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Brave New Ways of Making Babies

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By
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Introduction

The surge in reproductive technologies, such as high-tech AI, IVF, GIFT, and surrogate gestation, seems to offer non-fertile couples the chance to have "their own" children. Media coverage of the success stories often conceals the facts that such procedures: are very expensive, frequently not covered by insurance, often require multiple tries, involve physical risks to the woman and psychological risks to both, are fraught with ethical dilemmas such as multiple pregnancies or unwanted embryos, and have a relatively low success rate.

From an ecological point of view, the new reproductive technology holds promise only of more humans for a world already at risk form the effects of our species' overpopulation. And from a moral point of view, reproductive technologies have the effect of removing potential parents from the hopes of orphaned and unwanted children who already exist. "Baby-M"-style surrogacy is especially troublesome in this regard, in that, in it, children are deliberately produced and abandoned for adoption when children already exist already abandoned and needing adoption.

This talk seeks to identify those health care providers involved in providing fertility counseling and services as the chief reproductive advisers to couples unable to have children without assistance. As advisers, I argue that such health care providers serve as representatives of wider points of view than those of couples wanting to have their own children. Specifically, such providers serve as representatives of the points of view of children who already exist. I build the moral case for adoption as a morally superior option to several forms of technologically assisted reproduction, and argue that health care professionals have an obligation to commend adoption to couples that seek reproductive assistance.

1. The New Reproductive Technologies: promises, pitfalls, and problems

Apart from the technological conquest of space and all the military and scientific consequences of the move off the surface of the planet, there is probably no area in which so much attention and expense is lavished by this society as human biology. And within that field, perhaps no one area has touched, or the potential to touch, so many lives as reproductive technology.

Most of us have experienced, in recent years, repeatedly having our attention riveted to ongoing published or broadcast reports of clashes in the courts between individuals locked in disputes over custody of children conceived under surrogacy agreements, or individuals seeking knowledge about a biological parent, of embryos "orphaned" while in a frozen state. These are but particularly dramatic public examples of the many more scenarios played out in the usually private contexts of individuals dealing with needs and desires about having children. And it is sobering to realize that as many as 2.4 million married couples experienced fertility problems in 1982 (OTS, 1988), and many more will confront health problems in their children originating in genetic or paternal/maternal health factors during gestation. In fact, yesterday's NBC Today Show contained a report that estimated the number of American couples with fertility problems during their natural years of fertility at over twice that number, or 5 million — somewhere between five and ten percent of married, child-bearing-age couples.

Nor are those with infertility problems somehow all that different than the rest of us. Many elements in our modern American life style dispose many more of us potentially to reduced infertility. Sexually transmitted diseases, some now becoming highly resistant to antibiotics, are on the rise. The AIDS epidemic seems not to have decreased our sexual activity, only the number of partners; and while that factor is related to sexually transmitted diseases (STDs), it is neither the only one, nor are STDs the only causes of infertility. The tendency of both men and women to delay child bearing to permit establishing dual careers is another major factor, for fertility naturally declines as we age. Indeed, everything from tight clothing and sports injuries for men to intra-uterine devices (IUDs) and the more extreme forms of fitness training for women take their toll on fertility. Other disease that necessitate gynecological surgery result in iatrogenic infertility, as when ovaries or the uterus must be removed due to cancer or fibroid tumors. The use of illicit drugs is in some cases correlated with lowered numbers of motile sperm. And even legal drugs have infertility as their consequence — not only unwelcome but deliberately sought, sometimes, as in the case of the pill or Norplant.

So our attention is not merely voyeuristic; we see in others' plights anticipations of our own fragile possibilities. And these anticipations irresistible draw us unto reflection on the possibilities of being confronted with such obstacles, and into temptation by technology's ingenious and awesome ways around them.

A corollary of the truism that you can't do just one thing is that there are virtually no significant actions that you can take today that affect only yourself. You may focus exclusively for a time upon the hoped-for personal effects of an application of technology, but eventually you discover results in yourself and others that were unanticipated but are real and sometimes troubling. I want to spend a good deal of time this evening discussing some of those troublesome results of the technological approach to infertility. But first, a review of some of the more dramatic techniques, and the possibilities they open up, is in order.

Treating Infertility in America

An Office of Technology Assessment (OTA) in May, 1988, indicates that Americans spent about $1 billion that year on medical care to combat infertility (defined as a couple's failure to conceive after a year of unprotected intercourse). With the doubling of the number of cases in the past 5 years, as well as the annual increase in medical costs of something approaching 12%, we are now looking at perhaps $3 billion in annual expenditure on infertility treatments.

