

February 1996

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Recommended Citation

DuMaine, Pierre and Coleman, Gerald D. (1996) "Reproductive Technologies: Ethical Implications," *The Linacre Quarterly*: Vol. 63: No. 1, Article 4.

Available at: <http://epublications.marquette.edu/lnq/vol63/iss1/4>

Reproductive Technologies: Ethical Implications

by

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I. Introduction

The ethical implications addressed in this article and noted in its title are those that bear upon the public laws that will define the legitimate scope and necessary limits of private choices (both personal and professional) in reproductive technologies. These laws in turn must reflect at least provisional consensus in our society about the rights and duties of all participants in research, experimentation, and medical procedures that modify the normal biological processes of human procreation.¹ Our aim is to contribute to the public dialog that must shape this consensus.

Accordingly, after briefly defining the "scope of the question" (Section II), we

address basic ethical and evaluative norms (Section III). We then outline (Section IV) “core issues” in their medical and ethical aspects, and finally (Section V) draw our singular conclusion.

It is important that we state up front that we affirm the tradition which supports a natural law present in the heart of each person, established by reason and universal in its precepts and authority. This natural law expresses the dignity of each person and determines the basis for individual rights and duties. Cicero expressed it this way:

For there is a true law: right reason. It is in conformity with nature, is diffused among all men, and is immutable and eternal; its orders summon to duty; its prohibitions turn away from offense . . . (N)o one can abrogate it entirely.²

The natural law has provided the solid foundation on which human beings have built the structure of moral rules, not excluding the Enlightenment tradition, still rooted in Christian views of man/woman, on which Jefferson and others based our system of laws; it provides the indispensable moral foundation for building the human community; and it provides the necessary basis for civil law, whether by a reflection that draws conclusions from its principles, or by additions of a positive and juridical nature.

Specifically, natural law can be described as that law which lies deep within the human conscience, which is not humanly derived but which must be obeyed. It may be further understood as the order of things which landscapes the development of human qualities, an order that may be rationally known and used as the basis for free action.

In Catholic teaching, the core of natural law is that which lies at the very foundation of the conscience of all human beings: i.e., nonconventional, nonarbitrary moral standards which make possible genuine moral self-criticism, which supposes that all human beings can find within themselves an objective moral standard.³ In this paper, we affirm this natural law tradition; thus while we reference the biblical and Catholic tradition, we do not assume an acceptance of these sources for proof of the principles we put forth.

In “Presuppositions to Moral Judgements on Human Genetic Manipulation,”⁴ James J. Walter summarizes three models of human nature that affect our understanding of the proper uses of technology:

(1) The power-plasticity model which views material nature as possessing no inherent value, a reality to be simply dominated and manipulated by human freedom: humans thus sustain the unrestricted right to dominate/shape the body and its genetic heritage.

(2) The sacral-symbiotic model which views material nature as created by God and thus sacred; human nature is to be respected and heeded and we must live in harmony with our human nature.

(3) The evolving model which views material nature as sustaining certain stable and sacred components, but also a nature that is open to change and development; humans are embodied spirits who must learn how to use nature responsibly.⁵

The authors of this article affirm this third understanding of human nature.

In his book *Children of Choice: Freedom and the New Reproductive Technologies*, John A. Robertson, the Thomas Watt Gregory Professor in the School of Law at the University of Texas, outlines six ethical problems which arise with the technologies we will discuss:⁶

(1) Interference with Nature: natural conception by sexual intercourse has been replaced by “the bright glare of the laboratory.”

(2) Respect for Prenatal Life: IVF, as one example, externalizes embryos and then freezes, discards, researches, and biopsies them, treating them like objects of property — thus creating an attitude in some critics that respect for human life generally is being diminished. Although not mentioned by Robertson, another example involves preimplantation genetic diagnosis which leads some parents to abort a fertilized ovum when a negative genetic diagnosis is reached.

(3) Welfare of Offspring: of special concern is the impact on children of several acts of genetic and social parents, some of whom the child will never know, which arise in the collaborative use of gamete donors and surrogates.

(4) Impact on Family: family integrity is threatened by the collaborative reproductive techniques that separate genetic, gestational, and rearing parenthood which sustains the “potential” to undermine traditional notions of paternity and motherhood.

(5) Effects on Women: while reproductive technologies open up liberating options for some women, they may also act as agents of further oppression; often, for example, these technologies “treat the woman as a reproductive vessel to produce or serve the interests of males and the state in healthy offspring.”

(6) Costs, Access, and Consumer Protection: most technologies are quite expensive, and are available only to those who can pay, resulting in a greater disparity in access to health care than already plagues American medical care; in addition, the high cost of reproductive technology creates opportunities for exploitation and profiteering by the professionals who control its use.

While Robertson acknowledges this “minefield of ethical problems,”⁷ he advances the judgement that the “decision to have or not have children is, at some important level, no longer a matter of God or nature, but has been made subject to human will and technical expertise.”⁸

Robertson professes a single principle which must regulate all ethical questions regarding reproductive technologies: “procreative liberty” (which he also identifies as “procreative choice” or “procreative freedom”). He explains that

... being deprived of the ability to reproduce prevents one from an experience that is central to individual identity and meaning in life. Although the desire to reproduce is in part socially constructed, at the most basic level transmission of one's genes through reproduction is an animal or species urge closely linked to the sex drive. In connecting us with nature and future generations, reproduction gives solace in the face of death.⁹

We have already stated our acceptance of natural law and revisit this assertion now in order to highlight our belief that Robertson's approach to biomedical technologies represents the twin errors of relativism and individualism. We believe that these errors lead to a harmful dichotomy between personal freedom

and ethical order.

Robertson's pedagogy leads to the conclusion that there is no truth regarding right (and wrong) belief and practice; and from this relativistic premise he concludes that individuals should enjoy all but unlimited freedom in determining what is right and wrong belief and practice. On the contrary, we believe that freedom is in the service of truth and that truth is the precondition of freedom.

