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MULTIFETAL PREGNANCY REDUCTION IN ASSISTED REPRODUCTIVE TECHNOLOGIES: A LICENSE TO KILL?

*Siddharth Khanijou**

INTRODUCTION

Assisted reproductive technology (ART) has existed for over twenty-five years.¹ During this time, the technology has allowed many couples that suffer from infertility – generally defined as an inability to conceive despite regular and unprotected intercourse for 1 year² – to experience the joys of parenthood. In 2002, the 115,392 ART cycles reported a 40% increase from data gathered in 1998 and a 78% increase from 1996 figures.³ Live births from reproductive technology have risen from 20,659 in 1996⁴ (0.5% of total live infants born) to 45,751 in 2002. This number is likely to grow as more clinics begin to offer ART services. When combined with more recent technology, such as pre-implantation genetic diagnosis,⁵ ART increases the probability of giving a healthy child to an infertile couple since it may prevent the implantation of embryos that might develop into seriously impaired children.⁶ Similarly, the knowledge gained through the Human Genome

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¹ Jennifer Rosato, *The Children of ART: Should the Law Protect Them from Harm?*, 2004 UTAH L. REV. 57, 57 (2004).

² Center for Disease Control and Prevention (CDC), *Assisted Reproductive Technology: Home, available at* <http://www.cdc.gov/reproductivehealth/ART/index.htm>.

³ Nat'l Centers for Chronic Disease Prevention and Health Promotion (CDC), *2002 Assisted Reproductive Technology Success Rates: National Summary and Fertility Clinic Reports* (December 2004), available at <http://www.cdc.gov/reproductivehealth/ART01/PDF/ART2002.pdf>.

⁴ B.M. Dickens, *Some Ethical and Legal Issues in Assisted Reproductive Technology*, 66 INT J. GYNECOL OBSTET 55, 55 (1999).

⁵ Technology that allows a pre-embryo to be screened for genetic disease before it is implanted in a woman's uterus. This technique has been used to detect many debilitating diseases including Tay-Sachs, cystic fibrosis, sickle-cell anemia, and early-onset Alzheimer's disease. Rosato, *supra* note 1, at 58.

⁶ *Id.*

Project promises even more screening and more healthy children born to parents.⁷

However, this positive portrayal of ART represents only half the story and ignores a serious problem. In the last decade, there has been a dramatic increase in multifetal pregnancies as a result of ART. In 1980, 37 per 100,000 live births in the United States were triplet or higher order pregnancies; by 2002, this rate had increased fivefold to 184 per 100,000.⁸ Data published by the Centers for Disease Control (CDC) indicate that more than 30% of assisted technology births are multiples compared to the 2% incidence in the general population.⁹

The media and much of the public hail multiple births as a “miracle,” as in the case of the septuplets born to the McCaughey family, but the medical community is not so enamored. They have identified such pregnancies as failures, rather than successes, of the IVF enterprise.¹⁰ The press heralded the live birth of sextuplets in California, but the attention soon disappeared when three of the six died.¹¹ In 1998, one year after the septuplets, the birth of octuplets in Texas made history. But this holiday “miracle” soon turned tragic when one of the infants died and the remaining seven returned to neonatal intensive care soon after Christmas.¹² Perhaps some records were simply not meant to be broken.

But while the stories of multiple births have grabbed the newspaper and magazine headlines of late, the equally provocative, but less sensational, accounts of women who have “chosen” to undergo multifetal pregnancy reduction (MFPR) to reduce the number of fetuses they were carrying has gone largely unnoticed.¹³ “The presence, in previously infertile women, of more fetuses than can safely be brought to term remains one of the ultimate ironies in medical care.”¹⁴ Multifetal reduction procedures attempt to prevent the complications of

⁷ *Id.*

⁸ Carson Strong, *Too Many Twins, Triplets, Quadruplets, and So On: A Call for New Priorities*, 31 J.L. MED. & ETHICS 272, at *1 (2003).

⁹ Victoria Wright, et al, *CDC: Assisted Reproductive Technology Surveillance – United States*, 52(SS-9) MMWR 1 (August 29, 2003).

¹⁰ Nanette Elster, *Less is More: The Risks of Multiple Births*, 74(4) FERTILITY AND STERILITY 617, 618 (2000).

¹¹ Mary Rorty, *Elective Fetal Reduction: The Ultimate Elective Surgery*, 13 J. CONTEMP. HEALTH L. & POL’Y 53, 62 (1996).

¹² Elster, *supra* note 10, at 617.

¹³ Stacey Pinchuk, *A Difficult Choice in a Different Voice: + Multiple Births, Selective Reduction and Abortion*, 7 DUKE J, GENDER L. & POL’Y 29, 30 (2000).

¹⁴ Rorty, *supra* note 11, at 59.

a multiple pregnancy and improve outcomes by decreasing the number of potential live births. However, this failure of the fertility procedure comes at the expense of patients. Couples, who previously struggled to conceive, are now being asked to consider bringing about the death of a fetus to save their pregnancy. The psychological effects that accompany abortion decisions are potentially more prominent in couples who have undergone this dramatic shift in perspective.

As scientists and humanitarians, physicians want to be able to use the most advanced technology available to help their patients. However, because federally funded embryonic experimentation is prohibited, any and all risks of new techniques must be borne by the infertile couples and their future children with, perhaps, tort litigation as their only recourse.¹⁵ Yet despite the weaknesses in the current system, assisted reproductive technology proceeds virtually unregulated, largely because the politically charged abortion debate prevents the creation of any meaningful policy.¹⁶ Politicians need to realize that their stalemate has led to an increase in fetal loss *and* the birth of disabled children. It is time to turn our attention to this system failure and hold the government accountable for its failure to legislate protections for couples undergoing ART. The emotional stress and psychological injuries suffered when forced to make ethically-charged reduction decisions should not be the price we must pay for our civil liberties.

