
Chapter 11

Ethical Considerations

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Ethical Considerations

Ethical issues raised by the use of reproductive technologies can be examined in a variety of ways. One method is to study the arguments for and against the use of such technologies, with special emphasis on impacts that are unintended, indirect, and delayed. Another way is to list novel questions raised by the use of reproductive technologies. New ethical questions arise, for example, when third parties are involved in procreative interactions, when sperm and ova are banked for indefinite periods of time, and when surplus human embryos are created. A third method is to list the human values that are generally at stake in the diagnosis and treatment of infertility.

This chapter analyzes ethical arguments, raises novel ethical questions, and surveys relevant human values through discussion of six basic themes that pertain to specific reproductive technologies:

- the right to procreate or reproduce,
- the moral status of the embryo,
- parenthood and parent-child bonding,
- research initiatives and the rights of patients and research subjects,
- truth-telling and confidentiality, and
- intergenerational responsibilities.

CONTEXT OF THE ETHICAL DEBATE

Professional, public, religious, and personal opinions infuse ethical debates about the use of reproductive technologies. The concerns expressed by health care personnel are important, since these individuals are among those most intimately involved in the development and application of such techniques. Position statements have been prepared by relevant committees of the American Medical Association, the American College of Obstetricians and Gynecologists, and the American Fertility Society (1,2,4).

All these professional groups consider at least some, if not all, of the existing reproductive technologies to be morally licit, and all advocate their use in carefully circumscribed situations. Yet all share certain concerns and maintain that the use of these techniques requires careful monitoring. Seen to be especially central are the issues of confidentiality; informed consent; minimization of risk to the pregnant woman, the fetus, or the future child; adequate screening of donors; appropriate handling of embryos; and ongoing evaluation of data obtained through the use of these techniques.

Public opinion is reflected in the many responses of public commissions and groups in this country and throughout the world, particularly since

the 1970s (see also apps. D and E). Several themes emerge from such reports:

- support for artificial insemination by husband, artificial insemination by donor, and in vitro fertilization (IVF) as treatments for infertility;
- support for ova and sperm donation (with the exception of the U.S. Ethics Advisory Board, which barred the use of Federal funding, and the French National Ethics Committee);
- support for embryo donation (with the exception of the U.S. Ethics Advisory Board, the French National Ethics Committee, and the Working Party in South Australia);
- the imposition of guidelines and procedural regulations on the use of these techniques, such as restrictions on their use to stable couples and to physicians practicing in appropriate facilities, restrictions for donors of gametes, guidelines on the disclosure of information to protect confidentiality, and provisions to ensure informed consent and to clarify the legal status of children born as a result; and
- great controversy surrounding issues of surrogate motherhood (regardless of whether a fee is paid), the treatment of embryos not

transferred, and the use of these techniques by single women.

Many religious and secular communities emphasize the moral significance of parenthood in a general way, with several variations on this theme. One variation emphasizes the ways in which parenthood enriches the life of individual couples; a second focuses on the importance of parenthood for the social order. These two approaches are best viewed as instances of the appeal to consequences or outcomes of actions. A third emphasizes a theological dimension to parenthood, which is viewed as fulfilling a divine commitment to procreate or as a way of human participation in the divine activity of creating and sustaining life.

Religious traditions offer widespread support for traditional infertility workups and medical and surgical interventions (see app. F). The Protestant, Jewish, and Muslim traditions affirm artificial insemination by husband. The Roman Catholic tradition has special reasons for officially opposing artificial insemination by husband, although some theologians dissent (8,23). Most religious traditions find donation of sperm, eggs, or embryos to be problematic. The Roman Catholic, Orthodox Jewish, Muslim, and some Protestant traditions oppose it, while other Protestant and Conservative and Reform Jewish traditions allow it. Surrogate motherhood in any form is generally opposed by religious traditions. A few religious thinkers, notably biblical theologians (influenced by Old Testament patriarchal accounts about the importance of preserving male lineage) give guarded approval, but these are exceptions. It is important to note that not all members of a particular religious background adhere to the official tradition of their church.

Arguments about the use of reproductive technologies are generally expressed in terms of rights and responsibilities. There are two types of moral rights—liberty rights (negative or noninterference rights) and welfare rights (positive or correlative rights). Responsibilities are also described and sometimes referred to as duties and obligations. These terms are chosen because contemporary ethical discussion, whether it is based on intuition, ethical principles, or faith, is often couched in terms of rights and responsibilities.

A liberty right is defined as a natural right based on human freedom such that any human adult capable of choice has the right to forbearance on the part of all others from the use of coercion or restraint except to hinder coercion or restraint itself, and is at liberty to take any action that is not coercing or restraining or designed to injure other persons (16). In addition, liberty rights indicate the limits of the plausible authority of others, including government. Many people would extend to adolescents, children, and the unborn liberty rights in the form of a right to life (25). A liberty right is a kind of free assertion that requires only noninterference on the part of others, which is why it is characterized as a negative right. Exercising such a right does not require any positive response from others—only that they do not interfere. A liberty right does not claim aid from others in pursuit of a person's own goal. This is unrelated to the issue of whether the aid of others can be paid for or not. The exercise of a liberty right simply does not require such assistance.