When autonomy is absolutized, very little thought is given to the values that ought to inform and guide its use. Given such a vacuum, the sheer fact that a choice is the individual's tends to be viewed as the sole right-making characteristic of the choice. This trivializes human choice. It is no coincidence that Dr. Jack Kevorkian is a spokesperson for absolutized autonomy:

In my view the highest principle in medical ethics — in any kind of ethics — is personal autonomy, self-determination. What counts is what the patient wants and judges to be a benefit or a value to his or her own life. That's primary.¹⁰

It is not insignificant to note that Kevorkian regards medicine as a "strictly secular endeavor" which should be entirely separate from ethics. We reject this approach since it sustains an absence of any sense of an objective moral order, understanding freedom over truth and conscience as the creator of moral law.¹¹ We recall here with interest Karl Barth's claim that real "man" is "man in relation to God."¹² In other words, genetics alone never tells us everything about the *real* nature of the human.¹³

We strongly insist that the natural moral order teaches that the family is the goal of human sexuality and that the unitive and procreative aspects of the act of generation must not be separated by a deliberate human act. We affirm the belief that every human act has its own morality and that the intention alone does not justify a wrong act. The moral goodness or badness of a human act or a series of human acts may not be subsumed or overlooked by evaluating only the intention of the person or the consequences of a series of human actions.¹⁴

Because of the critical nature of our stance, we want to underline one more point here. The human person has not called him or herself into existence; and we need to accept this particular *existential*.¹⁵ In a certain sense the human being is most free when calling into being another human being. Consequently, procreation cannot become an act of neurotic anxiety in the face of fate. The other person must remain the one who is both *begotten* and *accepted* — an elevating personal experience because the new human being has been chosen, accepted and carried. Karl Rahner thus commented:

If man, when confronted with his child, saw only what he had himself planned, he would not be looking at his own nature, nor would he experience his true self which is both free and the object of external determination.¹⁶

Finally, the human person has his and her own sphere of intimacy. This sphere *should* exist and ought to be resolutely safeguarded. It forms the innermost region of freedom which we need in order to be really self-determining. Human sexuality,

as a free activity, both is and ought to be more than a merely biological function. Rather, human sexuality must be an activity of the whole person, the realization of personal love. Paul Ramsey's comment is helpful: ". . . a Christian, as such, intends the world as God intends the world" — and God intends the world with love.¹⁷

This personal love which is consummated sexually has within it an essential inner relation to a child, for the child is an embodiment of the abiding unity of the marriage partners which is expressed in marital union. Genetic manipulation, however, does two things: it fundamentally separates the marital union from the procreation of a new human being as this permanent embodiment of the unity of married love; and it transfers procreation, isolated and torn from its human matrix, to an area outside the sphere of intimacy. It is the sphere of intimacy which is the *proper* context for sexual union, which itself implies the fundamental readiness of the marriage partners to allow their unity to take the form of a child.

We thus reaffirm our conviction that there is an essential connectedness among the sphere of intimacy, the union of marital love, and the child as the permanent form of this union.

II. The Scope of the Question

In June of 1994 a twenty-two year old woman declared her intention to start a family using sperm surgically removed from her husband's corpse and then frozen and stored at U.S. Cryobank, Orlando, Florida. The woman commented, "This is the good that came out of something bad. This is what gives me something to hold onto."¹⁸

The September 28, 1994 issue of the *New York Times* reported that the nineteen-member Human Embryo Research Panel has recommended guidelines to the National Institutes of Health that will allow experiments on so-called "spare" embryos [embryos fertilized *ex utero* but not implanted]. These guidelines will allow scientists to create and discard human embryos under fourteen days development *solely for research purposes*. In other words, eggs and sperm could be donated by men and women who have no intention of becoming parents or accepting any responsibility or relationship with the "product" of this procedure. In addition, the panel is also recommending that scientists be allowed to generate parthenotes—eggs that have been propelled to begin the first stages of embryonic development, not through the traditional adding of sperm, but by chemical manipulations.¹⁹

Dr. Patricia A. King, a law professor at Georgetown University and a co-chairwoman of the advisory Panel, commented that very young embryos "do not have the same moral status as infants and children." On the other hand, Judie Brown, president of the American Life League, commented that doing human embryo research in which the fertilized egg eventually dies is equivalent to "killing little boys and girls."

While scientists argue that such work could lead to breakthroughs in the treatment of everything from infertility to aging to cancer, such biomedical research stands in need of ethical critique: i.e., when do human life and human

rights begin? James Nelson, an ethicist at the Hastings Center in New York, comments on the NIH guidelines: "This represents moral *terra incognita* for us as a society. We have a huge range of definitions of what an embryo is — anywhere from a person to just a bunch of tissue like any clump in the body."²⁰

These examples of the twenty-two year old woman and the recommendations of the Human Embryo Research Panel strongly suggest the central issue of this paper: ethically, what *is* good? For the woman referenced, is "good" defined exclusively in relation to herself as a woman and mother? What about the "good" of the conceived child? Is this decision "good" for the deceased father and his parents and family? What about the "good" for the community in which this child/family will live?

In terms of the proposed guidelines, is the pre-embryo merely a spare "tissue" with no human kinship? Does permission to do research on spare embryos amount to human experimentation without consent? In their book *The Facts of Life*, for example, Harold J. Morowitz and James S. Trefil maintain that a zygote is not fundamentally different from "an unfertilized egg" and consequently is not "worthy of special treatment."²¹

In the face of such examples, it is our contention that biomedical technologies intrinsically need ethical conversation before determining whether the biomedical advance is truly "for the good" of each participating individual and for the community they belong to. For example: whose good is controlling these scientific advances; do private choices necessarily sustain public consequences (i.e., serve a public good) — with consequent public interest which may be formulated in laws regulating the pattern of private choices on begetting and nurturing human life?²² This point is sharply made in *The Fetal Tissue Issue*:

The unprecedented powers conferred on humanity by advances in biology are expanding daily. Their potential for moral good and harm are so enormous that they must be contained within ethical boundaries.²³

The Human Embryo Research Panel ruled out as "obscene" an emerging technology that some scientists believe has great promise: making human-animal chimeras, e.g., fertilizing a human egg with a chimpanzee sperm. While this example might appear extreme, clinicians are even now being confronted with requests for all kinds of variations of the "basic technology:" e.g., donor sperm, donor ova, donor embryo, surrogate mothers [with sperm and/or ova from donors], surrogate carriers, single women, lesbian women, frozen sperm, frozen embryos.

