material is both unexplained and unclear.”¹⁰ Like Cahill, Shannon calls on his fellow Catholic moral theologians to reconsider the traditional priority of the physical over the personal. In his view, Christian principles lead to the conclusion that techniques such as IVF should be available to married couples who find themselves frustrated by infertility: “The couple using IVF is essentially doing what another couple is doing without IVF: cooperating in the creation of a new being from their love and their bodies.”¹¹

Like these and other critics, I am not convinced by the Roman Catholic arguments for insisting on the inseparability of the procreative and unitive purposes of each act of married sexual relations, and, thus, for rejecting nearly all forms of ART as well as the most common forms of birth control. But my reasons are not rooted in a belief that we can settle such matters by an appeal to natural law. Rather, the problem is with the lack of biblical support. Nowhere does Scripture state, or even imply, that it is morally wrong for a husband and wife to enjoy sexual relations when they do not intend procreation. Later, I will argue that it makes ethical sense, from a biblical perspective, to hold that ART should be offered only within the boundaries of marital love. And in a number of important ways, this affirmation does insist on holding together the gift of procreation with the gift of married love. However, the connection is between procreation and the *entire* relationship of marital fidelity. And this is based on a biblical view of the marriage covenant, not on a reading of natural law.

Still, even if the Catholic position on ART fails to develop and adequately biblical position, it should be acknowledged that *Donum Vitae* does well to remind us of central values that deserve protection. Among these, are the inviolable and invaluable gift of human life, the divinely appointed dignity of embodied personal life, and the importance of preserving the moral meaning of human procreation as an act of love for married couples. Such values point Christians in the direction of basic principles that should guide the use of ART. What follows is my attempt to set forth basic examples of such principles drawn broadly from Scripture.

1. Children should be valued as a gift from God. Human procreation is a part of God's gift to married couples. In a world with several billion human beings, it may seem unnecessary to urge people to "be fruitful and increase in number" (Genesis 1:28).¹² And the problems of over-population and must receive serious attention from those who believe that God has entrusted to humans the responsibility of caring for the earth. But the need to make responsible decisions about limiting procreation should not obscure the fact that, from a biblical perspective, the birth of children is a source of joy. To those specially called to be the people of God, a promise was repeatedly given: "I will surely bless you and make your descendants as numerous as the stars in the sky and as the sand on the seashore" (Genesis 22:17).¹³ To have many children was considered a great blessing. In the poetic words of a Psalm:

Sons are a heritage from the Lord,
children a reward from him.
Like arrows in the hands of a warrior
are sons born in one's youth.
Blessed is the man
whose quiver is full of them.¹⁴

To be "barren" or infertile was to experience deep sadness and disappointment. Frequently, stories are told in scripture of those who call upon God for miraculous aid in overcoming infertility, and God often answers their prayers affirmatively (Genesis 25:21). Again, the poetic words of the psalmist depict the Master of the universe as a participant in helping His people overcome infertility:

He settles the barren woman in her home
as the happy mother of children.¹⁵

Some may suggest that in an ancient agrarian, tribal society children were a source of security and wealth. Perhaps we should now understand the biblical attitude toward the blessing of children in light of the life situation of those times and acknowledge the fundamental differences between their conditions and our typically urban settings with their problems of over-population. While these differences can hardly be ignored, it is still the case the people whose moral imagination is shaped by the Bible will consider it a blessing to become parents and grandparents. In the process of caring for children, parents learn something unique about the eternal love of God. From a biblical

perspective, the capacity to make sacrificial commitments for the sake of the next generation is a trait God created in humans.

What this means for Christian ethics is that we imitate God when we assist infertile married couples to have the children they so often desire. This is not a matter of “playing God,” as some say. Indeed, if this were the case, then all medical interventions could be viewed as usurping the authority of God. After all, if God wants someone to live or die, why should we interfere with our attempts at life-extending medical care? The use of ART, such as IVF or homologous artificial insemination (with the husband’s sperm) is better understood as *cooperation* with God, who alone is the ultimate Giver of life. So long as the techniques that have been developed to assist human procreation do not abrogate other Christian principles, such interventions should be celebrated as opportunities to serve those who have distinctive medical needs.

Some may contend that infertility is not a “medical need.” But the capacity to have children is a normal part of human functioning. The inability to conceive and give birth to a child is appropriately viewed as a disability, especially when those who are infertile eagerly want to have children. As with any other disability that diminishes the quality of a person’s life, it is a legitimate goal of human medicine to seek ways to mitigate or overcome the disability. The personal anguish felt by some who are infertile should call forth in us a sense of compassion and a willingness to offer assistance if such can be done in morally acceptable ways.