About 20% of the cases of infertility result from sexually transmitted diseases, such as gonorrhea, chlamydia, and so forth, and are preventable with "safe sex" techniques. The most widely successful and common methods of treatment for infertility are "low tech" methods, such as in medical treatment, surgery, ovulation induction, and artificial insemination. "High tech" methods, such as in vitro fertilization and gamete intra-fallopian transfer, involve reproduction without intercourse (as does artificial insemination) but are considerably more expensive. Still other practices involve social arrangements which involve what has been called "pre-conception adoption contracts", the misnamed "surrogate mother," and other strategies permitting a couple's biological child to be gestated in another woman's womb.

Men who experience diminished fertility do so for a number of causes: cryptorchidism involving undescended testes; varicocele; sports and other injuries; diseases producing high fever or damage to reproductive structures; licit drugs taken to deal with conditions such as high blood pressure or high cholesterol; smoking and excessive alcohol consumption; illicit drugs, surgery for testicular cancer or strangulated *vas deferens*;

irreversible surgical sterilization; decreased sperm production due to autoimmune responses to sperm leaking from the *vas deferens* of a formerly sterilized man who has had the severed ends of the vas rejoined; exposure to radiation or toxic substances; spinal cord injuries; and natural aging. It is not generally known, and runs counter to prevailing myths, but the partner "responsible" for a couple's infertility is as commonly male as female: the *Today Show* report yesterday indicted that 40% of fertility problems of couples are due to men, 40% due to women, and 20% due to fertility problems in both.

Diminished fertility can often be successfully dealt with through medical treatment, surgery, and even through alternation of clothing styles or the use of practices or devices designed to lower the temperature of the testes, However, infertility may well persist despite such measures; couples then turn to fertility specialists seeking technical assistance in achieving pregnancy.

Despite the variety of low and high tech possibilities that currently exist, OTA reports that as many as half the infertile couples seeking treatment are ultimately unsuccessful. And the rate of failure increases for those who move from low-tech efforts to high-tech efforts. Among those who avail themselves of the complexities of IVF, success rates, depending on the experience of the fertility clinic and the care with which they screen applicants, was no more than 15% just three years ago.

Nonetheless, reproductive technology is thought to offer for many couples the only possibility of rearing normal children, since the combination of the ready accessibility of abortion on demand and long waiting lists for normal, adoptive children, together with standard age limitations for adoptive parents and delays in starting families alert may infertile couples to their problem well into the childbearing years. Thus, infertile couples and their social networks of families and friends represent a political force that may be expected to press for increased accessibility of many techniques currently not covered by medical insurance and thus unavailable to couples without substantial disposable income.

Artificial Insemination

Perhaps the oldest technique of reproductive technology is artificial insemination, or AI. AI permits semen to be collected from one or more ejaculations of a male who is chronically impotent or whose production of viable, active sperm in a given ejaculation falls below the numbers normally required to optimize the chances of fertilization. Batches of semen are then preserved through freezing, pooled, and introduced into the reproductive track of the woman at the time of ovulation. As a modern medical technique, homologous artificial insemination, or artificial insemination

from the husband (AIH) has been used for the better part of a quarter century to enable a husband to sire children by his wife when normal coitus is impossible or when numbers of health, motile sperm are sub-critical. The practice is wide-spread and relatively inexpensive: some 172,000 American women underwent physician-induced AIH in 1987, at an average cost of $953 each; slightly more than half these women had insurance coverage that on average paid 48% of the total cost.

Objections to AIH have been voiced, chiefly to two aspects: conception does not follow spousal intercourse, and a third party is involved in the process. Catholics who follow strictly the Church's directives that turn on the inseparability of the unitive and procreative aspects of sexual congress condemn the artificiality of AIH on these grounds. Despite such objections, AIH has become a widespread and commonly accepted practice, even among members of groups that officially disapprove. Some 35,000 children were born over a 12-month period in 1986-1987, as a result of AIH performed by some 11,000 physicians using the husband's semen. These live births represent 37.7 per cent of the cases in which AIH has been tried. More controversial, however, have been other applications of the same techniques: heterologous artificial insemination, and later artificial insemination of sperm from a donor (AID).

Heterologous AI was originally introduced as an extension of AIH in cases where, even with the technique of pooling of batches of semen, the husband's count of viable or motile sperm was inadequate to achieve pregnancy. Semen taken from a donor is mixed with the semen of the husband before artificial insemination. This technique originally permitted the husband to believe, because of the genuine possibility, that the offspring was his biologically; the likelihood of such psychological (and social) certainty was enhanced by matching the donor to the husband for obvious characteristics such as hair and eye color and even blood type. (Now, the sophisticated new techniques of DNA analysis make these and other attempts to minimize doubts about paternity readily defeasible.) However, heterologous AI has, in general, been supplanted by AID; the recent OTA reports do not mention heterologous AI as a practice.