A welfare right is a claim asserted by an individual that requires a corresponding response, obligation, or duty on the part of others. Welfare rights depend on a social consensus about the value of the goal. The right to be educated is a welfare right because it involves the assistance, contributions, and resources of others. The United States, for example, has a system of public as well as private education. The right to be educated, particularly at the public expense, is a kind of welfare right because it of necessity involves the talents, energies, and resources of others. It is important to note that the assertion of a welfare right does not necessarily indicate the presence or need for what is commonly called a welfare system. The claims made by infertile individuals or couples may or may not be something for which they can pay.

The infertile couple or individual must make decisions and come to terms with the problem of infertility in the midst of this professional, public, and religious debate about the ethics of reproductive technologies. The personal experience of infertility diagnosis and treatment may either reinforce or come into conflict with deeply held values. In addition, there are special problems in

establishing a definitive resolution of many of these issues because of the plurality of moral viewpoints. In such circumstances, it becomes more

difficult to restrict the informed and free collaboration of various parties in achieving conception.

THE RIGHT TO REPRODUCE

A fundamental aspect of much modern moral thinking is the significance of free and autonomous choices. The exact definitions of freedom and autonomy are controversial, but basically considerable moral significance is attached to a person's freedom to make voluntary, uncoerced choices based on self-legislated principles and values. When applied to an evaluation of techniques for preventing and treating infertility, the result is an emphasis on the moral significance of couples and individuals freely choosing to act in accordance with their own values.

A second aspect of modern moral thought is the recognition of duties, obligations, or responsibilities that may limit or constrain human actions. The performance of some types of actions is morally illicit, however valuable the consequences and however much the people involved want to perform them. The exact nature of these constraints and the conditions under which they may be overridden are matters of great controversy, but the basic idea that they exist and do impose limitations on choices is relatively straightforward. In terms of preventing and treating infertility, the emphasis is on examining whether particular techniques do or do not violate any of these constraints.

The right to reproduce appears to be linked to freedom and autonomy in the most basic way: the desire to have children and create a family is a natural expression of generative urges and commitments to religious, ethnic, and familial values that have characterized the human race from its beginning. At present, the right to reproduce is a natural as well as a necessary aspect of human existence for at least some human beings if the species is to continue. The right to reproduce is most often a liberty right in that it demands only that others not interfere. When infertility is not a factor, individuals can exercise their right to reproduce in a way that minimizes claims on the goods, services, and resources of others.

Even as a liberty right, some argue that it is and should be constrained by inordinate population growth. The right does not exist in a vacuum but is tempered by societal circumstances in which people live. China, for example, has a policy limiting to one the number of children married couples in most of the country may have. This public policy is inconsistent with American values and probably would never be adopted in this country, although some have urged that considerations of world population growth should influence the size of American families (21).

The right to reproduce, then, as a liberty right is not particularly controversial, especially when it is asserted by a fertile couple or an individual. When a man or a woman is infertile, however, this right involves claims on others for responses, actions, and services. Such claims, even when those exercising the right have a full ability to pay, must be balanced against a host of other health care needs and priorities. Obviously the right to reproduce can more easily be exercised by those who can pay for needed medical service or intervention, whether such services *ought* to be for sale is an important question, as is the question of when, if ever, others in society should subsidize or defray the costs of infertility diagnosis and treatment for those who cannot afford needed services. The use of tax dollars for infertility treatment services is also problematic to those members of society who think that some or all reproductive technologies are immoral.

Because it is desirable that procreation be achieved without the direct contributions of third parties or the services of health care providers, it would be better if the condition of infertility did not exist. The reality of infertility makes this a moot point, and it is the basis of a strong ethical argument for a heavy emphasis on preventive measures. For example, based on the ethical principle of respect for persons, it is important that factors that could contribute to infertility, such

as a high incidence of sexually transmitted disease resulting in tubal disorders (see ch. 4), be minimized. When attempts to prevent infertility are not initiated early or have failed, some assistance is required for individuals or couples to satisfy their desire to procreate.

When artificial insemination, gamete intrafallopian transfer, sperm and ovum banking, IVF, or surrogacy are needed, exercising the right to procreate makes extensive and in some cases troublesome claims on the interests and resources of others.

In the cases of drug therapy for ovulatory failure and surgical intervention for mechanical failure, the right to procreate can be exercised by infertile couples as long as they are able to procure the necessary expertise and pay for it either directly or through a third party. These technologies are widely available and the provision of them would not compromise the interests of any third party. In fact, infertile couples, health care professionals, and pharmaceutical companies all appear to benefit when such services are appropriately sought.

With artificial insemination, the ethical considerations become more complex. In the case of insemination with the husband's sperm, there is often no compelling objection as long as both partners are fully informed and choose to engage freely in this practice. In rare cases in which the husband is deceased, any harms to the child that might be born associated with not having a living biological father must be weighed against the mother's right to procreate using the stored sperm of a deceased spouse. This right has indeed been claimed by a widow for the use of sperm from her deceased husband (11).

The right to procreate when it involves insemination with a donor's sperm is least problematic when it is asserted by the couple because the husband's desire to see his wife become pregnant has obviously transcended his thwarted desire to be the genetic father. The desires of single women to be artificially inseminated by a donor do not cause any apparent harm to the donor but are most often evaluated with some consideration of the abilities to competently raise a child as a single parent and to the societal consequences of in-

dividuals conceiving with the explicit intention of raising a child alone, notwithstanding a trend toward single-parent adoption in this country.