This article suggests that the time has come to strictly regulate the fertility industry. Part I discusses the different types of reproductive technologies, risks of ART on children and parents, current regulatory mechanisms, and options available when the fertility procedure results in multifetal pregnancy. Part II discusses the psychological, medical, ethical, and legal implications of multifetal pregnancy reduction and a need to reduce the practice of pregnancy reduction. Finally, Part III proposes regulating the implantation of embryos to reduce the occurrence of multiple gestation, and concomitantly, the use of multifetal pregnancy reduction.

¹⁵ Rosato, *supra* note 1, at 73.

¹⁶ *Id.*, at 61; see also Parens and Knowles, *Reprogenetics and Public Policy: Reflections and Recommendations* (August 2003), available at http://www.thehastingscenter.org/pdf/reprogenetics_and_public_policy.pdf.

I. STATE OF THE ART

A. The Rise of Multiple Births

In 1998, the National Center for Health Statistics reported a dramatic rise in multiple pregnancies between 1986 and 1996.¹⁷ Late last year, the National Vital Statistics Reports found a continued increase with triplet births that now accounts for 184 per 100,000 live births.¹⁸ The number of these high risk pregnancies has risen nearly 400% since 1980. There are three primary factors that have contributed to the increase in multiples. The first factor is the trend toward delaying childbearing, which has led to older maternal age.¹⁹ With advancing maternal age comes an increased incidence of multiples, mostly twins. It is estimated that about 20% of the increase in multiple births is attributable to this factor.²⁰

The second factor is the use of an infertility treatment referred to as ovarian stimulation. In this treatment, women are given drugs that induce ovulation by stimulating the follicles to release mature ova.²¹ Such drugs are typically followed by artificial insemination with the husband's sperm or they may be administered in preparation for IVF.²² The technique is used for a variety of indications, including cases where women are not ovulating or where men have low sperm count or motility.²³ Multifetal pregnancy occurs when multiple ova are released, become fertilized, and develop after implantation in the uterus. To control the risk of a multiple pregnancy, several measures have been suggested including: more stringent controls on drug distribution; developing stricter clinical guidelines for fertility medications; restricting distribution to specialists; reducing dosing guidelines; and even removing many traditional pharmaceutical treatments.²⁴ However, the fact that hormonal products may offer the only mechanism to

¹⁷ Elster, *supra* note 10, at 617.

¹⁸ Martin, et al., *Births: Final Data for 2002*, 52(10) NATIONAL VITAL STATISTICS REPORTS (CDC) 1, 3 (December 17, 2003).

¹⁹ Strong, *supra* note 8, at *1.

²⁰ *Id.*

²¹ Lars Noah, *Assisted Reproduction Technologies and the Pitfalls of Unregulated Biomedical Innovation*, 55 FLA. L. REV. 603, 611 (2003).

²² The Food and Drug Administration (FDA) has approved the 3 main pharmaceutical products for the treatment of infertility: clomiphene citrate (sold under the brand names of Clomid and Serophene), human menopausal gonadotropins (hMG) (sold under the brand names of Fertinex and Metrodin), and human chorionic gonadotropin (hCG) (sold under the brand names Pregnyl and A.P.L.). *Id.*

²³ Strong, *supra* note 8, at *1.

²⁴ See Noah, *supra* note 21, at 654-56.

trigger ovulation for some women and their inconsistent physiological reaction to these therapeutics makes the risk-benefit calculus of ovarian stimulation a very unpredictable art.²⁵

The third factor contributing to multiple births from a single pregnancy is *in vitro* fertilization (IVF). *In vitro* fertilization involves harvesting oocytes from the patient, extracorporeal fertilization by mixing them with sperm in a culture media that promotes fertilization, and then transferring the resulting embryos back into the patient.²⁶ Generally, preembryos are screened and the most developed are transferred to the woman. However, because not all transferred preembryos implant in the woman's uterus, many clinicians operate under the misguided belief that the probability of live birth may be increased by transferring multiple preembryos.²⁷ The unfortunate side effect, which too often results, is a high-risk multifetal pregnancy.²⁸

When we consider the percentage of live births from assisted reproductive technology, the magnitude of the problem is illuminated. In 2002, 36 percent of pregnancies (32 percent twins and 4 percent triplets) created by ART in the United States resulted in multiple-infant live births.²⁹ These figures indicate a substantial decline from earlier figures,³⁰ but the persistence of this phenomenon is troubling nonetheless. Although ovarian stimulation has proven difficult to regulate, third-generation technologies such as blastocyst culture and micromanipulation of gametes can allow us to improve risk assessment and prevent IVF-born multifetal pregnancies.³¹

²⁵ *Id.*, at 656.

²⁶ Noah, *supra* note 21, at 609.

²⁷ Strong, *supra* note 8, at *2; see also Helen Pearson, *Big Success for Single Embryos in IVF* (October 22, 2004), at <http://www.nature.com> (The pregnancy rates after transferring one embryo is not significantly greater than the rate after transferring two embryos given modern techniques for growing and transplanting healthy blastocysts).

²⁸ In 1996, the live birth rate with three embryos transferred to the uterus was 35.8% (including 14.6% multiple births), four embryos produced 36.7% (16.2% multiples), five was 34.4% (15.2% multiples), and six embryos transferred resulted in 36.9% (17.8% multiples). Dickens, *supra* note 4, at 58.

²⁹ Nat'l Centers for Chronic Disease Prevention and Health Promotion (CDC), *supra* note 3.

³⁰ In 2000, 53% of infants created by ART (44% twins and 9% triplets) were multifetal pregnancies. See Wright, *supra* note 9.

³¹ Noah, *supra* note 21, at 655.