Frank artificial insemination from a donor, or AID, was the next step, using straight donor semen for cases where the infertility or impotence of the male partner was insurmountable, or where the male partner had a potential of transmitting a genetic disease, such as Huntington's chorea. And here the ascendancy of medical or private arrangement has proven to be more socially acceptable. Home-practice donor insemination almost always involves at least the woman knowing the identity of the biological father; many men willing to be donors are unwilling to place such a potent pieces of information in the hands of someone who may, at a later date, find the desirability of revealing it to a child or some other individual to be

greater than the inclination to keep the identity secret. Most, but not all, sperm banks and physicians practicing AID keep the donor's identity secret, although usually identifying records are kept that make it possible to connect information about a donor's genetic or infectious disease state with recipients of his semen.

It should be noted, however, that the various means of achieving AID can permit a close genetic relationship between the husband and the child who is the product of AID using semen from a male relative of the husband (such as a brother or even his father). There are thus cases on record where a man's wife has given firth to a child who is biologically his nephew or even his half-brother!

In all but a very few such arrangements, the donor remains anonymous, known only to the physician or sperm bank personnel who have collected the sample. And frequently, donors have been attracted with the incentive of cash payment for their sperm. These two features, anonymity and cash transaction, have been the source of numerous complications and a troubling precedent. The complications shall be mentioned here; the precedent will be introduced below in the discussion of surrogacy.

Consider the small town physician confronted with a starry-eyed couple intent on a pre-nuptial physical. In checking his records, he discovers to his consternation that they are half- brother and sister, each sired by the same anonymous sperm donor in AID arrangements with their parents nearly two decades previously. Or consider the situation of the AID-offspring who, learning of genetic diseases and wanting to avoid transmitting them to his future children, seeks genetic counseling. In the initial medical history form, he is confronted with such questions as, "Has any relative of yours, including both parents, been diagnosed as having a genetic disease?" and finds himself unable to answer because of his biological father's anonymity.

These, together with the typical wonderings about one's unknown biological parents, are the sorts of burdens carried by adopted children; provided careful records have been kept, it may be possible, with the cooperation of the donor or surrendering parent, to determine their answers. But unlike adopted children, AID-conceived children are deliberately conceived in a manner that will confront them with such future questions. Adoption is undertaken under the test of the "best interests of the child doctrine," as an arrangement designed to rescue a child from an unfortunate and often tragic set of circumstances. AID-conceived children, however, are destined to grapple with such questions not as the unavoidable result of a society's efforts to protect their interests but as the unavoidable result of medicine's efforts to further the interests of their gestational and rearing parents. Thus, AID harbors moral complications more severe than those of simple adoption, placing the future individual at risk from the start for all of the problems of incompletely known parentage and close genetic

connection to potential mates. The imposition of those burdens must be carefully weighed against the benefits to the infertile couple.

A corollary of these issues is that the individual donating semen may have a complex set of moral obligations to his several possible future children. Typically, financial responsibility for offspring sired with donated does not legally transfer with the genetic material. Still, one may arguably possess residual moral obligations to one's AID-sired offspring, at least to inform them of significant negatives in one's later health history. Some writers have speculated that the moral responsibility of the biological parent in AID and artificial inovulation from a donor remains fully that of a natural parent (Nelson & Nelson, 1989).

Seventy-eight percent of physicians sampled by the OTA reported testing for human immunosuppressive virus, or HIV; seventy-four percent require other diagnostic tests. Testing for HIV is tricky, because it is possible for semen to carry virus particles from a recent exposure of a male before a test is positive. Since the interval between exposure (and thus ability to transmit the virus) and a test being able to show that one has been exposed is three to six months, three-fourths of physicians who use frozen semen observe a quarantine period on the use of the semen. Thus, a would-be donor who has a genetic of transmissible sexual disease may represent a threat to numerous women and their offspring, and the payment of a fee for semen introduces into AID a conflict between the financial interests of donors and the health interests no only of their sexual partners but also recipients of their donated semen and the resulting offspring. Many feel that this is a basis for mandatory screening of donors.