2. Procreation should occur within the bounds of a loving marriage. The flourishing of children is best facilitated in the security of a family relationship in which mother and father actively participate in the development of maturity. From a biblical perspective, children are to learn their moral responsibilities from their parents (Deuteronomy 6:6-7), and children are to honor, respect, and obey their parents (Exodus 20:12; Ephesians 6:1). The wisdom literature says that “parents are the pride of their children” (Proverbs 17:6). And, in the Christian scriptures, God is often likened to a faithful parent (Hebrews 12:7-10).

For many reasons, the biblical ideal of both parents caring for their children is not always possible. Because of death, divorce, or desertion some parents must care for their children without the benefits of a spouse. But this fact should not lead to the conclusion that it is ethically permissible to *intend* a situation that deprives children of the benefits of both parents. From the perspective of Christian principles, the various techniques of ART should be available to married couples who are freely committed to procreation.

Because of the importance of preserving the integrity and exclusivity of the marriage relationship, there are serious ethical reasons to question the involvement of third parties in the process of procreation. The purchase and use of sperm or ova from “donors” and the participation of surrogates raise difficult questions about protecting the marriage relationship and about the dehumanization of procreation. Such methods represent the intrusion of a stranger into the marriage, even if the third party remains present only biologically in the genetic heritage of a child produced in this manner. The intentional

severing of biological parenting from social parenting may be a threat to the integrity of marriage and to the identity of children produced in this way.

It is true, of course, that human beings may adopt a child and provide a loving home environment, even though they are not the genetic parents. But adoption meets the needs of already existing children who deserve the security of a home. We should hope that children are not deliberately conceived with the intention of relinquishing them for adoption. In the same way, we should hope that the use of ART would not be for the purpose of producing children who, by design, would never be able to know their biological parentage. The Bible's significant emphasis on persons' lineage indicates the importance of knowing one's place in the march of the generations (e.g. Gen. 5 and 11).

The belief that ART should be limited to helping spouses have the children they desire would rule out asexual reproduction of humans or what is commonly called cloning. At present, there appears to be nearly universal agreement among Christians that cloning human beings would be morally unacceptable for several important reasons, including the potential risks to the physical and psychological well-being of children produced in this way and the separation of procreation from the wholeness of a married couple's relationship. The prospect of cloning aptly illustrates the need to mine Scripture for broad principles. It would be absurd to expect specific, biblical rules for a practice like cloning, which, even now, is only a future possibility for human beings. But the Bible often enjoins the protection of the most vulnerable (Deut. 1:17-19; Amos 8:4-6; Isaiah 1:16-17). And no human beings are more vulnerable than those who just entering human community.

3. Human life should be treated with respect at all stages of development. Of all the living creatures God created on the earth, only human beings are described as being "in the image of God" (Genesis 1:27). The ultimate penalty was established for taking human life: "Whoever sheds the blood of man, by man shall his blood be shed; for in the image of God has God made man" (Genesis 9:6). From the time that God breathed life into our first human parents, life has been passed to subsequent human life, as a torch passes fire to another torch. In many respects, it is pointless to pursue the question of when human life begins. It began through the creative act of God. And it continues through the gift of human procreation. To look for a time when nascent human life may be destroyed without any regret is to look for something that is not part of the plan of God, even if one takes a developmental view (as I do) of the arrival of a new member of the human community.¹⁶

For ART, the practical implication of accepting the inviolability of human life is that care should be taken to protect life as it develops. But does this imply that it is ethically impermissible, for example, to freeze human embryos? The answer to this question should be negative for several reasons. First, the purpose of saving embryos through cryopreservation is to conserve the possibility of gestation and birth. All forms of ART probably entail some increased risk to embryonic human life when compared to the most common method of procreation. But it should be noted that the vast majority of embryos

conceived through normal sexual intercourse do not progress to live birth.¹⁷ The relative difference in risks between ART and procreation from sexual intercourse, though difficult to calculate with certainty, does not appear to be great. We should also be mindful that the purpose of ART is in the service of life. Without this service, the embryos in question would simply be hypothetical.

Cryopreservation also raises questions about the disposition of embryos that, for various reasons, a married couple may not choose to have transferred. A couple may decide that they already have as many children as they can reasonably care for. In addition to the possibility of an untimely death of one or both prospective parents, other factors, such as altered health or marital status may occur. What then should happen to so-called “spare” embryos?