B. The Risks of ART To Children

Multiple gestation involves significant medical risks for fetuses and infants, some of which are potentially serious and enduring.³² Most medical complications result from the fact that multiples are often born prematurely.³³ The average gestation period for singletons is 39 weeks.³⁴ This dramatically decreases with the number of fetuses carried: 35 weeks for twins, 33 for triplets, and 29 weeks for quadruplets (just over viability).³⁵ Although only 2% of singletons are premature births (less than 33 weeks gestational age), 14% of twins and 41% of triplets are born premature.³⁶ This prematurity among multiples generally contributes to a high incidence of low birth weight.³⁷ Although only 1% of singletons are born with a birth weight of less than 1,500 grams, 10% of twins and 32% of triplets are born under this birth weight.³⁸ The problem is only exacerbated in higher-order quintuplets, sextuplets, and septuplets that have dominated the press of late.³⁹ Low birth weight significantly impacts infant morbidity and mortality as infants born weighing less than 2,500 grams are forty times more likely to die in early infancy.⁴⁰ Those that survive have an increased incidence of serious complications and physical or mental disabilities including: lung development problems, cranial hemorrhaging, hyaline membrane disease, bronchopulmonary dysplasia, intraventricular hemorrhage, and necrotizing enterocolitis.⁴¹ Children born through a multifetal pregnancy also suffer from a higher incidence of congenital malformations, the most common being intersex, anencephaly, hydrocephaly, omphalocele, anal atresia, and tracheoesophageal fistula.⁴² As a result of these problems, many

³² Studies in 1996 indicated that 16% of all neonatal deaths were multiples and that these children were seven times more likely to die within the first year of life. Another study found a disproportionate number of fetuses suffer from deformational plagiocephaly, or abnormal head shape. Elster, *supra* note 10, at 618.

³³ Strong, *supra* note 8, at *2.

³⁴ Elster, *supra* note 10, at 618.

³⁵ *Id.*

³⁶ Strong, *supra* note 8, at *2.

³⁷ On average, the birth weight of a triplet is only half that of a singleton; 90% of triplets and higher-order multiples weigh less than 2,500g compared to only 6% of singletons. Elster, *supra* note 10, at 618.

³⁸ Strong, *supra* note 8, at *2.

³⁹ *Id.*

⁴⁰ Elster, *supra* note 10, at 618.

⁴¹ Strong, *supra* note 8, at *2.

⁴² *Id.*

multiples require treatment and extended care in neonatal intensive care units (NICU).⁴³

Multiples may also suffer from long-term medical and developmental problems. The incidence of cerebral palsy increases from 1.6 per 1,000 in singleton pregnancies to 75.9 per 1,000 in higher-order (triplet) pregnancies; a forty-seven-fold increase.⁴⁴ Other common maladies include mental retardation, chronic lung disease, and retinopathy of prematurity.⁴⁵ The problems that can arise from a multiple pregnancy are illustrated by the following examples. Two of the sextuplets born in New York in 1996 suffer from serious long-term medical problems; one child is blind and the other is epileptic. Two of the McCaughey septuplets have severe reflux and, despite undergoing esophageal surgery, still have trouble eating.⁴⁶ Two others have developmental problems which may result in cerebral palsy.⁴⁷ Unfortunately, these examples are indicative of the norm in higher-order births rather than the exception.

In addition, while the perinatal and neonatal mortality rates of multiple gestation has decreased over the past decade,⁴⁸ it remains significantly high. Although the death rate is 8.8 per 1,000 in singleton births, it is 82.6 per 1,000 in triplets.⁴⁹

C. The Medical Risks of ART to Women

Multiple gestation also poses long- and short-term medical risks to women. Preterm labor is the most common maternal complication of a multifetal pregnancy which often requires treatment with labor-arresting drugs that have side-effects such as respiratory distress.⁵⁰ While the incidence of preterm labor is 15% for women with singleton pregnancies, it is 40%, 75%, and 99%, respectively, for women carrying twins, triplets, and quadruplets.⁵¹ Other frequently occurring

⁴³ While only 15% of singletons are admitted to the NICU, 48% of twins and 78% of triplet and higher order multiples were admitted. Elster, *supra* note 10, at 618.

⁴⁴ Strong, *supra* note 8, at *2.

⁴⁵ *Id.*

⁴⁶ Elster, *supra* note 10, at 618.

⁴⁷ *Id.*

⁴⁸ A positive effect of the use of differential management schemes, such as prophylactic admission to the hospital, oral tocolysis, intravenous tocolysis, or cervical cerclage, to prolong the pregnancy and allow thorough fetal and maternal monitoring. Strauss, et al., *Multifetal Gestation- Maternal and Perinatal Outcome of 112 Pregnancies*, 17 FETAL DIAGN THER 209, 214 (2002).

⁴⁹ Strong, *supra* note 8, at *2.

⁵⁰ *Id.*

⁵¹ *Id.*

complications include premature delivery, pregnancy-induced hypertension, toxemia, gestational diabetes, vaginal uterine hemorrhage, preeclampsia, anemia, and premature rupture of membranes.⁵² Gestating multiples also expose women to prolonged bed-rest (to prevent pre-term labor),⁵³ hospitalizations (for hypertension or bleeding), administration of medication, cerclage,⁵⁴ incompetent cervix, caesarian section, and postpartum hemorrhage.⁵⁵ Postpartum hemorrhage, combined with anemia, leads to the increased need for blood transfusions in patients with multifetal pregnancies.⁵⁶

Despite these numerous physical complications, the adverse psychological complications are more troubling. Research indicates that mothers with multiples are more likely to suffer from depression, abuse drugs and alcohol, and divorce because of the fatigue and stress arising from child care.⁵⁷

D. The Limits of Federal and State Regulation

At present, it seems that ART is bound only by the ethics of the fertility specialists and the financial and emotional limits of the couples undergoing the treatment. In the United States, assisted reproductive technologies proceed virtually unregulated with limited federal and state intervention.⁵⁸ As a result, the market rules and no one in the contracting process speaks for the future children whose interests have never been given careful consideration.⁵⁹

The fertility field is an extremely competitive multibillion-dollar industry.⁶⁰ As such, the profitability of a particular clinic depends on its success, measured by number of pregnancies and live births.⁶¹ As happens in any unregulated industry, questions arise about the accuracy of a clinic's promotional claims, particularly with regard to inflated success rates.⁶² In response to this concern, Congress passed

⁵² Elster, *supra* note 10, at 619.