A final area to be discussed is that of the possibilities created by AID for widows and other single women, including those involved in lesbian relationships, to conceive and bear children without sexual contact with males. The OTA estimates that 5.6 percent of patients requesting artificial insemination did not have a relationship with a male partner. Confronted with a knowledgeable, well-situated single woman who asserts her right to reproduce, and possessed of techniques making that possible without the entanglements of sexual relations, gynecologists may find it difficult to maintain that these techniques are only for the use of married women whose husbands cannot impregnate them. For, such treatments (particularly AID) are not truly therapies for male infertility; they are ways of enabling a woman to have a child whose husband cannot perform that essential function. A woman without a husband faces precisely the same difficulty as a woman with an infertile one, and it may appear unjust to deny the unmarried woman the right of conception simply because she is unmarried. Human ingenuity being what it is, it would be possible to have a marriage of convenience with an infertile male lasing just long enough to qualify for

AID, or even more simply to induce a male acquaintance to provide a plastic baggie containing the makings of one's future offspring.

Nonetheless, when asked if they would be likely to reject an unmarried recipient without a partner, sixty-one percent of surveyed physicians indicated they would. This pattern has prompted the opening of sperm banks committed to providing AID to any healthy woman or couple regardless of marital status, and one exists with an explicit commitment to providing services to single and lesbian women. The Sperm Bank of Northern California in Oakland also actively seeks freely given sperm from donors who are willing to be contacted by their offspring.

Recipients for AID are frequently also screened for drug and alcohol abuse, for various serious diseases such as gonorrhea, syphilis, hepatitis, and cytomegalovirus, and for psychological conditions associated with child abuse. Where such conditions are present, a sperm bank or physician may refuse the service until the condition is adequately treated.

Fertility Drugs

Male infertility yielded sooner to technical assistance (or perhaps circumvention) than female infertility. Problems of female infertility have proven more resistant to medical advances, perhaps in part because of the dominance of male physicians in fertility research but also because of the relative inaccessibility of the female reproductive system. Female sterility may be due to a number of factors: lack of quantities of natural hormone sufficient for maturing egg follicles; endometriosis and various STDs resulting in chronic pelvic inflammatory disease (PID); blockage of the fallopian tubes as the result of injury, surgical sterilization, or disease; uterine abnormality. As in the case of male infertility, some of these problems yield to surgical or hormonal therapy.

The two most common, surgically correctible causes of female infertility are endometriosis, and blocked or scarred fallopian tubes. Endometriosis involves the presence of small pieces of the endometrium, the normal uterine lining, in abnormal locations such as the fallopian tubes, the ovaries, or the peritoneal cavity. While its etiology is not fully understood, it appears to be caused by endometrial material, sloughed off from the uterine wall during menstruation, being forced back up through the fallopian tubes. Areas of chronic inflammation develop around the sites where endometrial material lodges, interfering with normal hormonal regulation of the reproductive cycle. Both medical and surgical techniques exist for dissolving or removing these areas.

Fallopian tubal blockage may occur for a number of reasons, but frequently due to inflammation or scarring upon contracting a sexually transmissible disease (STD) or other disease of the pelvic area. Treatment of the disease medically may open the tubes, but sometimes surgical removal of scar tissue must be attempted. Typical costs of surgical procedures for repairing causes of female infertility run from $1,200 for laser laparoscopy for endometriosis to $3,500 for tubal surgery.

Other major causes of female infertility are amenorrhea, oligomenorrhea, and luteal phase defect (LPD). Amenorrhea, or the absence of menstruation, and oligomenorrhea, or infrequent, scanty menstruation, have a number of causes, including extreme physical activity, as in dancers and athletes, and anorexia, malnutrition caused by obsessive preoccupation with weight loss. LPD involves failure of the endometrial lining of the uterus to develop properly after ovulation. All of these disorders also involve ovulation dysfunction. Drugs that induce ovulation (the so-called fertility drugs, such as gonadotropine and clomiphene citrate), as well as drugs that promote normal endometrial growth (such as progesterone), are employed to treat these disorders. Fundamentally, these are synthetic hormones designed to supplement what has been diagnosed as a sub-threshold level of the hormones necessary to ripen and release ova, and their administration is sometimes unpredictable. The costs of the drugs themselves can run from $30 to $588 per month.

It has not been uncommon during the 1970s and 1980s to read of a woman giving birth to 4 or more premature infants, as a result of having received fertility drugs. Frequently one or more of these children failed to survive the experience of prematurity, and those that did survive succeeded in doing so only with enormous expenditure of costly neonatal technology, with the result not always a normal child.