Examples could easily be multiplied; but one reality is clear: traditional values are being challenged both by the technical scope and the emotional intensity of the varied issues involved in genetic intervention (e.g., genetics, sex preselection, genetic counseling, genetic screening), in reproductive technologies (e.g., abortion, sterilization, prenatal diagnosis, artificial insemination, in vitro fertilization, fetal research) and in biomedical intervention in the human life process (e.g., psychosurgery, electrical brain stimulation, drug therapy, oral transplants, euthanasia).²⁴

In *Redefining Human Life*, Robert H. Blank, Professor and Chair of the Department of Political Science, University of Idaho, offers an instructive comment:

... (T)hese developments have a variety of impacts on the life cycle, on customary social expectations and practices, and on such critical institutions as the family. Together, these issues present a formidable set of policy concerns that warrant careful and balanced scrutiny across a whole spectrum of fields.²⁵

We endorse Blank's comment because we believe that segmenting, disassociating, manipulating and otherwise disrupting "natural" processes entails private choices and public policies which must reckon with the "natural rights" of all human individuals and communities affected, as well as with a natural law that undergirds these rights and interests.

We believe that the natural law tradition would hold that the deliberate separation of sperm, ovum, implantation, conception, gestation to term, and the clear responsibility of "parents", ethically damages the natural process of conception by sexual intercourse of persons committed to a stable marital relationship, who care for each other and care for the new life conceived, and who intend to bring it to birth and nurture it through its initial growth and socialization.

It seems to us that four major sectors of society have both a stake and responsibility in the issues:

(1) citizens who must make choices on the basis of more than private self-interest, invoking well-considered and freely-chosen moral principles and priorities;

(2) scientists and technologists who offer a new array of choices for intervention in the human life cycle;

(3) public servants who make, enforce, and interpret the laws that protect individual rights and public interest; and

(4) the ethicists and social scientists who address underlying norms of private/public morality and personal/social values, issues that lie behind the scope and competence of empirical science and civil law.

The authors of this article belong to the fourth category and write out of a specific moral tradition of natural law as articulated in a centuries-old moral tradition.²⁶ As already affirmed, however, the guiding principles suggested in this paper do not rest on or require religious faith in a divine revelation; but they do invoke fundamental philosophical principles that transcend both science and law.

Einstein wrote that "Science can only ascertain what is, but not what should be. And outside its domain value judgments of all kinds remain necessary . . . Science without religion is lame; religion without science is blind."²⁷ By inference, a system of laws that does not fully reckon with both realms will be arbitrary and ultimately either oppressive or ineffectual in resolving tensions between community/public interest and individual/private choice.

It is our contention, then, that key biomedical issues need immediate reference to core ethical issues, especially regarding the uniqueness and sacredness of human life, and the consequent question of the "rights" due to a human person. Such pivotal questions as: Who is the human person? What is his/her final destiny or future? What is truly beneficial to the human person?, are queries that seek solutions that are truly and authentically human. In addition, we resist the

emerging and perhaps prevailing view that all "values" are a matter of opinion and that all opinions are of equal value, with the result that the principles that shape our laws become a matter of political negotiation of divergent opinion, with the majority or the powerful and influential prevailing, regardless of the individual rights or common good that may be imperiled.

III. Ethical Scrutiny - Evaluative Norms

Our ethical scrutiny begins with the fundamental truth that all of creation must be approached with respect and reverence, with the conviction that all of reality is permeated with value. This ethical dimension necessarily surfaces critical and evaluative moral tools which must stand in critique of all reproductive technologies²⁸ - the basic criterion of "the integral well-being of man."²⁹ "Integral" necessarily implies that the human person is not a fragmented or segmented being, but an individual whose body/soul composite is integrally intertwined to form a single, indivisible human life. The human person is a unified totality, both corporeal and spiritual. The human body cannot be considered as a mere complex of tissues, organs and functions. The human body is a constitutive part of the person.³⁰ This is a core ethical principle in judging the moral character of human actions.

To decide whether certain actions or policies involve us in wrongdoing our own good, i.e., our human integrity, we must be clear on certain essential dimensions relative to human persons that are brought into play by the use of reproductive technologies:

(1) *The sacredness of human life.* Life is sacred not only because of its origin and destiny, but also because of its inherent value. All human life is intrinsically valuable. This dignity/sacredness demands reverential attitudes and practices from genetic science and from law. In this regard, Paul Ramsey bequeathed us a memorable aphorism: "(Human beings) ought not to play god before they learn to be (human beings), and after they have learned to be (human beings) they will not play God."³¹ The ethical presupposition is clear: The finitude of human beings. This "anthropological vision" must stand in conversation with all biomedical advances. Put in another way, "science without conscience can only lead to man's ruin."³² Practically, this means that technology must avoid undue risks, and especially discriminatory distribution of risks. Law must thus protect against arbitrary, private choice. A study group of the National Council of Churches has rightly noted: "Throughout the process it (genetic technology) must protect the human and civil rights of all people, especially those least able to defend themselves."³³ The standard protection here is the requirement of informed consent.

(2) *The interconnection of life systems.* There are many life systems in our ecological whole. Harm to one will likely have a deleterious impact on others. In measuring the possible benefits of genetic interventions, it is foolish and morally wrong to sacrifice long-term well-being for immediate gain. As Marshall Nirenberg, 1969 Nobel Prize winner in Physiology, wrote, "When man becomes capable of instructing his own cells, he must refrain from doing so until he has

sufficient wisdom to use this knowledge for the benefit of mankind."³⁴

(3) *Individuality and diversity.* Uniqueness and diversity (sexual, racial, ethnic, cultural) are treasured aspects of the human condition. Diagnostic and eugenic interventions that would bypass, downplay or flatten these diversities and uniqueness should be viewed as temptations. Pertinent here is the potential information explosion associated with increasing knowledge of the human genome. Who will have access to this information and how will it be used?³⁵ We cannot collapse the meaning of the human person into knowledge about the person's genes.