Surrogates and donors of sperm and ova are not necessarily exercising a right to procreate but are contributing their human biological materials for a variety of motives, ranging from pure altruism to a desire to make money. Ethical considerations concerning these transactions center on issues of confidentiality, truth-telling, and the moral status of contracts.

Do infertile couples have a right to financial assistance if they are unable to pay for the cost of diagnosing and treating infertility? The American Fertility Society has noted that if techniques of assisted reproduction are included in the notion of an adequate level of health care, then it is consistent with the work of the President's Commission for the Study of Ethical problems in Medicine and Biomedical and Behavioral Research that all citizens be provided with infertility services (2,28). A variation of this position is the view that individuals have a positive right only to a fair share of what may fulfill true human needs (15). It can also be said that infertile individuals and couples are entitled to diagnosis and treatment for infertility if they have had the foresight to select and supplement insurance coverage in a way that such services are included (9).

Providing Federal funds either through a possible extension of Medicaid benefits or by means of a separate enactment is one of the most controversial aspects of complete support of the right to procreate for all infertile couples. Some Americans view selected reproductive technologies as immoral. Spending Federal dollars always raises questions about the allocation of scarce resources. The principal arguments in such debates are:

- **utilitarianism**, that resources should be allocated in a way that promotes the greatest good for the greatest number (24);
- **libertarianism**, that individuals are entitled to whatever resources they possess provided they acquired such resources fairly, that resources may be exchanged commercially or as gifts, and that inequalities in the distribution of resources maybe unfortunate but they are not inherently unfair (27);

- **maximin**, that as a matter of first principle, individuals are entitled to equal shares of resources and, as a matter of second principle, inequalities (either excess or scarce resources) should be distributed to benefit the least advantaged provided there is fair equality of opportunity (29); and
- **egalitarianism**, that resources should always be distributed equally (26).

The utilitarian argument can be used to support funding for infertility services by demonstrating how such support would contribute to the greater good. The libertarian argument is largely consistent with the status quo, in which infertil-

ity services are available on a limited basis to those who can pay for them. The maximin position could be used to justify some special consideration for infertility services if it could be demonstrated that such services are generally available and that the infertile have the special status of a least **advantaged** group. Finally, an egalitarian argument about the availability of infertility services would support only those services it is feasible to provide to everyone in need. Thus, the arguments about just distribution and the allocation of scarce resources suggest a variety of ethical responses on access to and provision of infertility services for those who cannot currently afford them.

MORAL STATUS OF THE EMBRYO

Human fertilization creates a biological entity that is commonly regarded as more than and different from the precursor germ cells of human sperm and ovum (see figure 11-1). This new entity may develop into a fetus and, eventually, an infant. A number of human embryos are naturally lost when the embryo does not implant in the lining of the womb (see ch. 2).

There is no societal consensus about the earliest point, if any, at which a human embryo should be considered to be a person. At least two important moral or ethical questions are raised about embryos. First, how should we regard or value embryos? Second, what actions are morally acceptable and morally unacceptable with respect to embryos?

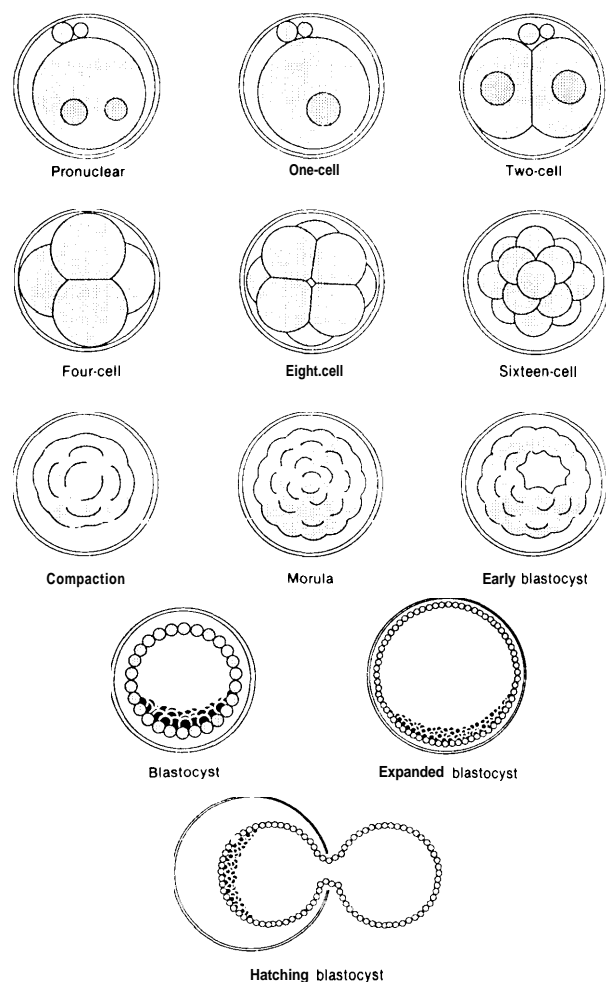
These questions are directly relevant to two of the reproductive technologies examined in this report—IVF and embryo banking. In addition, the freezing of embryos, research using embryos, and in vitro embryo culture are influenced by the way in which the embryo is regarded. In the process of IVF (see ch. 7), it is standard practice to mix several ova with sperm in order to increase the likelihood that several fertilizations will take place. The desired result is the development of embryos. Although the precise moment of fertilization and activation of the new genome may be as late as the four- to eight-cell stage of cell division, ethical questions do arise when more embryos develop than are needed for transfer to the womb or when

embryos are created for purposes other than transfer, such as research (19).