The phenomenon of a multiple pregnancy, whether due to natural or artificial causes, together with the substantially increased risk of premature delivery, has prompted some obstetricians to employ the technology of fetal monitoring to identify those fetuses in a multiple pregnancy at greatest risk for abnormality or non-survival, and to "selectively reduce the pregnancy," i.e., selectively abort one or more of the fetuses so as to increase the chance for the remaining ones to come to full term. Such abortions are viewed as a form of *triage*, designed to increase the chances of some by denying the chances of others; however, they possess an active, interventionist character that strikes many as morally different from simply yielding to the hopelessness of a case (How that difference is assessed as a moral one, is, of course, frequently the point of contention).

Selection is thought to be non-arbitrary when it is based on evidence of identifiable defects in some of the offspring, and thought even to be a kind of therapy in defense of the lives and health of those fetuses not aborted, to

whom the very multiplicity of siblings poses a grave risk. At the same time, such measures are inherently desperate, based precisely on the kinds of decision making that hospital allocation committees found so difficult before the federal government's provision of virtual universal access to dialysis.

Part of the difficulty here is the inability to make such selection very early in the gestational period, and even to control how many ova are released and fertilized. Other new techniques offered increased control of that process, as well as the possibility of therapy for the many women whose infertility was due to physical blockage of the fallopian tubes that could not be surgically reversed.

Gamete Intrafallopian Transfer and In Vitro Fertilization

Gamete Intrafallopian transfer (GIFT) is the technique of extracting the female's gametes, called oocytes or ova, using laparoscopy and aspiration, from follicles stimulated to "ripen" through the use of one of several fertility drugs, and inserting one or two of them together with sperm into a catheter from which they are transferred into the end of a fallopian tube. The procedure is then repeated in the other fallopian tube, if possible. The procedure is thus thought to most closely approximate the conditions of natural fertilization, is less expensive and technically challenging than in vitro fertilization (IVF), and may be used to overcome certain problems of fertility in either the male or female partner. Surveys found the technique to be successful on average in 29 percent of attempted cases, ranging from 10 to 56 percent effectiveness based on the type of infertility, at an average cost of $3,500 (OTA 1987, pp. 297, 141).

The procedure is relatively safe and appears to offer slightly more favorable odds than IVF. In addition, some couples prefer it because the fertilization is "natural" in that it occurs at the place where fertilization naturally occurs, h the fallopian tubes. The procedure does carry the risk of multiple pregnancy, although, given the naturally low incidence of fertilization coupled with whatever other factors in an infertile couple might make for reduction in that percentage, the frequency of multiple pregnancies is quite low. It also involves a general anesthetic for the surgical procedure, posing to the woman the risks of general anesthesia. Finally, it does not permit either sex selection or other diagnosis or genetic of chromosomal abnormalities in preembryos, nor identification of defects in the fertilizing ability of sperm or eggs, all of which are possible with IVF.

IVE uses the same medical and surgical techniques for harvesting eggs as employed by GIFT. The eggs are then placed in a sterile fluid culture medium in a glass container, into which sperm are introduced. Fertilization

takes place in the glass container (hence "*in vitro*," or "in glass" fertilization). The fertilized ovum, or preimplantation embryo, is then examined and tested during several days of cell division to detect abnormalities. If found to be abnormal, the preimplantation embryo is discarded. But if normal, the embryo is introduced through the vagina into the uterus. If the embryo successfully implants in the uterine wall, pregnancy has occurred and technology has circumvented the blockage in the fallopian tubes that prevented sperm from reaching the egg.

The procedure requires careful monitoring of the ovulatory cycle for months prior to the release of ova from follicles, biochemical manipulation of the ovaries to stimulate multiple release, an invasive surgical procedure to remove released ova, an expensive laboratory cell culture technique not normally available to the typical obstetrician. The average cost of IVF through two complete cycles was $9,376 in 1986; however, as a couple is likely to come to IVF only after medical drug treatment for diagnoses oligomenorrhea has failed, complete infertility evaluation and surgical repair has failed, the approximately 11 percent of infertile couples who proceed to IVF will have spent at least 4.5 years and $22,217 in order to achieve pregnancy in 25% of the couples in which IVF is attempted.

There is the additional risk to the woman of ectopic pregnancy (where the embryo is accidentally flushed back up into the fallopian tube and implants there, and rupture of the tube occurs as the embryo grows, causing massive internal bleeding and possibly death) in introducing the embryo into the uterus. (Corea, 1975) A tubal pregnancy occurs in 2 to 17% of IVF procedures, probably depending on how high the catheter is placed in the uterus. (OTA 1988, p. 131)

A failure of the fertilized ovum to implant in the uterus would necessitate a repeat of the entire cycle, and thus re-exposure of the woman to the risks of infection and ectopic pregnancy inherent in the full procedure, as well as further preoccupation with tracking the ovulatory cycle and loss of time for harvesting ova. Thus, in the early years of this technique's development, women undergoing IVF might be subjected to four or more repetitions of the cycle of harvesting, fertilization and implantation before achieving pregnancy or resigning from the effort.