(4) *Social responsibility and the priorities of research.* Genetic technology must take into account our essential sociality both in its purposes and processes. This responsibility refers to the need for distributive justice (justice which regulates the measure of privileges and burdens of an individual as a member of the community) both in the priorities of genetic research (allocation of resources) and the enjoyment of its benefits. Too few of our resources go to the most needy. Roger Shinn, Reinhold Professor of Social Ethics at Union Theological Seminary, New York City, notes that too often the assignment of resources is proportioned "to the glamor of the project or the interests of groups who influence politics."³⁶ In addition, as The National Council of Churches study group has asserted, the benefits of genetic innovation should be "generally available (not coercively) to all, regardless of geographic location, economic ability or racial lines."³⁷

(5) *The Acceptance of human imperfection.* The quality of personal life can never be a matter of purely objective measurement. In this regard, the Genome Project calls for scrutiny of the assumption that those who are different from what society considers normal necessarily lack quality of life in their suffering or difference. The possibility of confusion between human wants and genuine human needs is real. A parent may want a "designer" child via gene therapy, but this is not something that parent or child needs.³⁸

Our desire not to bring imperfection into the world must be tempered by a recognition that suffering brought about by events we can never control is an ineradicable part of life. After all, those who are genotypically and phenotypically more "perfect" than others can lead tragic lives. It is not ethically sound to attempt to remove all contingency from human experience. We cannot control all events. Stephen G. Post of the Center for Biomedical Ethics at the School of Medicine, Case Western Reserve University, Cleveland, thus asks, "Does technology foster a rage to control and thus prevent our coming to grips with the basic reality of contingency from which we never escape?"³⁹

The technological drive to perfection must be tempered: e.g., as difficult as the problems of infertility and sterility are, they are not of themselves human evils that demand technological intervention. There is treasure in earthen vessels, and earthen vessels we are. As humans, we are subject to countless infections, accidents, chronic ailments, and finally to the decline of old age and death. It is especially wrong when a society so overvalues beauty and physical prowess that boldly imperfection and weakness are aborted out of existence, for example, in selective abortions for moderate or trivial imperfections or for reasons of sex

selection. The ability to reach into the human genome creates by anticipation some vague image of perfection constitutive of progress. Enhancement and eugenic engineering are problematic because they tend to further externalize our images of human perfection and do not result in any moral good. Post's remark is helpful:

All the major cultures of the world, with the help of religious worldviews, have defined perfection internally, that is, with emphasis on character and virtue. From Aristotle to Thomas Aquinas, perfection meant wisdom rooted in experience and in the relationships by which the moral life is learned through example.⁴⁰

These five dimensions relative to the human person help situate the 1987 Vatican document from the Congregation for the Doctrine of the Faith, *Instruction on Respect for Human Life in Its Origin and on the Dignity of Procreation: Replies to Certain Questions of the Day*.⁴¹ The *Instruction* asserts certain "fundamental rights" that are to be recognized by civil law in any society: (a) every human being's right to life and physical integrity from the moment of conception as an institution and, in this area, the right of children to be conceived, brought into the world and brought up by their natural parents.⁴²

Specifically, the *Instruction* outlines several evaluative norms for all genetic technology:

(1) The human person has a primary and fundamental right to life, rooted in the intelligence and freedom that sets humans apart from other animals and supports laws and customs that hold people responsible and accountable for their actions.⁴³

(2) Science and technology must have an unconditional respect for some fundamental criteria of a moral law: i.e., they must be at the service of the human person, of the person's inalienable rights and true and integral good.⁴⁴

(3) The human person is a "unified totality" - a nature that is at the same time both corporeal and spiritual. This totality/integrity is multi-dimensional, sustaining physical, psychological, emotional and spiritual components, all of which *together* demand ethical norms in society for creating proper health and respect. Consequently, the human body cannot be considered as a mere complex of tissues, organs and functions; nor can it be evaluated in the same way as the body of animals. An intervention on the human body affects not only the tissues, the organs and their functions, but also involves the person, him or herself.⁴⁵ Therefore, "... what is technically possible is not for that very reason morally admissible."⁴⁶

(4) From the moment of conception the life of every human person is to be respected in an absolute way. Human life is sacred because of its inherent value and dignity; and also because life involves "the creative action of God" and remains forever in a special relationship with the Creator.⁴⁷

(5) The inviolable right to life of every innocent human individual and the rights of the family and of the institution of marriage constitute fundamental moral values that have been common to virtually all religious traditions in our nation and recognized as fundamental even apart from religious belief and affiliation.⁴⁸ The task of civil law is to ensure the common good of people through the recognition and defense of fundamental rights and through the promotion of peace and of public morality. Consequently, political authority must guarantee and ensure:

(a) respect and protection for the unborn child from the moment of conception, never permitting the unborn child to be treated as an object of experimentation; and (b) protection for the family: civil law cannot grant approval to techniques of artificial procreation which, for the benefit of third parties (doctors, biologists, economic or governmental powers), take away that which is a right inherent in the relationship between spouses.⁴⁹

IV. Three Core Biomedical Issues

We will now lay out and assess the three core issues which lie behind all the technologies already referenced.⁵⁰

(1) *In Vitro Fertilization*

On 25 July 1978, Louise Brown was born in Oldham, England, from in vitro fertilization. She was the first so-called "test-tube baby," the culmination of years of pioneering research by Patrick Steptoe and Robert Edwards. Since that time, well over five thousand babies have been born via this procedure, most of them in Australia, England and the United States. The number changes almost daily.