It has been suggested that decisions about the use of human embryos can be made depending on the neurological development of the embryo at a given point in time (14)(33). The Wailer Committee in Victoria, Australia, the Warnock Committee in Great Britain (see app. E), and the 1979 report of the Ethics Advisory Board in the United States all approve of research involving human embryos fertilized in vitro, with varying restrictions but with agreement on a time limit of 14 days after fertilization (35).

There are at least three major philosophical positions on the moral status or meaning of the human embryo. The first is that the embryo is no different from other human biological material and that it has meaning only in terms of the goals and aspirations of others regarding its use and possible maturation. Adherents of this position point out that a large portion of all human embryos are naturally cast off when implantation fails to occur and, further, that an intrauterine device results in the loss of embryos that are even more developed than those that might be discarded in the course of IVF (10,2 o).

A second position proposes that the embryo, while not a person and while not necessarily requiring the respect and rights due to fully functioning persons in society, is not an objective prod-

Figure 11-1.—Fertilization and Early Stages of Human Embryonic Development

SOURCE: Office of Technology Assessment, 1988

uct or thing, and that it serves as a powerful symbol of respect for life (30)(31)(34). The embryo, in this scheme, is a “transient identity” and should be accorded “(transient rights.” These rights are not derived from the values others place on its existence, but from the nature of the potentiality of existence the embryo possesses. Still, while couples have the primary obligation to respect the life of the conceptus, however early its human form, respect for that life may itself lead some to consider abortion on genetic or other grounds. These grounds are open to some public scrutiny and control. When the embryo is at risk—during transfers, freezings, transplants, and future genetic

manipulations—public scrutiny may also include public controls. It may be inappropriate to sell such material for research purposes, because that would violate the inherent transient rights of such entities (34).

A third position, which is held by the Roman Catholic church and others, is that the human being must be respected—as a person—from the very first instant of existence (8). From the time an ovum is fertilized, a new life is begun that is of neither the father nor the mother; it is rather the life of a new human being with an individual growth. It would never be made human if it were not human already. “Right from fertilization is begun the adventure of a human life” (32). This position has important implications for any use or treatment of the human embryo that would be different from or less than that afforded to a human person.

In practice, the issue of the use of surplus embryos in IVF is sometimes avoided by implanting all the eggs that are fertilized, increasing the probability of multiple births. One commentator, however, has argued that the deontological (duty-based) problem of the moral status of the embryo in this case gives way to the teleological (outcome-based) problem of how to care for more than one newborn (18). In addition, the presence of multiple fetuses in utero is correlated with lower birth weight per child and greater risks to the mother and to fetal health.

A recent Australian case demonstrates some of the problems and issues associated with the moral and legal status of unimplanted embryos (see box 11-A). From an ethical standpoint, the Rios case illustrates why it is important to discern the moral status of the embryo. Aside from the intents of the parents, who in this case are no longer living, it is difficult to ascertain what duties and obligations are owed the frozen embryos.

The extent to which a human embryo should be respected was addressed in 1986 by the American Fertility Society in its recommendations that:

- cryopreservation should be continued only as long as the normal reproductive span of the egg donor or as long as the original objective of the storage is in force;

Box 11-A.—Australia's Orphan Embryos

In 1981 Mario and Elsa Rios, of Los Angeles, CA, participated in the IVF program at the Victoria Medical Center in Melbourne, Australia. Then age 50 and infertile, Mr. Rios allowed a local, anonymous donor to artificially inseminate three eggs from Elsa Rios, his 37-year-old wife; one was transferred and the other two were frozen for possible use in the future. Mrs. Rios subsequently miscarried and chose not to undertake further transfers at that time. Before she could return and try to use the other embryos, she and her husband died in a plane crash in Chile. Because no will was executed by the wealthy Rios, the California laws of interstate succession seemed to apply. Thus, Mr. Rios' son by a previous marriage was thought to be entitled to his father's share of the estate and Mrs. Rios' 65-year-old mother to her daughter's share. In December 1987, a California superior court declared Mrs. Rios' mother to be sole heir. The medical center in Melbourne then announced that the embryos would be thawed and implanted when a suitable recipient was found, although the survival chances were rated at 5 percent.