It was thus a welcome merging of the techniques of cryopreservation and IVF that was permitted by the discovery that early-stage embryos could successfully be frozen to arrest their development, then later thawed and implanted without damage. For, this permitted harvesting of several ova in one procedure through prior administration of fertility drugs, fertilization of them all, and then cryopreservation of those normal ones not to be used in the initial implantation effort. Medicine's defense of the procedure was thus based on minimizing the risk of harm to the woman. Rather than expose her o repeated months of monitoring, multiple hormonal manipulations and

multiple surgical procedures, one of each would normally suffice. Because unfertilized ova tend not to cryopreserve well, fertilization followed by cryopreservation of a reserve supply served to minimize the potential for repeated applications of the procedure as well. Finally, medicine has generally taken the position that, at such early stages of development, there is only the one patient whose interests bear on the medical decisions to be made.

Such principled justification, however, struck substantial portions of the public struggling to integrate the new technology into its institutions as little more than rationalizations. Serious questions were raised about the necessity for preservation of many preembryos, and medicine was criticized as erring on the side of excessive preoccupation with the interests of the woman. The issue was most forcefully brought home by the tragedy of a couple that sought IVF in an Australian clinic. The first attempt at implantation failed. Several frozen embryos were still available, but the couple was tragically killed in an airplane accident while on vacation just before scheduled to attempt a second implantation. The problem arose as to the legal status of the frozen preimplantation embryos, which had not even been addressed in the contract between the parents and the clinic. Were they heirs to the considerable estate? Were they the property of the fertility clinic? Could they be implanted in host women who wanted them? If they were so implanted, would they stand to inherit a portion of the estate, with their gestational and rearing parents free to administer their wealth? Perhaps fortunately, the embryos passed beyond the point of viability before these legal issues could be resolved.

Medicine's response has been to walk more carefully the thin line between necessity and excess, reflecting increased skill with the procedures: the number of ova permitted to be fertilized is now typically no more than would be implanted in the woman — usually, two. Thus if both are normal she can look forward to fraternal twins; if one is abnormal, it is discarded and a single child will hopefully result.

But the questions posed by the new IVF technology did not end with the possibility of this tragic sort of case, not even with the troubling issue of what was to be done with unused embryos not needed in order to achieve a couple's pregnancy. With the IVF technology, it would be possible for one woman to act as surrogate gestational mother for another's biological child, then return the newborn to its biological parents. Such embryo transfer (ET) simply employs a different uterus as the receptacle for the selected embryo than that normally intended with IVF.

Such an application of the technique could serve as a kind of therapeutic option for a couple wishing to have "their own child" but unable to do so because of, say, a surgical removal of the wife's uterus where the ovaries were left intact. The wife's ovaries would be simulated to produce

several ova, just as in IVF; they would be harvested and fertilized with the husband's sperm *in vitro*, just as in IVF; but they would be implanted in the uterus of another woman, perhaps a sister or daughter or other individual contracted for the purpose and carried to term in and by the host. The host would then go through labor and delivery and surrender the child to its "rightful" parents, receiving their thankful gratitude and any coverage of expenses or other remuneration for her trouble they had contracted or cared to provide.

But this technique, as therapy, is physiologically and procedurally no different from removal of ova from a woman who is able to bear children but finds it inconvenient as interfering with other activities to which she has made major commitments of time and energy. Indeed, with careful timing she might even avoid the first surgical procedure to remove an ovum; fertilization could take place normally, with the embryo flushed from the fallopian tube or uterus before it has a chance to implant, and transferred to the host uterus. A "wet nurse" was a common enough recourse, before the advent of bottled formula, for a woman who either didn't yield sufficient breast milk or who didn't want to nurse; such a gestational host might strike some as but an extension of that old practice with a similar rationale.

The easy slide from IVF into what might properly be called "surrogate motherhood" (but for the appropriation of that term in a less appropriate context — see below), illustrates a general point made above. Medical technology, invented for a clearly therapeutic purpose, may be made to serve quite different, non-therapeutic purposes. Medicine, motivated by its traditional calling to serve the concept of health, finds itself pressed by "consumers" of its "services" to adapt them to the wants, not needs, of others. Individuals, faced with the conflicting demands of career and biology, seize upon the possibilities of a piece of technology as offering a way to satisfy both. But the medical community, itself composed of individuals with a strong, traditional conception of its proper role in human affairs, finds the demands of such individual consumers not to be in keeping with its traditional roles, it is not surprising that fertility clinics have generally resisted applications from individuals with non-therapeutic motives.