Robertson names the Brown achievement as the beginning of a "reproductive revolution:"

What is revolutionary . . . is the unprecedented technical control that medical science now brings to the entire reproductive enterprise, thereby creating a fertile source of options for individuals facing reproductive decisions. Consider the reproductive topics that have been the focus of media attention since the 1978 birth of Louise Brown: frozen embryos, surrogate motherhood, genetic screening, manipulation of embryos, forced cesarean section, criminal punishment of pregnant drug users, Norplant and RU486, *in utero* fetal surgery, and fetal tissue transplants. In years to come, other technologies will cascade out of medical laboratories and into social practice, as micromanipulation of embryos, nuclear transplantation, egg fusion, cloning, interspecies gestation, ectogenesis, and gene therapy are developed.⁵¹

In "simple case" IVF sperm and ovum come from husband and wife and the pre-embryo is implanted in the uterus of the wife. In 1949 in an address to the Fourth International Congress of Catholic Doctors, Pope Pius XII stated that artificial insemination by husband (AIH) "must be absolutely rejected."⁵² On 29 October 1951 he revisited this point in his address to the Italian Catholic Union of Midwives:

In its natural structure, the conjugal act is a personal action, a simultaneous and immediate cooperation on the part of the husband and wife which by the very nature of the agents and the propriety of the act is the expression of the mutual gift which according to Holy Scripture brings about union "in one flesh only." This is something more than the union of two seeds which may be brought about even artificially without the natural action of husband and wife.⁵³

This citation formulates a natural law response to this ethical issue. The crucial point is that the conjugal act must be *personal* - i.e., it must share in the sphere of intimacy already discussed, thus expressing the total embrace of love of husband

and wife to each other, a gift whose expression is intimate and immediate and does not allow for manipulation or objectification. The *personal* dignity of the conjugal act demands the consequent *personal right* that a child has to be conceived and brought into the world in marriage and from marriage.

Pius XII insisted that the child, for the good of the child, the marriage, and society, must be the fruit of the conjugal union. But it is the fruit of the *conjugal* union only when it is conceived *in a conjugal way*, that is, by sexual intercourse. A child conceived by artificial insemination by husband is not conceived by sexual intercourse.

The conjugal act sustains a natural *existential* which joins the procreative (life-giving) and unitive (loving) dimensions of sexuality and thus excludes IVF.⁵⁴

In 1968 Pope Paul VI reasserted this point in *Humanae Vitae*: i.e., the inseparability, in the conjugal act, of the unitive and procreative dimensions of the act. This inseparability was repeated in Pope John Paul II's *Familiaris Consortio*.⁵⁵ In 1987 the Vatican *Instruction on Respect for Human Life in Its Origin and the Dignity of Procreation*⁵⁶ likewise assesses *in vitro* fertilization as a separation of the unitive and procreative dimensions of the conjugal act. Carlo Caffarra, head of the Pontifical Institute for the Family states it this way:

In vitro fertilization . . . establishes between the one performing the fertilization and the one to be born a relationship of "production of an object." Herein lies the intrinsic illicitness: the person cannot be an object produced by human labour, but a subject willed by a personal act of love.⁵⁷

Our argument here is simply that a child should be begotten and not made. In other words, IVF "is more tampering than genuine therapy."⁵⁸

An additional and critical moral problem in IVF processes is the high, deliberate wastage of embryonic lives.⁵⁹ Some authorities put this at 15%, but more suggest a minimum of 50%.⁶⁰ Parents run the high risk of loss of embryonic life by attempting to achieve a pregnancy, be it naturally or artificially. The risk is much higher in the IVF situation where over 90% of the fertilized eggs do not survive with the present technology.⁶¹

The practice of cryopreservation or freezing of so-called "spare" embryos generated through IVF carries enormous moral implications.⁶² In one study⁶³ six of the nineteen embryos that were frozen were so damaged by the process when they were thawed that they could not be transferred to the womb. This is about a 30% rate of embryonic loss due to the freezing process itself. Because of this high rate of damage, this practice cannot be morally justified as a routine policy so that excess embryos could be kept for future transfer in the eventuality of a pregnancy not occurring, not even to mention the ethical problems associated with so-called "orphan embryos," fertilized eggs whose parent(s) have died. This process demonstrates a gross lack of respect due the individual human life jeopardized by these potential hazards. Embryos bear human kinship and cannot be summarily dismissed.

2. *Third Party Involvement*

Most often, third-party involvement will take the form of donor sperm.

Sometimes it could involve donor eggs, donor embryos or donor wombs. In 1949 Pope Pius XII spoke clearly to this question:

Artificial insemination in marriage, with the use of an active element from a third person, is equally immoral and as such is to be rejected summarily. Only marriage partners have mutual rights over their bodies for the procreation of new life, and these rights are exclusive, nontransferable and inalienable.⁶⁴

Pius XII was referring specifically to donor sperm; but his argument would apply equally to donor eggs. In addition, he viewed such third party involvement as opposed to the good of the child because between the child and at least one rearing parent there is “no bond of origin, no moral and juridical bond of procreation.” In other words, there is no “sphere of intimacy.”

AID (Artificial Insemination by a Donor), then, “fundamentally separates the marital union from the procreation of a new person.”⁶⁵ While we recognize the ongoing debate regarding the “status” of a fertilized ovum and the question of “rights:” e.g., when does the fertilized ovum assume *personal* rights, we affirm that when fertilization/conception is complete, the zygote is human and must be given all rights accorded to a human being. One can certainly debate when this human becomes a person, with all the rights accorded to persons in our society. At the same time, however, we believe that the zygote is fully human, with the potential to grow into the various stages of embryonic development. We believe that debates which pit embryos against adults are harmful to the respect due to all stages of the human developmental cycle. What will be fully human is even now human; and this fact commands respect.