SOURCE: Office of Technology Assessment, 1988, based on G.P. Smith, "Australia's Frozen 'orphan' Embryos: A Medical, Legal and Ethical Dilemma," *Journal of Family Law* (University of Louisville School of Law) 24:27-41, 198.5-86; and on "Embryos Will Be Implanted," *New York Times*, Dec 5, 1987

- transfer of embryos from one generation to another is unacceptable; and
- formal discussion with the couple should take

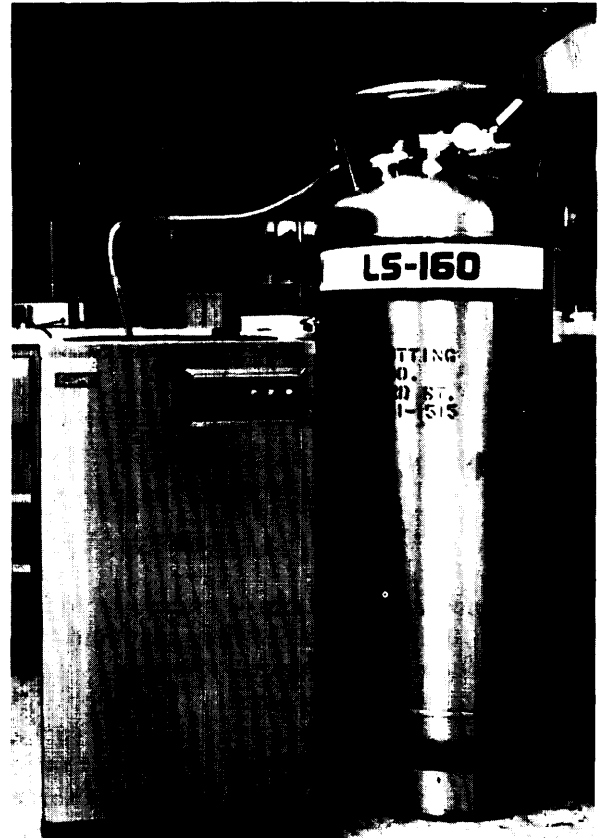


Photo credit: Martin Quigley

Cryopreservation of human embryos in liquid nitrogen storage chamber

place in advance to decide whether excess embryos can be transferred to other couples, used for approved research, examined, or discarded (2).

PARENTHOOD AND PARENT-CHILD BONDING

Opinion differs on the extent to which the genetic, gestational, and social functions of parenting can be separated and yet preserve the welfare of parents and children. Some who contend that new reproductive technologies are ethically acceptable regard parenthood as a relationship defined by acts of nurturing as opposed to acts of conceiving and giving birth. Others, although recognizing that acts of nurturing and generating life are distinct and that acts of nurturing are

included in the meaning of parenthood, affirm that acts of generating life are parental in nature (22).

Bonding between a human infant and an adult is a prerequisite to the physical and psychological growth of the child and creates and sustains the abilities of the parents to nurture the child. Do parents and children possess a possible welfare right to at least the minimum conditions necessary for human bonding to take place? Now that

it is possible for a child to have a total of five “parents”—three types of mothers (genetic, gestational, and rearing) and two types of fathers (genetic and rearing)—which of these parents has the right to form a parent-child bond? Now that it is possible through surrogacy arrangements and artificial insemination by donor for individuals to plan to create a single-parent family, does this violate a possible right of the child to bond to more than one parent? These questions have important implications for the way in which parent-child bonding takes place and for possible new variations in the developing identities of some children.

Any one of these variations on the theme of the moral significance of parenthood and the importance of parent-child bonding has considerable relevance to an ethical assessment of techniques for preventing and treating infertility. Depending on a number of factors (e.g., the way in which a particular variation views parenthood and the particular treatment used), the importance of the parent-child bond may lead to a positive ethical evaluation of techniques for preventing and treating infertility (6).

RESEARCH INITIATIVES AND THE RIGHTS OF PATIENTS AND RESEARCH SUBJECTS

In the process of diagnosis and treatment for infertility, individuals or couples may find themselves in the role of research subjects as well as patients. Typically they start out as patients and are presumably informed about and give consent to each step of the diagnostic process. Couples are asserting a right to be treated for their infertility using medical therapy.

To expand and improve on the scientific basis of diagnosis and treatment for infertility, information about patients and their problems must be gathered and recorded in a systematic way. This is an aspect of medical treatment that can result in descriptive research about the course and outcome of medical therapy. As long as patients are informed that facts about them are being collected, in part for research purposes, and that their anonymity will be preserved, the benefits of this accumulating database seem to outweigh any possible harms or inconveniences to the infertile couples. These couples are now, in addition to being patients, also serving as research subjects although they may always choose to exercise their right to not participate. This pattern is not substantially different from that conducted in other areas of human health and disease.

A more troubling research aspect of infertility diagnosis and treatment (as well as the diagnosis and treatment of many other conditions) is how to make appropriate use of new technologies that

have not yet entered the realm of tried and true medical therapy. Which reproductive technologies, if any, are more experimental than therapeutic? Do infertile couples become research subjects as a result of the experimental nature of the technologies that may be used in their treatment? Is there a subtle pressure occasionally present that the development of new knowledge can sometimes justify placing a human subject at a disproportionate risk or engaging in research with inadequate informed consent procedures?

All the parties interested in effective infertility diagnosis and treatment share a concern about how to distinguish properly among medical therapies, clinical trials, and clinical experiments. A specific reproductive technology may be *used* in a standard way in one instance and in a novel or experimental way another time. So it is not only the technologies themselves, but the way in which they are used, that determines whether a patient receives care that is more experimental than therapeutic (7).

Clinicians and researchers note that the problem of consistently developing medical therapies is particularly acute in the treatment of infertility because a de facto moratorium since 1980 on Federal funding for many forms of research involving fertilization of human egg and sperm has impeded the development of knowledge about fertility, infertility, and contraception (see ch. 15).