Gestational surrogacy also raises legal and moral questions at a conceptual level. Are the surrogate gestational mother's parental rights with respect to the child to be modeled on the law of paternity, where proof of genetic parentage establishes definitive parentage? Or, are they to be predicated on the 9-month experience of pregnancy as establishing the preponderant interest of definitive parentage? The latter has the operational superiority of establishing the identity of the legal mother at the time of birth, but it undercuts the aim of the biological parents to use a contracted

service to provide them with an otherwise impossible dream — that of rearing "a child of their own flesh and blood."

Interestingly, and perhaps more because of the resistance of medicine to deflections from its traditional paths than the legal uncertainties just cited, the form of surrogacy cited above has not become a major social issue. Instead, another form, commonly but less properly called "surrogacy," has commanded out attention in the media, courts, and legislatures of the country for the past several years.

Surrogate Motherhood

William Stern, whose wife, Elizabeth, suffers from multiple sclerosis (of a kind that would most likely be seriously exacerbated by pregnancy), contracted through an intermediate agency with Mary Beth Whitehead, a married woman, to be artificially inseminated with his sperm, carry the pregnancy to term, and surrender the newborn to the Stern couple, whereupon Mrs. Stern would adopt the child. Mrs. Whitehead was to be paid a fee of $10,000 for this service; the intermediate agency was to receive $7,500.

Although she had signed the contract, Mary Beth Whitehead decided after delivering the baby, whom she named Sara Elizabeth, that she did not want to surrender it for adoption by Mrs. Stern to be raised by the Stearns as their own child. A bizarre struggle ensued, the details of which read like a television soap serial. A lower court awarded custody of Baby M (for "Melissa," the name given her by the Sterns) to Mr. And Mrs. Stern and approved Mrs. Stern's adoption petition on the grounds that the contract was a valid contract and that they were better potential parents for the baby than her natural mother.

The New Jersey Supreme Court overturned the decision and voided the adoption, declaring that no contract to surrender a child for adoption could be validly entered into before the child was even conceived, and disrupting the evidence that the Sterns would be better parents than Mrs. Whitehead. The Court, however, awarded custody to the Sterns on the grounds that they had had effective custody throughout the many months of the appeals procedure and that Baby M's interests would now not be well served by returning her to the custody of her biological mother. The latter was awarded substantial visitation rights.

It is, first, worthwhile noting that the use of the term, "surrogate mother" to describe Mary Beth Whitehead's relationship to Melissa, or to characterize any woman who has been fertilized in order to bear a child to be surrendered for adoption, is bizarre and confusing. A surrogate is one who functions in the place of another. But there is no way in which Mrs. Whitehead biologically functioned in the place of Mrs. Stern, except to bear

a child sired by Mr. Stern. “Surrogate” perhaps better describes the relationship of a woman who serves as the gestational host of an embryo developing from a fertilized ovum of another woman here, the surrogate mother performs the gestational functions of the biological mother.

The commodification of reproduction was very much an issue in the Baby M trial and appeal. As noted earlier, however, precedent had already been established in the practice of donors selling semen. An argument in support of the Sterns’ position that the contract was a valid one would be that they had contracted for the purchase of one of Mrs. Whitehead’s ova, which would be fertilized by Mr. Stern’s sperm; additionally, they had contracted for the use of Mrs. Whitehead’s uterus to gestate the fertilized ovum. Thus they were engaged in the purchase of a biological bodily product no more special than blood or semen, and of a service not fundamentally different than that provided by a wet nurse or child-care provider. The purchase of the ovum, since it was to be delivered in altered state, involved a prior agreement on the part of Mrs. Whitehead to surrender the child for adoption.

The counter argument proceeds by appeal to the way in which we have legalized adoption. An adoption agreement cannot be entered into for a future, possible child, but must refer to the child by name and thus cannot be entered into before birth. Further, contracting for the use of one’s uterus is perilously close to contracting for the use of one’s vagina; the parallel with prostitution strikes many as compelling, and all but one state prohibit prostitution contracts. Finally, it becomes increasingly difficult to distinguish between a surrogacy contract and the selling of children, particularly when a part of that contract involves payment for release of one’s interest in the child.

Interestingly, the New Jersey Supreme Court focused almost exclusively on the contract, rather than the service. It allowed that private arrangements between consenting individuals, which were not secured by contract, fell out of the purview of the court’s review and were, unless expressly prohibited by statute, consistent with state adoption laws.