⁵³ Loss of muscle and atrophy is associated with prolonged bed-rest and may result in the loss of substantial weight. *Id.*

⁵⁴ A minor surgical procedure in which the cervix is sewn closed to prevent preterm dilation. *Id.*

⁵⁵ Strong, *supra* note 8, at *2.

⁵⁶ *Id.*

⁵⁷ *Id.* at *3.

⁵⁸ Rosato, *supra* note 1, at 62.

⁵⁹ *Id.* at 63.

⁶⁰ *Id.* at 73.

⁶¹ *Id.*

⁶² Noah, *supra* note 21, at 614.

the Fertility Clinic Success Rate and Certification Act of 1992 and directed the Center for Disease Control (CDC) to collect and publish information regarding fertility center success rates.⁶³ However, this mandatory reporting requirement serves no regulatory purpose and clinics continue to maximize pregnancy rates by transferring too many embryos per cycle.⁶⁴ Information regarding a clinic's success rates, originally intended to serve a consumer-oriented purpose, has had the regrettable side-effect of promoting unethical business practices because it causes patients, seeking clinics with the highest live birth rate, to be unwittingly drawn to clinics having the highest rates of failure or multiple births.

Unfortunately, the Act does not clearly state the consequences of failure to comply. Under the Act, a failure to report will trigger "the routine penalty for non-reporting in force at the time of reporting," the practical consequence of which is simply publication of noncompliance.⁶⁵

State regulation does not offer any greater protections because it is not comprehensive and varies considerably state-to-state. Most regulation of assisted reproduction at the state level is focused on limited aspects of ART such as sperm donation, surrogacy, embryo donation, and embryo storage and abandonment.⁶⁶ Although a few states have attempted to regulate ART directly, this approach is the exception, not the rule.⁶⁷

E. The Limits of Self-Regulation

With limited governmental regulation or legal restrictions, fertility centers and health professionals are largely self-regulated. Self-regulation has advantages over legal regulation because it protects patients' reproductive interests and can respond to issues in a more flexible and reflexive manner.⁶⁸ However, though professional medical organizations regulate some fertility practices, the system is not well-equipped to curb harmful practices.

The American Society of Reproductive Medicine (ASRM) is the principal organization that supervises the field of reproductive medicine. The Society of Assisted Reproductive Technology (SART),

⁶³ *Id.* at 615.

⁶⁴ Pinchuk, *supra* note 13, at 52.

⁶⁵ Rosato *supra* note 1, at 64.

⁶⁶ *Id.* at 65.

⁶⁷ *Id.* at 66.

⁶⁸ *Id.* at 67.

an affiliated organization, specifically covers IVF programs.⁶⁹ ASRM and SART have issued policies on gamete donation, the number of embryos that can be safely transferred, and gender selection. However, these policies have proved ineffective for three reasons. First, existing enforcement mechanisms are not only ill-equipped to detect violations, but even when violations are detected the corresponding penalties are so minimal that they have little effect in correcting unethical practices.⁷⁰ The penalty for noncompliance is removal from group membership, however violators are still free to offer services to couples.⁷¹ Consequently, non-reporters can still build a lucrative practice without oversight.

Second, many of the standards set forth by SART are too flexible to be enforceable.⁷² Although the Committee Report sets out guidelines regarding the number of embryos to transfer, it allows individual programs to redefine, and many times exceed, these guidelines based on data and variables within specific practices.⁷³ The most current Committee Report recommends that physicians may transfer one to five embryos per cycle based on particularized criteria such as the patient's age, fertility prognosis, and history of failed IVF cycles.⁷⁴ However, in practice this discretionary approach has proven ineffective. Nearly 66% of all ART cycles using fresh ova involved the transfer of at least 3 embryos, about 28% involved the transfer of four or more, and 10% involved 5 or more embryos.⁷⁵ The transfers involving 3 or more embryos resulted in 5-6% risk of delivering triplets.⁷⁶

Third, and most importantly, limited regulation allows experimental procedures with unproven efficacy to be adopted too quickly.⁷⁷ This "practice first, assess risk later" approach puts families at risk and places the task of evaluating the safety of techniques in the hands of those who stand to profit from their use.

⁶⁹ Rosato, *supra* note 1, at 66.

⁷⁰ *Id.* at 68.

⁷¹ *Id.*

⁷² *Id.*

⁷³ Rosato, *supra* note 1, at 68.

⁷⁴ See Practice Committee of SART and ASRM, *Guidelines on the Number of Embryos Transferred*, 82(3) FERTILITY AND STERILITY 773 (September 2004).

⁷⁵ Nat'l Centers for Chronic Disease Prevention and Health Promotion (CDC), *supra* note 3.

⁷⁶ *Id.*

⁷⁷ Rosato, *supra* note 1, at 69.

F. Multifetal Pregnancy Reduction as Multiple Pregnancy Regulation

The considerable risks inherent in carrying a multiple pregnancy to term made it necessary to consider how to eliminate, or at least greatly reduce the incidence of, the multiple gestation associated with assisted reproductive technologies. There are three options available when the fertility procedure results in a multifetal pregnancy: (1) terminate the entire pregnancy through abortion and attempt to conceive again; (2) accept the situation and hope for a natural resolution of some of the multiple gestations despite the risks; or (3) employ currently available techniques for pregnancy reduction.⁷⁸ Presented with these limited options, only the third affords the opportunity of achieving the intended goal of the fertility treatment with a good outcome.⁷⁹ Therefore, it is appropriate to consider pregnancy reduction as an unfortunate, but sometimes necessary, therapeutic intervention connected with fertility treatments.