At least three possibilities exist. The embryos may be saved indefinitely through cryopreservation. The costs for this are relatively nominal, and there is no clear scientific evidence that long periods of preservation would render the embryos non-viable. Indefinite preservation would leave open the possibility that the potential parents, if still alive, may later experience changed circumstances that would alter their willingness to seek embryo transfer.

A second possibility is that the embryos could be discarded. At present, it appears that the majority of couples who have control over the destiny of their extra embryos elect to discard them once the couples have their desired number of children.¹⁸ But, for those who attach moral value to the embryonic potential for personal life, discarding embryos is morally problematic.

A third possibility is that the embryos may be relinquished for adoption by other infertile couples who have been unsuccessful with other forms of ART. This third alternative deserves careful attention. Earlier I argued that ART is best seen as an ethical option for married couples who are seeking assistance with procreation of their own child. The intentional creation of an embryo for the purpose of selling it to others, or even for the explicit purpose of relinquishing it for adoption, carries unacceptably high risks of demeaning human life. But what should we say about those embryos that were frozen with the intention of being transferred to the womb of the genetic mother when this is no longer desirable or possible? If the biological parents of the embryos choose to relinquish them for adoption, as an act of compassion and generosity toward an infertile couple, this is probably the best alternative for preserving the greatest number of important values. The genetic parents of such embryos have within their power the opportunity to bless another couple with the hope of pregnancy and the birth of a child. While no one should be forced to make such a decision, it should be encouraged with accurate information about the prospect of helping others.

4. Decisions about assisted procreation should be based on truthful information.

Christian morality insists on truthfulness. Jesus lists deceit as one of the traits that make a person unclean from within (Mark 7:22), and Christians are admonished to rid themselves of deceit (1 Pet. 2:1). The Psalmist writes:

No one who practices deceit
 will dwell in my house;
 No one who speaks falsely
 will stand in my presence.¹⁹

By contrast, those who follow the Lord learn to distinguish between truth and error and to tell the truth in a caring way (Eph. 4:15)

Experience with ART illustrates the need for complete candor and the dangers of obscuring the truth. It should be obvious that couples seeking ART need to be given accurate information about the risks, costs, and evidence-based likelihood of success so that both spouses can make informed decisions. The success rates for IVF, for example, vary considerably among fertility clinics. And so do the costs. In previous years, it was not uncommon for a clinic to offer ART while failing to disclose the fact that it had very low, or even no, success with the methods being offered. This changed significantly in the United States after the passage of a federal law requiring all programs that offer ART to keep accurate records of successful pregnancy rates and report these to the federal government.²⁰ Couples seeking ART deserve to know their chosen clinic's success rates just as they deserve to know what the costs and risks will be.

5. Decisions about assisted procreation should be made freely. The ethical principle of human freedom is a particularly clear example of the need to search the Bible for the broad principles of God's plan for human life. The fact that the Creator permitted our first parents the freedom even to make death-dealing mistakes is dramatic evidence that love requires the risk that freedom entails (Gen. 3). Throughout the stories of Scripture, people are confronted with the most basic choices, including the choice to serve the Lord (Joshua 24:15). In the realm of ethical decisions, it is especially important that personal integrity be preserved by acknowledging the role of each individual's conscience. Commenting on this, Ellen White writes: "In matters of conscience the soul must be left untrammelled. No one is to control another's mind, to judge for another, or to prescribe his duty. God gives every soul freedom to think, and to follow the dictates of his own convictions."²¹

For this reason, it should also ethically obvious that both husbands and wives must make personal decisions about whether or not to become parents through ART. A relationship of love requires freedom. No hint of coercion should be allowed to intrude. While couples must make such decisions together, it is important to be certain that both spouses understand the implications of their decisions and that both are free to accept or reject ART. In some cultures, powerful social pressures in favor of successful procreation make it difficult to ensure respect for personal autonomy. Nevertheless, the decision to become a parent is of sufficient gravity with such a multitude of personal implications that every effort should be made to allow honest reflection and decision, free from an environment of force or intimidation.

Conclusion. The five principles set forth above obviously do not exhaust what Christians should ponder when assessing ART. There are many other important considerations. For example, Christian stewardship of scarce resources must be taken into account, especially in a world with such great needs. Christian couples must weigh the fact that IVF typically costs tens of thousands of dollars. Is such expenditure responsible given the couple's resources and responsibilities? And, in a world faced with the problems of over-population, would it be ethically preferable for couples to adopt children needing homes rather than to produce more children? ART also raises profound questions about social justice. Is it fair that couples with better health care insurance or greater wealth have access to the full range of ART while other couples, with more limited resources, have little or no hope of benefiting from such technology?