This raised the question for lawmakers of whether to prohibit such practices as private arrangements. On the side of permitting them is the very human need to have children, and the practice as a way of enabling a couple to rear a child which is biologically related to one of them — no different than the rationale for AID. On the side of restricting or prohibiting them is our uncertainty about whether there is significant potential of psychological harm to the child in learning that he or she was conceived by and born to a woman who was perfectly willing to sell or give her baby away.

There is also the difficult matter of maternal/child bonding which some think must begin prior to birth. We simply do not understand the role that such bonding play’s in a child’s developmental experience. Perhaps we can

learn from the experiences of adopted children here. Since we regard adoption as a desperate solution to an even more desperate situation that has befallen the child, perhaps we should be less sanguine about deliberately creating a child to face such a fate. Clearly, as in the case of AID, there is a need to study the long-term effects on children born of the new technology before comfortably standardizing these techniques, and at least one philosopher has called for a moratorium on this and the other form of surrogacy while such studies take place. (Spicker, 1988)

Since the problems faced by Mrs. Stern and by infertile women who are unsuccessful with the other reproductive technologies in their attempts to have their own children are powerful ones, the social likelihood is that the practice of surrogacy will continue even if elements of surrogate contracts are unenforceable. Some states are seeking to minimize this likelihood by legislating against such social arrangements. To other legislatures, it appears desirable for the practice to be regulated so that the interests of involved parties, particularly those of the offspring of such arrangements, are protected. The present tendency in an number of states is to pass regulatory legislation that will model surrogacy contracts after adoption agreements and practices.

An Argument for Adoption as Morally Superior

Infertile couples that seek the assistance of the reproductive technologies face significant costs: in money, time, and loss of privacy, in exposure to drug therapy and surgery and their attendant risks. They face $20,000 to $45,000 in medical and/or legal costs. They must make a commitment of 3 to 5 years of trying increasingly invasive procedures, performing intercourse in many cases “on order” of a stranger, all with a payoff, not factoring for age or cause of infertility, of not more than 50% success.

Adoption is less expensive. While it involves waiting periods it does not do so beyond that of reproductive technology. The invasion of privacy occurs generally only at the point of application and final confirmation of adoption, and success in adoption some child is assured upon approval, although made more difficult as race, ethnic and other restrictive conditions are applied. Thus, adoption may well appear a more appealing option when the calculus is applied.

But these benefits are chiefly a matter of choice, preference, willingness or hesitation to take risks. There are stronger moral reasons to consider adoption as preferable to the reproductive technologies.

The duty to rescue and the right to be rescued are usually expressed in terms of a duty to rescue when doing so is at no significant cost to the rescuer over the alternative actions the potential rescuer would otherwise engage in. Peter Singer has put the duty much more strongly and

imposingly: we have a duty to rescue when doing so imposes no comparable cost to the rescuer — i.e., no cost comparable to that paid by the rescuee if he is not rescued.

Adoption rescues a child confronted with a tragic situation, such as the loss of one or both parents, or the absence of one responsible parent together with the inability of the other to provide appropriate care. Adoption is a desperate solution to a desperate situation. Several of the reproductive technologies involve creating a child that is to be adopted. Couples and physicians contemplating utilization of such technologies must be sure that their situation is sufficiently desperate as to warrant creating and placing a child in a desperate situation that plans for its abandonment by one parent and adoption by another.

Adoption rescues an existing child. AID, surrogacy (both types), and artificial inovulation from a donor create a child to whom the rescue of adoption must eventually appear to be a contrived, unnecessary sham. The reproductive technologies, to the extent they are successful, remove individuals from the likely pool of adoptive parents that are the hope of existing, abandoned or orphaned children. Finally, reproductive technologies increase the world's population by enabling individuals to reproduce who naturally would not.

The late Michael Bales has argued that the right to reproduce is limited by the harms that would be produced by reproducing, as when one's children will predictably have a horrible genetic disease, or be born into such poverty as to lack opportunity for development. The duty to do no harm may give us pause in contemplating the possibilities offered by reproductive technologies. The duty to benefit, by removing harms, preventing harms, and promoting the good of already-existing individuals, are all woven into the traditions that we, as Americans, bring to our decision-making.

The Chinese have imposed a legal limit on reproduction to curb population growth, and enforce it with measures as severe as forced abortion and sterilization. Our traditions do not permit such Draconian measures, but seek instead to empower us as individuals to make reproductive decisions wisely.

May we exercise our unfettered freedom with a full appreciation of the great range of ethical and valuational issues that is involved.