Proponents of multifetal pregnancy reduction (MFPR) cite the medical justification as the strongest argument in favor of this procedure. Multifetal reduction is generally performed between the 9th and 12th weeks of gestation and commonly involves the insertion of a needle guided by ultrasound through the abdominal wall and the injection of potassium chloride into the thorax of a fetus to stop its heart.⁸⁰ Many commentators consider multifetal reduction a “lifeboat” intervention, i.e. a utilitarian intervention intended to increase the likelihood of survival of some of the fetuses to birth rather than the loss or significant pain and suffering of all the fetuses.⁸¹ This focus on intent is what distinguishes abortion from MFPR: the former is performed to terminate the entire pregnancy, while the latter is performed to salvage the pregnancy. The law’s definition of abortion as motivated by the desire to avoid procreation unavoidably excludes the termination of life with the intent to produce a live birth.⁸²

Multifetal reduction also carries less ethical baggage than another procedure known as selective reduction (termination).⁸³ Unlike

⁷⁸ Rorty, *supra* note 11, at 60.

⁷⁹ *Id.*

⁸⁰ Elster, *supra* note 10, at 619.

⁸¹ *Id.*

⁸² Pinchuk, *supra* note 13, at 38.

⁸³ Selective termination refers to the procedure in which one or more anomalous fetus(es) in a multifetal pregnancy are terminated. The affected fetuses usually have chromosomal, structural, or genetic abnormalities identified by ultrasound examination or an invasive prenatal diagnostic test, such as amniocentesis or

selective reduction, in multifetal reduction the physician chooses fetus(es) to be terminated based on proximity to the abdominal wall and terminates as many as are necessary to increase the likelihood of a positive outcome.⁸⁴ Since the fetus(es) are chosen arbitrarily with respect to genetic characteristics, the procedure is less ethically controversial⁸⁵ and thus accepted by many political entities.⁸⁶ As might be anticipated, the procedure is neither approved nor practiced among nations where abortion is specifically illegal or socially unacceptable.

A second argument for MFPR is grounded in the iatrogenic nature of the multiple gestation problem.⁸⁷ In the two most common fertility treatments, ovarian stimulation and IVF, multiple fetuses are not the intended result of the fertility drugs or transfer procedure and only occur indirectly as a result of third-party intervention. The implicit responsibility felt by many physicians creates an obligation in many to fix the problem.⁸⁸ Therefore, the physician involved in the fertility

chorionic villus sampling. In contrast to MFPR, the selectively terminated fetus(es) is chosen based upon a fetal abnormality rather than randomly or based upon its position in the uterus. Rorty, *supra* note 11, at 57.

⁸⁴ In a multichorionic pregnancy, the fetus(es) reduced are those that are most easily accessible, usually closest to the anterior uterine wall and/or the fundus. The fetus above the cervix is avoided whenever possible because of the hypothetical increased risk for infection or uterine irritability if that fetus were reduced. However, if the fetus has a lagging crown rump length, a significantly smaller sac, increased nuchal translucency, or an obvious anomaly, then that fetus is preferentially reduced. LG Keith, et al. *Multiple Gestation: Reflections on Epidemiology, Causes, and Consequences*, 45 INT J. FERTIL WOMENS MED 206 (2000).

⁸⁵ Selective termination differs from MFPR in two important ways. First the choice of which fetus to reduce is not arbitrary. Therefore, use of selective reduction (and pre-implantation genetic diagnosis) to select for genetic and phenotypic characteristics results in serious theological and ethical questions and is thought by many to be the precursor to "designer genetics." It encourages reductivism or the identification of a specific child by his selected trait(s). Even if this does not lead society to reduce individuals to traits, it may subtly encourage us to disassemble persons into nothing more than the sum of their parts rather than as something greater than the sum. Mary Crossley, *Choice, Conscience, and Context*, 47 HASTINGS L.J. 1223, 1232-1233 (1996). Second, the termination is not intended to increase the chances of a live birth, but rather to prevent the birth of an abnormal child. Thus, selective termination is not a "lifeboat" decision justified by the principle that it is wrong to bring avoidable suffering into the world. Rorty, *supra* note 11, at 65-66.

⁸⁶ Abortion is illegal or socially unacceptable in only 29% of the 52 surveyed countries including Ireland and many of the Latin American countries such as Argentina, Brazil, Chile, Ecuador, El Salvador, and Venezuela. Supplement, *Chapter 10: Fetal Reduction*, 81(5) FERTILITY & STERILITY S35 (2004).

⁸⁷ Rorty, *supra* note 11, at 61.

⁸⁸ *Id.*

procedure is: (1) the proximate cause for the fertilization of the pre-embryos; (2) an intervening agent that disrupts the otherwise “natural” selection of embryos that have the chance to implant; and (3) directly co-responsible for the failure which a multifetal pregnancy represents.⁸⁹ The causal context of the multiple pregnancy is an important variant when analyzing the ethics of MFPR because the physician is the causal agent of a specific, and often lengthy, chain of inter-related actions occurring because of his intervention.⁹⁰

II: A MISCARRIAGE OF JUSTICE?