In a paper this brief, it has been impossible to address the full range of such important ethical questions. But the five stated principles do permit some relevant decisions to be made about the kinds of cases with which the paper began. The first case, that of the Whites, comes close to comporting well with all five of the principles: the couple made a suitably informed, autonomous decision that seeks to use ART for the purpose of having a child who is genetically their own. Their goal in the cryopreservation of the additional embryos is also on the side of human life. However, the participation of the Mary White's older sister adds the ethical complexity of a third person intimately engaged in the procreative process. While the presumption of the principle, stated above, is against such third-party involvement, all such principles must be applied in ways that take full account of the entire situation. My sense of the application of biblical principles to the White's case is that the involvement of the sister can be justified as an exceptional act of Christian compassion. Though arguments could be mounted on the opposite side, I believe that there is sufficient evidence to justify the White's decision. The sister is not seeking financial gain, nor does she seem to be motivated by other self-serving considerations. Her goal is to help her younger sister and brother-in-law who want children of their own. In some respects the older sister's action may be analogous to the biblically prescribed role of a brother who follows the levirate law for marrying his deceased brother's widow, thus preserving his brother's lineage in Israel (Deut. 25:5-10).²²

The case of the Littles, on the other hand, raises a number of additional problems. The involvement of an ova "donor" and of a surrogate gestational mother, both of whom were paid substantial sums for their participation, greatly complicates the case from the perspective of Christian ethics. The fact that the resulting embryos were genetically related to Mr. Little but not to his wife represents further ethical risk. Considering the entire situation of the Littles, I must conclude that their case is outside the bounds of the Christian principles stated here. The fact that they later experienced the added burdens of divorce and controversy over the frozen embryos is irrelevant to the assessment of their initial decision for ART. However, there can hardly be doubt that these problems were exacerbated by the complexity of the original process that led to procreation.

Based on the history of ART thus far, we may expect continued progress toward higher success rates for such techniques as IVF. We should also expect lower costs for this

service. This means that more infertile couples are likely to seek help via ART. Already many tens of thousands of children have been born as a result of such medical assistance. (The first reproductive health clinic to offer IVF in the United States recently reported that it is approaching the birth of the 3000th infant as a result of its program.²³) But such success comes with ethical price tags. For example, in the United States it is estimated that about 400,000 human embryos are currently in frozen storage.²⁴ The majority of these are being saved for what is described as “family building.” But it is likely that many will meet a different destiny; they will be used for research or discarded. Already, Christian organizations have been formed to facilitate the adoption of unwanted, frozen embryos.²⁵ These developments indicate that nearly three decades after the first successful IVF birth, there continues to be significant need for our best ethical reflection. For people who have faith in an all-powerful Creator, the work of ethics is an opportunity to serve God by searching for faithful applications of God’s revealed will. In this process, understanding the of the broad principles of God’s Word will be essential.

¹ Ellen G. White, *Youth's Instructor*, May 30, 1895, and *Testimonies for the Church*, vol. 4, p. 562.

² For a recent survey of religious attitudes toward assisted human procreation see J. G. Schenker, "Assisted Reproductive Practice: Religious Perspectives," *Reproductive BioMedicine Online*, January, 2005, Vol. 10, No. 3, pp. 310-19.

³ Congregation for the Doctrine of the Faith, *Donum Vitae*, issued February 22, 1987, translated as “Instruction on Respect for Human Life in Its Origin and on the Dignity of Procreation” and reprinted in Edmund D. Pellegrino, et al, editors *Gift of Life: Catholic Scholars Respond to the Vatican Instruction* (Washington, D. C.: Georgetown University Press, 1990), pp. 1-37.

⁴ *Ibid.*, pp. 36-37.

⁵ *Ibid.*, p. 13.

⁶ *Ibid.*, p. 27.

⁷ *Ibid.*, p. 30.

⁸ Lisa Sowle Cahill, “What Is the ‘Nature’ of the Unity of Sex, Love and Procreation?” in *Gift of Life*, edited by Edmund Pellegrino, pp. 137-48.

⁹ *Ibid.*, p. 142.