Although research initiatives may result in the steady transition of reproductive technologies from the domain of experimental to that of standard medical therapy, the rights of patients who are being treated for infertility to be appropriately informed about the research aspects of their treatment persist. In the course of diagnosing and treating infertility, the liberty or noninterference rights of scientists to pursue research and of physicians to practice medicine are constrained by the correlative right of infertile couples to be informed about the experimental nature of selected reproductive technologies.

Individuals and couples with problems of infertility are an extremely vulnerable population

group. Because of their strong desire to exhaust all possibly successful avenues of treatment, an attitude they share with those who are considering participation in research under the pressure of severe illness, their ability to give free and informed consent is to some extent always compromised. For this reason, it is particularly important that care be taken to carefully inform infertile couples when new reproductive technologies are suggested as possible methods of treatment. The special vulnerability of this group makes quality control of reproductive technologies a vital societal concern (see ch. 9).

TRUTH-TELLING AND CONFIDENTIALITY

Infertility prevention, diagnosis, and treatment are interactive processes in which the infertile individuals, physicians, and others exchange information, make evaluations, and even offer predictions. All parties to these interactions have a right to know the truth. At least two moral arguments for telling the truth can be cited: Truth-telling is a general requirement for an action to be moral, and truth-telling generally has the best consequences in the realms of personal interaction (37). A common counterargument is that the truth might result in some harm, such as increased personal suffering or a denial of access to a desired service. Using the language of moral rights mentioned earlier in the chapter, the right to be told the truth is a claim right involving the full disclosure of otherwise unknown or unavailable information. The liberty right to be left alone, or free from harm, might be best exercised with or without the truth.

Infertile individuals and couples who seek diagnosis and treatment are not asking merely to be left alone. In their quest for a solution to their infertility, truthful information is an important basis for accurate diagnosis. It is important for the physician to know, for example, about any occurrence of sexually transmitted disease in order to make an accurate diagnosis and to devise an appropriate treatment. It is also important for

the physician to know the extent of previous diagnostic workups and treatment failures.

By the same token, it is important for the patient to know the truth about a specific treatment and the likelihood of success of a given effort. A common criterion used in evaluating various IVF programs is the pregnancy rate achieved by a specific program. There is considerable variation, however, in the way that this rate is reported. The variations include reporting in terms of pregnancies per ovarian stimulation cycle, and pregnancies per embryo transfer (see ch. 9). A group of prominent clinicians has noted that what constitutes pregnancy is confusing to the lay public. Couples who seek treatment for infertility are really interested in taking home babies, and a claim to a high pregnancy rate based on a limited number of chemical pregnancies, for example, is misleading (5). One commentator makes the point that technically accurate statements that convey misleading messages are no less a violation of the principle of truth-telling because their content happens to be technically true (36).

One area in which physicians have made judgments that truth-telling may not ultimately be of benefit to the patients they are trying to treat is in filing insurance claims on behalf of patients. The great variation in coverage among third-party

payers may lead to physician subterfuge about the actual services provided and the goals of treatment (see ch. 8). This is a case in which the physician may knowingly compromise his or her own integrity in order to assist patients in acquiring reimbursement. Physicians who do this have made the judgment that the negative consequences of telling the truth in a way that corresponds to insurance reimbursement categories outweigh the general moral requirement to tell the truth.

A major feature of the physician-patient relationship is the expectation that the highly charged personal information pertaining to the diagnosis and treatment of infertility will be held in confidence. This is true for most of the interactions that take place between physicians and patients but is particularly pressing in an area of medical practice where problems are of such an intimate nature and strike at the heart of personal and family relationships. The fundamental statement concerning medical confidentiality appears in the Hippocratic oath:

What I may see or hear in the course of the treatment or even outside of the treatment in regard to the life of men, which on no account one must spread abroad, I will keep to myself, hold-

ing such things to be shameful to be spoken about (12).

This principle has been reiterated in modern times by many groups and in numerous codes of professional ethics. It has been maintained, for example, that a doctor owes a patient absolute secrecy on all that has been confided or that the doctor knows because of the confidence entrusted in him or her, and that the patient has the right to expect that all communications and records pertaining to care should be treated as confidential (3,4).

The use of reproductive technologies can place a strain on maintaining confidentiality in several important ways. The use of donor ova or sperm involves the transfer of relevant information about the donor although the anonymity of the donor can be maintained. It may be impossible to treat the problem of infertility as a problem of the couple if one partner holds the physician to a principle of confidentiality, for example, with respect to past sexual practices. The maintenance of confidentiality is also linked to the reestablishment of privacy concerning sexual matters that may be essential to the well-being of the couple after the crisis of infertility has been resolved.

INTERGENERATIONAL RESPONSIBILITIES

One important aspect of ethical arguments for and against specific reproductive technologies is the significance of considering the consequences of individual actions and social practices for all those affected. These individuals can include those who perform the actions or participate in the practices, or they may be other members of society. Any evaluation must consider the consequences of these techniques for the infertile couples, for their prospective children, and for the rest of society (6).

Some argue that the use of reproductive technologies carries with it the duty of not harming either the infertile patient or the resulting embryo, fetus, and child. The ethical principle of non-maleficence has a long tradition in medical ethics that many trace back to the Hippocratic oath (36). In addition, others would argue that there is a

strong obligation to circumvent or treat the problem of infertility in ways that do not harm future generations in general. Does one generation have obligations to another and, if so, how are these duties weighed against individual needs and desires?