The nature of contemporary medical practice is that interventions that are discovered and perfected in one context are readily transferable to others. If a specialist develops a high degree of skill in a procedure, the decision to invoke the skill in a different context might be: “I can do it.” In the context of fetal reduction, however, the first question ought to be: “Should I do this?”⁹¹

A. Post-Hoc Ethical Analysis

The medical, ethical, and legal literature contains little discussion of the ethical issues that multifetal pregnancy reduction raises. To the extent that these concerns are addressed, the ethical gymnastics generally begins at a point when a multiple pregnancy already exists. In these cases MFPR is presumed acceptable based on the legality of abortion or utilitarian ethics.⁹² However, the fundamental ethical inquiry *should* begin not once a high-order multiple pregnancy is established, but when people choose a course of conduct that creates a substantial risk of multiple pregnancy. To draw on the “lifeboat” metaphor, the ethical analysis should begin at the moment the ship’s captain decides to sail the stormy seas since it is at this moment that he predestines his crew to make grave mortal decisions.⁹³ Similarly, the use of infertility treatments that induce superovulation or multiple embryo transfer raises ethical concerns because the treatment course willingly flirts with the high probability that a multiple pregnancy will result.

The following example illustrates why this willing entertainment of risk may be troubling. Imagine a couple that

⁸⁹ *Id.*

⁹⁰ *Id.*

⁹¹ Rorty, *supra* note 11, at 53-54.

⁹² Crossley, *supra* note 85, at 1227.

⁹³ *Id.*

understands the risks of multiple pregnancy and availability of MFPR, but nonetheless chooses to pursue an aggressive treatment that maximizes their chances of giving birth.⁹⁴ In this scenario, the couple is willing to deliberately destroy fetal life in order to achieve their goal of creating a genetically-related child.⁹⁵ This choice creates a disproportionate risk of harms to fetal life in order to advance the couple's personal needs or goals.⁹⁶ Even proponents of women's rights who disagree on the absolute level of harm associated with terminating a fetus, agree that the context within which this choice is made affects the proportionality of harm.⁹⁷ In the context of abortion, the law permits individuals willing to engage in unprotected sexual intercourse to assume the risk that the termination of fetal life may become necessary to achieve life goals.⁹⁸ By comparison, one might rationally conclude that the assumption of risk in the fertility scenario is less troubling because it reflects an ardent, and perhaps selfless, desire to have a child. When faced with a multifetal pregnancy, the physician's application of the medical frame⁹⁹ to this moral dilemma may encourage a selfless and responsible reduction to salvage the pregnancy.

From the moralist perspective¹⁰⁰ however, the consent to engage in multifetal reduction reveals a grave and inevitable immorality. The very intent of the couple to create fetal life they are later willing to destroy adds an additional, symbolic harm.¹⁰¹ The image of deliberately creating life only to turn around and destroy it smells of the wickedness we associate with human cloning and may have a powerful symbolic

⁹⁴ *Id.*

⁹⁵ *Id.* at 1228.

⁹⁶ Crossley, *supra* note 85, at 1228.

⁹⁷ *Id.*

⁹⁸ *Id.*

⁹⁹ The medical frame focuses its inquiry on the evidence regarding statistical outcomes. The statistical analysis that forms the basis of the medical frame focuses on two issues: the risks associated with multigestational pregnancies without reduction, and the risks associated with reduction to different endings. This reliance on statistical evidence is commonplace in rational thought and represents a standard way to work towards a consensus regarding treatment. Britt, et al., *Framing the Decision: Determinants of How Women Considering Multifetal Pregnancy Reduction as a Pregnancy Management Strategy Frame Their Moral Dilemma*, 19 FETAL DIAGN THER 232, 233 (2004).

¹⁰⁰ The moral frame attends to statistical evidence of risk in making medical decisions but does so within the context within which it occurs. This contextual approach seeks to minimize the disruption to the moral principles to which one subscribes. *Id.* at 234.

¹⁰¹ Crossley, *supra* note 85, at 1228.

impact.¹⁰² This symbolic harm associated with using human life, albeit unborn human life, to advance one's own ends must be considered in balancing the "goal sought against the potential harms wrought."¹⁰³ Thus, a prospective parents' decision to use aggressive infertility treatment to maximize their chance of conceiving a child may even be seen as more selfish than a postmenopausal woman's decision to bear a child or a decision to hire a woman to act as a surrogate mother.¹⁰⁴

B. A Focus on Context: Adding to the Ethical Complexity

Many commentators, however, believe that neither the selfish nor the selfless classification accurately encapsulates a woman's choice when faced with deciding whether to reduce a multiple pregnancy.¹⁰⁵ Buried behind the polarized rhetoric of the public abortion debate, lies another, more appropriate, classification. Carol Gilligan's abortion study provides an appropriate lens through which to view and better understand multifetal pregnancy reduction.¹⁰⁶ The study, conducted in the immediate aftermath of *Roe v. Wade* between 1973 and 1975, was designed to clarify ways in which women of various ages, social class, and ethnic backgrounds, construct and resolve abortion decisions.¹⁰⁷ Gilligan describes her main findings as follows:

Women were constructing the dilemma in a way that was completely at odds with the public conversation. Then, as now, the public discussion of abortion was framed as a conflict between the right to life and right to choice, raising the question of whose rights took precedence in a formulation that pitted the fetus against the mother (according to right-to-lifers) or women against men (according to pro-choicers). Yet women were saying, "I'm in this dilemma of relationship and I can't see any way of acting that will not cause hurt. So I don't know what to do. There is no good thing to do here." So I would ask them, "What are you thinking about? Who is involved?" And they would say, "Well, everybody affected by the decision is involved. It was like someone on a trampoline. You make a move and the whole thing is shaking." Women said, "it will affect my parents, it will affect... all these people, and I don't

¹⁰² Noah, *supra* note 21, at 605.

¹⁰³ Crossley, *supra* note 85, at 1229.

¹⁰⁴ *Id.*

¹⁰⁵ See generally Pinchuk, *supra* note 13.

¹⁰⁶ Pinchuk, *supra* note 13, at 39.

¹⁰⁷ *Id.* at 39.