Also to be faulted in AID is the anonymity of the donor, which represents a refusal of responsibility as father/mother and an infringement of the rights of the child. McCormick adds this illuminating point:

It should be remembered that when Sweden passed legislation (1984) giving children conceived by AID the right (at eighteen years of age) to know the identity of their genetic fathers, donor insemination came to a virtual standstill. The same thing seems to be happening in parts of Australia. Obviously, donors want neither recognition nor responsibility.⁶⁶

Two points are critical in this ethical Assessment:

First, it can be argued that any relaxation of the exclusivity of husband and wife will be a source of harm to the marriage and to the prospective child. For instance, the use of donor semen means that there is a genetic asymmetry in the relationship of husband and wife to the child, with possible damaging psychological effects. If a surrogate mother is used, conflicts could arise that damage both the marriage and the surrogate. Collaborative reproductive techniques muddy notions of family and genetic lineage and can lead to family-wrenching disputes, such as occurred in the Baby M case.

In other words, third party involvement separates procreation from marriage *in principle*. This opens the door, both by human proclivity and the logic of moral justification, to a litany of worrisome problems such as non-marital insemination.

Second, third party involvement is itself violative of the marriage covenant independent of any potential damaging effects or benefits. Paul Ramsey put it this way:

To put radically asunder what God joined together in parenthood when He made love procreative, to procreate from beyond the sphere of responsible procreation (by definition, marriage) means a refusal of the image of God's creation in our own.⁶⁷

In summary, then, we believe that the use of third parties (whether by donor sperm, donor ovum, or surrogate womb) is ethically wrong⁶⁸ for these reasons:

1. It fundamentally severs procreation from the marital union; and it violates the marriage covenant whereby exclusive, non-transferable, inalienable rights to each other's person and generative acts are exchanged.

2. By premeditation - in contrast to adoption - it brings into the world a child with no bond of origin to one or both marital partners, thus blurring the child's genealogy and potentially compromising the child's self-identity.

3. Once conceded the moral right to be inseminated by the sperm of another man, wives might conclude that it is preferable to being inseminated in the natural way. Thus adulteries might be multiplied to the detriment of marriage.

4. The stud-farm mentality is supported with its subtle but unmistakable move toward eugenics.

5. The use of third parties tends to absolutize sterility as a disvalue and childbearing as a value, thus distorting - and potentially threatening - some basic human values: life, marriage, and the family.⁶⁹ Medicine, law and society should not be obligated to facilitate "parenthood."

3. *The Moral Status of the Embryo*

The difficulty and delicacy of this issue may be highlighted by reference to a talk by Pope John Paul II to a distinguished group of scientists invited to Rome in 1982 to participate in a formal week of study sponsored by the Pontifical Academy of Science on the theme of biological experimentation:

I condemn, in the most explicit and formal way, experimental manipulations of the human embryo, since the human being, from conception to death, cannot be exploited for any purpose whatsoever.⁷⁰

There are three ethical positions articulated regarding embryo status:⁷¹

1. After fertilization, the embryo is a human subject.

2. The embryo has a status no different from that of any other human tissue; and is to be treated accordingly.

3. The embryo deserves respect greater than that accorded to other human tissue, because of its potential to become a person; but it should not be treated as a person since it has not yet developed the features of personhood, is not yet established as developmentally individual, and it may not realize its biologic potential.

The authors of this article embrace the first position: while it may be

demonstrated that the embryo is not yet developmentally a person, it *is* human and must be respected not merely for its *potential* but also for its distinctly *human* make-up. In most states at the present time, the law does not regard embryos as rights-bearing entities, as legal subjects in their own right. We disagree with this legal status and would promote laws which protect human life from the time of conception.

Adhering to a natural law philosophical tradition, Catholic formulations have for decades spoken of the human being “from the moment of conception.” The underlying supposition is that from the moment (or process) of the union of sperm and ovum there is present a fully protectable human life. In *Science and the Unborn*,⁷² Clifford Grobstein convincingly details some basic perspectives on how we should view the status of the embryo. Grobstein argues that the embryo is alive, human, genetically individual, and sustains potential to become a future person in the full sense. Consequently, a pre-embryo/embryo must be respected for its biologically human quality. This “conferral of status” is realized to some degree when some practitioners of IVF feel obliged to transfer to the uterus all available pre-embryos. This “conferral of status” is crucial, with important and binding legal implications: i.e., laws must recognize the human quality of the pre-embryo and disallow arbitrary and damaging manipulations of the human status of a fertilized ovum. Pre-embryos and embryos are members of the human community with specifically recognized and important roles within it. Grobstein concludes that “. . . discard of preembryos under any circumstances should only be a last resort, given the profound value that attaches to all stages of humanity, whatever the stage of the life cycle.”⁷³

These observations coincide precisely with our own that “Human life must be respected and protected absolutely from the moment of conception.”⁷⁴ This position is made most explicit in the 1974 Vatican *Declaration on Procured Abortion*:

In reality, respect for human life is called for from the time that the process of generation begins. From the time that the ovum is fertilized, a life is begun which is neither that of the father nor of the mother: it is rather the life of a new being (*novi viventis humani*) with his own growth. It would never be made human if it were not human already . . . Right from fertilization the adventure of a human life begins. . . . (I)t is not up to biological sciences to make a definitive judgement on questions which are properly philosophical and moral, such as the moment when a human person is constituted or the legitimacy of abortion. From a moral point of view this is certain: *even if a doubt existed* (italics added) concerning whether the fruit of conception is already a human person, it is objectively a grave sin *to dare to risk* (italics added) murder.⁷⁵

We thus strongly disagree with the divergent view taken by Morowitz and Trefil in their book *The Facts of Life*.⁷⁶ They maintain that a human being is one who “has recognizably human DNA”⁷⁷ - i.e., an individual fetus “acquires humanness when the cortex begins to function,” a process that “starts around twenty-four weeks of gestation and continues well into adulthood.”⁷⁸

V. Conclusion

The ethical and evaluative perspectives regarding the human person set forth above accord with Einstein's insight that ethical implications of science and technology require science to work in partnership with religion and philosophy.

That insight also underlies the aim of this paper, stated at the outset, to contribute to the dialog needed to fashion a public consensus on ethical issues that in turn must shape our laws. Our aim and Einstein's insight have been well summarized by Pope John Paul II in a 1979 address to the Pontifical Academy of Sciences on the occasion of the centenary of Einstein's birth:

Fundamental science is a universal good that all people must be able to cultivate in complete freedom . . . [but] applied science must be allied with conscience so that through the triad science-technology-conscience, the true good of humanity will be served.