These questions are particularly relevant to issues of confidentiality and truth-telling in the context of donor gametes (ova or sperm) and surrogate motherhood. Should a child be told that his or her rearing parent is not the child's genetic and/or gestational parent, and also how he or she was conceived? Should information about a child's biological origin be kept on file? Should a child who is not living with his or her father or mother be entitled to at least some information about this genetic parent? Should a child be entitled to know the identity of the genetic father or mother and

thus be afforded the opportunity to contact this parent?

In his book *The Philosophy of Right*, G.W.F. Hegel stated:

Children are potentially free and their life directly embodies nothing save potential freedom. Consequently they are not things and cannot be the property either of their parents or others (17).

Children are ends in themselves and not merely the means or objects of the goals of their parents. If this is true, then it would be unacceptable to utilize a reproductive technology that would impinge on the freedom or autonomy of children. One philosopher argues that duties to future generations must be much weaker than duties to con-

temporaries, for contemporaries are actual persons who can have actual views about what is important (13). Even so, there is an important argument that it is prudent to support those practices that are least likely to be harmful to the next generation.

Reproductive technologies also raise intergenerational concerns about the use of resources. Increased funding for infertility research can have important benefits for humanity but this claim for the research dollar has to compete with other research interests. In addition, any general shift in the reproductive years of the population as a whole has important economic and demographic implications for the generations that follow.

SUMMARY AND CONCLUSIONS

For individuals and couples with problems of infertility, the right to procreate maybe exercised as a simple liberty right involving the noninterference or forbearance of others or as a welfare right that makes significant claims on technology and the expertise and resources of others. The right to reproduce becomes problematic when it involves large financial resources extending beyond those available to an infertile individual or couple. Given the fundamental nature of the desire to procreate, however, it seems desirable that individuals from a variety of backgrounds have some access to reproductive technologies.

The right to reproduce becomes more difficult to justify when it begins to compromise the interests of a third party. There is a strong moral sentiment that the exercise of the right to procreate by some individuals should not result in the exploitation of women, for example, in surrogate mother arrangements. Alternatively, some moral support exists for the view that in a free society it is possible and should be legal to give the gift of genetic or gestational surrogacy to an infertile couple.

A strong ethical argument can be made that resources and support should be devoted to the prevention of infertility in order that the right to procreate can most often be expressed as a liberty right. Individuals have an interest in avoid-

ing any curtailment of their reproductive capacity when they wish to reproduce. This places a heavy emphasis on the eradication of factors that lead to infertility.

The moral status of the human embryo is a subject of considerable debate. Many people have made judgments about whether the embryo has the status and meaning of a person. In addition, cryopreservation of embryos presents legal and ethical questions about the rights of such entities and any duties and obligations owed to them. The unresolved debate about appropriate uses of human embryos and the de facto moratorium on Federal support for IVF research have impeded the growth of new knowledge about fertility, infertility, and contraception.

Reproductive technologies make it technically possible for a child to have a total of five '(parents'—three types of mothers (genetic, gestational, and rearing) and two types of fathers (genetic and rearing). These possibilities change the nature of parenting and may have implications for the ways in which parent-child bonding takes place. Such bonding has important psychological benefits for parents and is essential to the developing personalities of children.

The right to conduct research is a noninterference or liberty right as well as a welfare or cor-

relative right. The right to pursue research is always balanced against other societal goods, and the resources to conduct research are always limited. Infertile patients have a right to know when their treatment is in the realm of proven medical therapy or is essentially experimental.

Telling the truth and maintaining confidentiality are important aspects of the physician-patient relationship. The intimate nature of the diagnosis and treatment of infertility and the special features of reproductive technologies that make use of donor ova or sperm complicate simple ethical imperatives to tell the truth and to hold personal information in confidence. A strong argument can be made that individuals have a duty to refrain from utilizing reproductive technologies in ways that could possibly harm future generations or make disproportionate claims on the resources of existing generations.

Most religious traditions in the United States:

- support the treatment of infertility when such treatment involves traditional drug therapy or surgical intervention, and accept the moral licitness of such treatments;
- accept the moral licitness of artificial insemination by husband, have considerable hesitation about artificial insemination by donor, and show even less support for artificial insemination of single women with donor sperm;
- support IVF as long as only spousal gametes (ova and sperm) are used and as long as no embryos are wasted, though support lessens to some degree when there is early embryo wastage and to a much greater degree when donor gametes are used; and
- oppose surrogate motherhood in both its genetic and gestational forms.