*know how to move without having an effect on all these people, and if I don't move, I will have a baby.*¹⁰⁸

The abortion study demonstrates that women's abortion discussions are much more multilayered, complex, and relational than the public debate of right versus murder.¹⁰⁹ Gilligan noted that women characterized themselves as either selfish or selfless when they spoke of connection, responsiveness, and responsibility because the opposition of self and the other was so pervasive and powerfully voiced in public debate.¹¹⁰

The analogy to being on a trampoline is equally applicable to multifetal pregnancy reduction with the addition that nonfeasance could result in two unique outcomes – conception of multiple babies, or possibly no babies.¹¹¹ Further adding to the complexity is the fact that MFPR not only pits the fetus's interests against those of the mother, but each fetus's interest is in competition with each other's.¹¹² Nowhere is this more evident than in the physical torment endured by women who have carried multiple fetuses to term. Bobby McCaughey was described as having had difficulty gaining enough weight for her seven fetuses; she gained only 25 pounds during her pregnancy despite the fact that her waist was fifty-two inches.¹¹³ Nkem Chukwu spent the last two and a half weeks of her pregnancy bed-ridden at an upside down tilt in order to keep her fetuses in utero for as long as possible.¹¹⁴ While being bed-ridden and upside down may seem like the ultimate sacrifice to bring multiple lives into existence, others view the same act as selfish because it places a personal desire to reproduce ahead of bringing healthy infants into the world.¹¹⁵ Herein lies the tension that so permeates MFPR and distinguishes it from abortion – while the abortion study labeled a woman's decision as selfish *or* selfless, these characterizations seem to collide in the context of multifetal pregnancy reduction.¹¹⁶

In the abortion context, it is the patients that fall in the middle and have difficulty finding a moral compass because they experience

¹⁰⁸ *Id.*

¹⁰⁹ *Id.*

¹¹⁰ Pinchuk, *supra* note 13, at 45.

¹¹¹ *Id.* at 40.

¹¹² *Id.*

¹¹³ *Id.* at 46.

¹¹⁴ Pinchuk, *supra* note 13, at 46.

¹¹⁵ *Id.*

¹¹⁶ *Id.*

pressure in contradictory directions that are most at risk.¹¹⁷ In these patients, the anxiety generated by the moral dilemma has long-term ripple effects on their birth outcomes and their adjustment following reduction.¹¹⁸

C. To Reduce or Not to Reduce: A Psychological Tug-of-War

Although there are no comprehensive studies examining the psychological effects on women who undergo multifetal pregnancy reduction, an analogy to abortion studies is instructive. Like the decision to abort, the decision to reduce does not occur in a vacuum but impacts the woman making it. A 1992 study in the *British Medical Journal* indicated that eight years after an abortion women were 138% more likely to be at high risk for clinical depression than those who carried their unintended first pregnancy to term.¹¹⁹ Women who choose to abort are more likely to experience a sense of loss, guilt, repression, sleeping disorders, anniversary reactions, problematic relationships with men, obsessive-compulsive behavior, suicide attempts, and psychotic conversion reactions.¹²⁰

The decision not to abort also affects parents of multiples socially and psychologically. They are more exhausted, depressed, and anxious after the birth of their babies.¹²¹ Life changes dramatically with the birth of one baby, one can only imagine life after the simultaneous birth of three or four children, particularly if they have physical or cognitive disabilities. Interestingly, *Roe* recognized the potential psychological impact of having a possibly unwanted child: "Maternity, or additional offspring, may force upon the woman a distressful life and future. Psychological harm may be imminent. Mental and physical health may be taxed by child care."¹²²

¹¹⁷ Britt, *supra* note 99, at 239.

¹¹⁸ *Id.*

¹¹⁹ Publication of this study coincided with the 30-year anniversary of *Roe v. Wade*. The study was carried out between 1979 and 1992; overall, 4,463 women were surveyed about depression, intendedness of pregnancy, and pregnancy outcome. *Clinical Abortion after Unintended Pregnancy Linked to Abortion* (Jan. 18, 2002), available at <http://www.afterabortion.org/news/depressionbmj.html>.

¹²⁰ Pinchuk, *supra* note 13, at 47.

¹²¹ Elster, *supra* note 10, at 621.

¹²² Pinchuk, *supra* note 13, at 47.

D. The Cost-Benefit Analysis

Today, healthcare spending accounts for 15% of the nation's economy.¹²³ Earlier this year, the Department of Health and Human Services (DHHS) reported that healthcare spending expanded 9.3% in 2002 to a total of \$1.55 trillion.¹²⁴ This represents the largest increase in 11 years.¹²⁵ As a percentage of the gross national product, federal spending on healthcare has tripled in the past two decades and, if the latest rise is any indication, the problem appears to be getting worse.¹²⁶ The necessary care associated with multiple births has a sizeable impact on healthcare spending. In 1997, surviving quadruplets purportedly cost the healthcare system \$1.2 million¹²⁷ for maternal and neonatal care after a premature delivery.¹²⁸ And, even after lengthy stays in neonatal intensive care units (NICU), many premature infants leave the hospital only to return with serious physical and developmental handicaps.¹²⁹ In light of these costs, pregnancy reduction may seem like the answer to the multiple gestation problem. When there is a multiple pregnancy, reducing the number of fetuses improves the chances of a good outcome at a nominal cost. But this would be a very shortsighted way to view the multiple gestation problem and is a gross distortion of the notion of preventive care.

There are several reasons why pregnancy reduction is not a viable solution. First, patient surveys indicate that at least one-third of infertile couples would not choose fetal reduction on religious or ethical grounds.¹³⁰ Second, fetal reduction is a highly stressful and psychologically traumatic experience for a woman to bear.¹³¹ Most of these women have already dealt with the emotional roller-coaster of failed pregnancies, unsuccessful IVF cycles, or years of struggle to get

¹²³ *U.S. Health Care Spending Reaches All-Time High: 15% of GDP* (2004), available at
http://reclaimdemocracy.org/articles_2004/us_recordhigh_healthcare_spending.html.