¹⁰ Thomas A. Shannon, “Reproductive Technologies: Ethical and Religious Issues,” in *Reproductive Technologies: A Reader*, edited by Thomas A. Shannon (New York: Rowman and Littlefield, 2004), p. 42.

¹¹ *Ibid.*, p. 45.

¹² All quotations from the Bible are from the New International Version.

¹³ See also Exodus 32:13.

¹⁴ Psalm 127:3-5.

¹⁵ Psalm 113:9.

¹⁶ It is not possible in this paper to develop a full discussion of the moral status of prenatal life. It is uncommon for anyone, including Christians, to assign the status of moral protectability to human gametes, though they are alive, and the technology of parthenogenesis might make it possible at least for an ovum to develop into a human being. But after gametes unite to begin the process of forming a new genotype that may eventually implant and become a fetus, precisely when should such life be accorded full moral status? In answer, many Christians claim clear biblical warrants for positions ranging from the “moment of conception” to the first breath. My view of the matter is developmental. All the stages count. For example, the process of syngamy is important because, when it is completed, a new genotype has been formed. Later, at the point of implantation, the prospects for the embryo to become a person are vastly increased. For those who accept the category of “brain death,” there is also some reasonable symmetry with the significance of “brain birth.” The time of viability is also significant because it means that the fetus could survive outside the womb. Certainly, at the point of live birth, the arrival of a new citizen in the human community must be acknowledged. On the developmental view, for which I believe there is biblical support, each stage of prenatal life is seen as part of a promising crescendo that culminates in birth. God is depicted as participating in this “knitting together” that goes on in the womb (Psalm 139:13). It is

evident that Scripture does not accord the same moral status to fetal life as to that of the established life of the mother (Exodus 21:22-25). And traditional Jewish interpretation has typically reflected this distinction. But there is no time when fetal life can be ended without a sense of loss.

¹⁷ My informants who specialize in obstetrical medicine indicate that the percentage of embryos that fail to implant is between 50% and 60% and the percentage of those that are later lost through miscarriage is in the range of 10% to 15%. According to the best current information, this means that about 60% to 75% of all human embryos resulting from sexual intercourse do not progress to live birth. While these percentages are lower than the average failure rate for IVF embryos, it is not uncommon now for infertility clinics to report implantation rates in the range of 30% to 40%.

¹⁸ One recent Australian study, for example, reports that about 90% of couples (N = 1246 couples) who chose not to transfer frozen embryos, opted to discard them. G. T. Kovacs, et al, "Embryo Donation at an Australian University In-Vitro Fertilisation Clinic: Issues and Outcomes," *Medical Journal of Australia*, 2003, Vol. 178, No. 3, pp. 127-29.

¹⁹ Psalm 101:7.

²⁰ The Fertility Clinic Success Rate and Certification Act of 1992 (United States public law 102-493). Presently, over 95% of ART clinics are in compliance with the reporting requirements of this law; those who do not comply are listed as "non-reporters" in a list published by the Center for Disease Control, David Adamson, "Regulation of Assisted Reproductive Technologies in the United States," in *Reproductive Technologies*, edited by Thomas A. Shannon, pp. 1-22.

²¹ Ellen G. White, *Desire of Ages*, p. 550

²² According to the levirate marriage rule given in Deut. 25:5-10, if a brother dies, who has been living on the same land as another brother, then the living brother (or "levir") must marry the widow and seek to produce a son who can bear the deceased brother's name. A similar custom is found among a number of other cultures, especially agrarian ones in which membership in a tribe or clan is highly significant and in which primogeniture for the transfer of land ownership is customary. Ordinarily, it was forbidden for a Jewish male to marry his sister-in-law (Lev. 18:16; 20:21). But the importance of preserving lineage was sufficient reason for prescribing levirate marriage. The rule also provides a ceremony (which came to be known as "hazilah") for a brother who refuses to accept the duty of the "levir." But failure to perform the duty of the "levir" was viewed as disgraceful. See article on "Levirate Marriage" in the Jewish Encyclopedia at jewishencyclopedia.com

²³ Information from the Jones Institute for Reproductive Medicine, available at www.jonesinstitute.org

²⁴ D.I Hoffman, et al, "Cryopreserved Embryos in the United States and Their Availability for Research," *Fertility and Sterility*, May, 2003, Vol. 79, No. 5, pp. 1063-69.

²⁵ B. Smietana, "400K and Counting: Christians Recoil at Explosive Growth of Frozen Human Embryos," *Christianity Today*, June, 2003, Vol. 47, No. 7, p. 17.