CHAPTER 11 REFERENCES

1. American College of Obstetricians and Gynecologists, *Ethical Issues in Human In Vitro Fertilization and Embryo Placement* (Washington, DC: 1986).
2. American Fertility Society, Ethics Committee, "Ethical Considerations of the New Reproductive Technologies," *Fertility and Sterility* 46:1S-94S, 1986.
3. American Hospital Association, "Statement on a Patient's Bill of Rights," *Hospitals* 47:41, 1973.
4. American Medical Association, Judicial Council, *Opinions and Reports* (Chicago, IL: 1968).
5. Blackwell, R. E., Carr, B. R., Chang, R. J., et al., "Are We Exploiting the Infertile Couple?" *Fertility and Sterility* 48:735-739, 1987.
6. Brody, B. A., "Religious and Secular Perspectives About Infertility Prevention and Treatment," prepared for the Office of Technology Assessment, U.S. Congress, Washington, DC, June 1987.
7. Caplan, A. L., "The New Technologies in Reproduction—New Ethical Problems," *Annals of the New York Academy of Sciences*, in press, 1988.
8. Congregation for the Doctrine of the Faith, *Instruction on Respect for Human Life in its Origin and on the Dignity of Procreation* (Vatican City: 1987).
9. Daniels, N., "Am I My Parents' Keeper?" *Midwest Studies in Philosophy* 7:517-520, 1982.
10. Dickens, B. M., Faculty of Law, University of Toronto, Toronto, Canada, personal communication, Aug. 28, 1987.
11. Dionne, E.J., "Paris Widow Wins Suit To Use Sperm; Court Decides Against Sperm Bank in Plea From Wife of Man Who Died in 1983," *New York Times*, Aug. 2, 1984.
12. Edelstein, L., "The Hippocratic Oath: Text, Translation and Interpretation," *Ancient Medicine: Selected Papers of Ludwig EdeZstein*, O. Tempkin and C. Tempkin (eds.) (Baltimore, MD: Johns Hopkins University Press, 1967).
13. Engelhardt, H.T., Jr., Center for Ethics, Medicine and Public Issues, Baylor College of Medicine, Houston, TX, personal communication, June 24, 1987.
14. Flower, M. J., "The Neuromaturation of the Fetus," *Journal of Medicine and Philosophy* 10:237-251, 1985.
15. Fried, C., *Right and Wrong* (Cambridge, MA: Harvard University Press, 1978).
16. Hart, H. L. A., "Are There Any Natural Rights?" *Rights*, D. Lyons (cd.) (Belmont, CA: Wadsworth Publishing Co., 1979).
17. Hegel, G. W. F., *The Philosophy of Right*, Trans. T.M. Knox (Oxford, UK: Clarendon Press, 1952).
18. Jansen, R., "Ethics in Infertility Treatment," *The Infertile Couple*, R. Pepperell, C. Wood, and B. Hudson (eds.) (New York, NY: Churchill Livingstone, in press).
19. Jones, H. W., and Schrader, C., "The Process of Human Fertilization: Implications for Moral Status," *Fertility and Sterility* 48:189-192, 1987.
20. Kuhse, H., and Singer, P., "The Moral Status of the

- Embryo," *Test-Tube Babies*, W. \\\alters and P. Singer (eds.) (Melbourne, Australia: OxfordUniversity Press, 1982).
21. Mann, D., "Growth Means Doom," *Science Digest* 4:79-81, 1983.
 22. McCormick, R. A., "Reproductive Technologies: Ethical Issues," *Encyclopedia of Bioethics*, W.T. Reich (cd.) (New York, NY: Macmillan/Free Press, 1978).
 23. McCormick, R. A., "Vatican Asks Governments To Curb Birth Technology and To Outlaw Surrogates," *New York Times*, Mar. 11, 1987.
 24. Mill, J. S., *Utilitarianism and Other Writings* (New York, NY: The New American Library, Inc., 1962).
 25. Moraczewski, A. S., Regional Director, Pope John XXIII Medical-Moral Research and Education Center, Houston, TX, personal communication, Aug. 28, 1987.
 26. Nielsen, K., "Radical Egalitarian Justice: Justice as Equality," *Social Theory and Practice* 5:209-226, 1979.
 27. Nozick, R., *Anarchy, State and Utopia* (New York, NY: Basic Books, 1974).
 28. President's Commission for the Study of Ethical Problems in Medicine and Biomedical and Behavioral Research, *Securing Access to Health Care* (Washington, DC: U.S. Government Printing Office, 1983).
 29. Rawls, J., *A Theory of Justice* (Cambridge, MA: Belknap Press of Harvard University Press, 1971).
 30. Robertson, J. A., "Embryos, Families and Procreative Liberty: The Legal Structure of the New Reproduction)" *Southern California Law Review* 59: 971-987, 1986.
 31. Robertson, J. A., "Ethical and Legal Issues in Cryopreservation of Human Embryos," *Fertility and Sterility* 47:371-381, 1987.
 32. Sacred Congregation for the Doctrine of the Faith, *Declaration on Procured Abortion* 66: 12-13, 1974.
 33. Tauer, C. A., "Personhood and Human Embryos and Fetuses," *Journal of Medicine and Philosophy* 10: 253-266, 1985.
 34. Thomasma, D. C., Director, Medical Humanities Program, Loyola University Stritch School of Medicine, Chicago, IL, personal communication, Mar. 16, 1987.
 35. U.S. Department of Health, Education, and Welfare, Ethics Advisory Board, *HEW Support of Research Involving Human In Vitro Fertilization and Embryo Transfer*, May 4, 1979.
 36. Veatch, R. M., *A Theory of Medical Ethics* (New York, NY: Basic Books, 1981).
 37. Walters, L., "Ethical Aspects of Medical Confidentiality," *Contemporary Issues in Bioethics*, T. Beauchamp and L. Walters (eds.) (Belmont, CA: Wadsworth Publishing Co., 1982).