(T)he fundamental meaning of . . . the "dominion" of man over the visible world . . . consists in the priority of ethics over technology, the preeminence of people over things, and the superiority of spirit over matter.⁷⁹

References

1. The authors of this article understand "ethical implications" as carrying these specific meanings: "reproduction" is the proper technical term for biological processes common to all mammals, including humans; and "procreation" denotes responsibilities, rights and choices peculiar to the human species in begetting and nurturing new life.
2. Cicero, *Republic* III, 22,33.
3. See *Gaudium et Spes*, n 16 in *Vatican Council II: The Conciliar and Post-Conciliar Documents*, New York: Costello, 1992, 916; Romans 2:15-16; Johannes Grundel, "Natural Law" in *Sacramentum Mundi*, vol 4, 157, New York: Herder and Herder, 1969; Joseph Boyle, "Natural Law" in *The New Dictionary of Theology*, Wilmington: Michael Glazier, 1987, 703-708; and St. Thomas Aquinas, *Summa Theologiae* 1a2ae, 91, 2-4.
4. James J. Walter, "Presuppositions to Moral Judgments on Human Genetic Manipulation," *Chicago Studies* 33 (1994), 228-239.
5. See Daniel Callahan, "Living with the New Biology," *Center Magazine* 5 (1972), 4-12.
6. John A. Robertson, *Children of Choice: Freedom and the New Reproductive Technologies*, Princeton: Princeton University Press, 1994, 12-15.
7. *Ibid.*, 16.
8. *Ibid.*, 5.
9. *Ibid.*, 24.
10. *Free Inquiry Interview*, "Medicine: The Goodness of Planned Death," *Free Inquiry* 11 (Fall 1991), 14-18; citation at 14.
11. See Richard McCormick, "Some Early Reactions to *Veritatis Splendor*," *Theological Studies* 55 (1994), 481-506, especially 502-503; and Pope John Paul II, *Veritatis Splendor*, *Origins* 23 (1993), 297-334.
12. Karl Barth, *Church Dogmatics*, III/2, 71-202.
13. See James M. Gustafson, "Where Theologians and Genetic Meet," *Center for Theology and the Natural Science Bulletin* 13 (1993), 1-9.
14. See Benedict M. Ashley and Kevin D. O'Rourke, *Healthcare Ethics*, 3rd ed., St. Louis: The Catholic Health Association of the United States, 1989, 281-183.
15. See Karl Rahner, "The Problem of Genetic Manipulation," *Theological Investigations*, vol. 9, trans. Graham Harrison, New York: Crossroad, 1972, 244-252.
16. *Ibid.*, 245.
17. Paul Ramsey, *Fabricated Man: The Ethics of Genetic Control*, New Haven, Yale University Press, 1970, 38.

18. See *San Francisco Chronicle*, 4 June 1994, A8.
19. "Federal Panel Urges U.S. to Drop Its Ban On Financing Human Embryo Research," *New York Times*, 28 September 1994, 16; see also "Panel Supports Embryo Research," *San Jose Mercury*, 28 September 1994, 1 and 18A.
20. See "Brave New Embryos," *Time*, 29 August 1994, 60-61.
21. Harold J. Morowitz and James S. Trefil, *The Facts of Life*, New York: Oxford University Press, 1992, 52. Morowitz is the Clarence J. Robinson Professor of Biology and Natural Philosophy at George Mason University and Trefil is the Clarence J. Robinson Professor of Physics at George Mason University.
22. These types of ethical questions are addressed well by Richard A. McCormick's "Therapy or Tampering? The Ethics of Reproductive Technology and the Development of Doctrine" in *The Critical Calling*, Washington, D.C.: Georgetown University Press, 1989, 329-352.
23. Peter J. Cataldo and Albert S. Moraczewski, ed., *The Fetal Tissue Issue*, Boston, Mass: The Pope John XXIII Medical-Ethics Center, 1994, xiv.
24. See Robert H. Blank, *Redefining Human Life*, Colorado: Westview Press, 1984; John Cornwell, "Nature in the Laboratory," *The Tablet* 14 (1994), 590-591; Diane M. Bartels, Bonnie S. LeRoy and Arthur L. Caplan, eds. *Prescribing Our Future: Ethical Challenges in Genetic Counseling*, New York: Aldine De Gruyter Press, 1993; Joseph A. Selling, "(In Search of) A Fundamental Basis for Ethical Reflection," *Ethical Perspectives* 1 (1994) [Leuven], 13-21; and Thomas H. Murray and Stuart J. Youngner, "Organ Salvage Policies: A Need for Better Data and More Insightful Ethics," *Journal of the American Medical Association* 272 (1994), 814-815.
25. Op. cit., 1.
26. See, e.g., *Catechism of the Catholic Church*: Libreria Editrice Vaticana, 1994, nn 1954-1960.
27. Albert Einstein, "Science and Religion" (1939) in *The World Treasury of Physics, Astronomy and Mathematics*, Timothy Ferris, ed., New York: Little Brown, 1991, 828-835, citation at 832.
28. We will rely here on two fundamental sources: *The Critical Calling*, op. cit. and *Inquiries in Bioethics*, Stephen G. Post, Washington, D.C., Georgetown University Press, 1993. See also "Human Research and Triage" and "Reconstructing Human Beings" in *Ethics of Health Care*, 2nd ed., Benedict M. Ashley and Kevin D. O'Rourke, Washington, D.C., Georgetown University Press, 1994, 113-128 and 169-188.
29. *L'Osservatore Romano*, 24 October 1982.
30. See *Instruction on Respect for Human Life in Its Origin and the Dignity and Procreation*, op. cit., Introduction: 3.
31. Paul Ramsey, op. cit., 138.
32. *Instruction on Respect for Human Life . . .*, op. cit., 6.
33. Panel on Bioethical Concerns, National Council of Churches of Christ - U.S.A., *Genetic Engineering: Social and Ethical Consequences*, New York: Pilgrim Press, 1984, 34.
34. *Human Genetic Engineering*, Hearings before the Subcommittee on Investigations and Oversight of the Committee on Science and Technology, U.S. House of Representatives, 170 (1982), 303 and 305.
35. 1980 Nobel laureate in Chemistry Paul Berg of Stanford University thus comments: "I can see the potential for this information to intrude on personal freedoms. We can already see this in tests that can detect susceptibility to certain chemicals. Employers might not hire people who have risks associated with exposure to these substances. Insurers might charge high premiums to cover these people or not insure them at all. Conceivably, the government could use this information to mandate how and where we live." *Medical Science News*, November 1984.
36. *Human Genetic Engineering*, op. cit., 305.
37. Cited in McCormick, op. cit., 269.
38. This and other similar options bring up the ethical/legal question of children suing parents for wrongful birth.
39. *Inquiries in Bioethics*, op. cit., 13.
40. *Ibid.*, 16.
41. Congregation for the Doctrine of the Faith, *Instruction on Respect for Human Life in Its Origin and on the Dignity of Procreation: Replies to Certain Questions of the Day*, *Origins* 16 (1987), 697-711.

42. Ibid., Part III. See "Moral Traditions, Ethical Language, And Reproductive Technologies," *The Journal of Medicine and Philosophy* 14(1989), 497-522.

43. Introduction: 1. The authors do not address the question of the existence of an immortal soul; we do assume a uniquely human "source" of the rights and responsibilities set down in any system of laws.

44. Introduction: 2. This same point was made by Pope John Paul II in his talk, "The Ethics of Genetic Manipulation," *Origins* 13 (1983), 385-389.

45. Introduction: 3.

46. Introduction: 4.

47. Introduction: 5.

48. It is tragic that this consensus is eroding among religions due to great social pressures. We feel that this value is essential in reaching a social consensus on reproductive technologies.

49. Part III.

50. We will follow Mc Cormick's basic analysis in *The Critical Calling*, op. cit. 333-352.

51. John A. Robertson, op. cit., 5.

52. *Acta Apostolicae Sedis* [hereafter AAS] 41 (1949), 559-560.

53. AAS 43 (1951), 835-854. The Pope spelled out this point in even further detail on 19 May 1956 in his talk to the Second World Congress on Fertility and Sterility when he stated that the Church rejects the separation of "the biological activity from the personal relation of the married couple." AAS (1956), 467-474.

54. Richard A. McCormick, *The Critical Calling*, op. cit., 335. The critical essay that influenced Pope Pius XII was by F. Hurth, S.J., "La fecondation artificielle: Sa valeur morale et juridique," *Novelle revue theologique* 68 (1946), 416 ff.

55. AAS 74 (1982), 119.

56. Congregation for the Doctrine of the Faith, *Instruction on Respect for Human Life in Its Origin and the Dignity of Procreation*, San Francisco: Ignatius Press, 1987.

57. Carlo Caffarra, *L'Osservatore Romano* (English edition), 30 July 1984. See also William Daniel, "In vitro Fertilization: Two Problem Areas" in *Moral Studies*, Terence Kennedy, ed., Melbourne: Spectrum Publications, 1984, 27 ff. "Intrinsic" is an ethical term denoting that an action is per se good or evil: e.g., viewing a person as an object is of its very nature wrong as personal dignity demands the respect of subjectivity.

58. Richard McCormick, *The Critical Calling*, op. cit., 337. It should be noted that many writers reject this line of reasoning: they do not see IVF as "manufacture" of a "product." Fertilization happens when sperm and egg are brought together in a petri dish. The technician's "intervention is a condition for its happening: it is not a cause." (William Daniel, op. cit., 27.) Furthermore, some believe, the attitudes of the parents and technicians can be every bit as reverential and respectful as they would be in the face of human life naturally conceived.

59. See Norma Ford, "Moral Issues that Arise in Experimentation on Human Embryos," *The Australian Catholic Record* 63 (1986), 3-20; especially 11-12.

60. See Thomas W. Hilgers, "Human Reproduction: Three Issues for the Moral Theologian," *Theological Studies* 38 (1977), 147-149.

61. *Fertility and Sterility* 57 (1992), 15, 21.

62. See Christine Overall, *Human Reproduction: Principles, Practices, Policies*, Toronto: Oxford University Press, 1993, 167-168.

63. See John A. Robertson, "Ethical and Legal Issues in Cryopreservation of Human Embryos," *Fertility and Sterility* 47 (1987), 371-381.

64. AAS 41 (1949), 557-561.

65. Karl Rahner, "The Problem of Genetic Manipulation," *Theological Studies* 9, New York: Herder and Herder, 1972, 225-252; citation at 246.

66. *The Critical Calling*, op. cit., 341.

67. Paul Ramsey, op. cit., 88-89.

68. We here endorse and rely upon McCormick's outline in *The Critical Calling*, op. cit., 330.

69. See also "Ethical Considerations of the New Reproductive Technologies," *Fertility and Sterility* 46 (1986), Supplement 1.

70. *Origins* 12 (1982), 342.

71. See John A. Robertson, op. cit., 102-104.
 72. Clifford Grobstein, *Science and the Unborn*, New York: Basic Books, Inc., 1988.
 73. Ibid., 74.
 74. The Holy See, *Charter of the Rights of the Family*, 23 October 1982, art.4.
 75. Congregation for the Doctrine of the Faith, *Declaration on Procured Abortion*, 18 November 1974. Printed in *Vatican Council II/More Post Conciliar Documents*, A. Flannery, ed., Dublin: Dominican Publications, 1982, 445-446. This same point has been reiterated in *Evangelium Vitae (Origins 24, 1995, 689-727)*, esp. nn 57-63.
 76. Harold J. Morowitz and James S. Trefil, *The Facts of Life*, New York: Oxford University Press, 1992.
 77. Ibid., p 16.
 78. Ibid., p 152.
 79. See *Science*, 14 March 1980, 1165.
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