¹²⁴ *Id.*

¹²⁵ *Id.*

¹²⁶ *An Overview of the U.S. Healthcare System: Two Decades of Change, 1980-2000* (2002), available at <http://www.cms.hhs.gov/charts/healthcaresystem/all.asp>?

¹²⁷ Rorty, *supra* note 11, at 62.

¹²⁸ A 1997 study found that daily hospital charges exponentially increase from \$591 for a singleton to \$1,715 for each higher-order infant born (third and above) of a multiple pregnancy. Delivering a baby before 30 weeks' gestation costs \$100,000 and a 3-month hospital stay for a preterm baby could near \$500,000. Elster, *supra* note 10, at 620.

¹²⁹ Noah, *supra* note 21, at 620.

¹³⁰ Strong, *supra* note 8, at *4.

¹³¹ *Id.*

pregnant. Though unsupported by psychological studies, it is reasonable to assume that infertile women are particularly vulnerable and susceptible to depression given their past experiences. These women finally find themselves in the position of being pregnant only to face making a decision about whether to abort some of their fetuses.¹³² Finally, multifetal pregnancy reduction is not a fail-safe procedure. The main complication is loss of the entire pregnancy.¹³³

The more appropriate remedy is to *prevent* women from having to make the decision to reduce in the first place. Instead of attending to the immediate context of a reduction decision, we need to focus our attention on the larger social, cultural, moral, and economic context in which we make reproductive choices. From an economic standpoint, the transfer of fewer embryos can reduce the probability of multiple gestation and the healthcare costs from complications associated with multiple pregnancy. Likewise, the cost of treating psychological effects and depression that follow a decision to reduce in many women would be eliminated.

From moral and social perspectives, the use of assisted reproductive technologies to promote consumer preferences that satisfy our own selfish desires threatens to erode our sense of humanity and the non-contingent connection between parent and child.¹³⁴ The advent of reproductive technology has spawned an unparalleled focus on autonomy that seems to have eroded the notion of pregnancy as a blessed gift. The view of multifetal pregnancy reduction as a benevolent intervention to multiple gestation threatens our sense of personhood¹³⁵ by encouraging shortsightedness and selfish behavior since fetal reduction serves as a remedy for an irresponsible choice to implant many embryos. Our focus needs to be on encouraging moral reasoning and conscience searching by the couple, family, clinician, and *all* those involved in the process, not on promoting certain outcomes.¹³⁶ While it is important to respect an individual's liberty to make reproductive decisions, simply exercising the right to choose reduction as a remedy to the unwanted fetuses that result from transferring unnecessary embryos does not further the ideal of

¹³² *Id.*

¹³³ The risk of pregnancy loss is based on the number of initial fetuses and the experience of the healthcare professional. For pregnancies that begin with triplets, the loss rate for reduction to twin is about 4-8%; by contrast, in a higher-order 6+ fetus gestation, the loss rate may be as high as 21%. *Id.*

¹³⁴ Crossley, *supra* note 85, at 1234.

¹³⁵ *Id.*

¹³⁶ *Id.* at 1238.

autonomy that strengthens personhood.¹³⁷ Instead, the autonomy that we should value is that which encourages educated, reflective, and values-based decision making or we may find ourselves in a moral vacuum where autonomy simply reflects personal choice with no principle available for moral judgment.¹³⁸ Moreover, although the decision to reduce may not have the same ethical gravity as abortion, the potential for psychological trauma following pregnancy reduction indicates that we may simply be replacing one problem with another.

If we paid more heed to context, we might find more couples exercising their autonomy to limit the number of embryos transferred even if this *might* lower their chances of becoming pregnant.¹³⁹ The willingness to avoid a higher-order multiple pregnancy reflects a moral evaluation and should be the basis of future law and policy.

III: A CRY FOR REGULATION

The decision to elect fetal reduction is not a simple one, and neither are its consequences. The possibility that a woman might carry the dead fetus(es) for a period of weeks or months, after the injection of potassium chloride into the heart sac of fetus(es) and until birth of the remaining child or children, is not a pleasant one.¹⁴⁰ Neither is the thought of a one-year old fed formula by a feeding tube and facing an uncertain future because she was born through a multiple pregnancy.¹⁴¹ These stark realities distinguish multiple gestation and pregnancy reduction from abortion.¹⁴² It raises our discomfort with this discussion and makes us question whether there is an ethical compromise.

What is clear, despite one's personal constitution regarding its ethics, is that multifetal pregnancy reduction must remain lawful. It would be inherently inconsistent to prohibit the practice of multifetal pregnancy reduction at the 12th week simply because of inherent conflicts and a potential for adverse psychological consequences when abortion is lawful until the 27th or 28th week (viability) and carries the same risks. The fact that multifetal pregnancy reduction is intended to salvage pregnancy, further tips the scales in favor of the lawfulness of

¹³⁷ *Id.*

¹³⁸ Richard A. McCormick, *Bioethics A Moral Vacuum?*, 180(15) AMERICA 8, 8 (May 1, 1999).

¹³⁹ Crossley, *supra* note 85, at 1236.

¹⁴⁰ Pinchuk, *supra* note 13, at 52.

¹⁴¹ *Id.*

¹⁴² *Id.* at 53.

this “lifeboat” intervention. Therefore, regulation must challenge the boundaries of procreational autonomy, a liberty interest protected by the Constitution.¹⁴³ A woman’s personal desire for a multifetal pregnancy¹⁴⁴ using assisted reproductive technologies should not trump the State’s interest in protecting these “at risk” children when alternatives, such as adoption, hosting a child, sponsorship, or even gestational surrogacy exist to allow couples to parent many children.

Legislation should set an upper limit on transferable embryos in order to prevent the complications associated with multifetal pregnancies, protect “at risk” multiples, and preempt the litany of psychological consequences that may arise from a decision to reduce.¹⁴⁵ The federal government, in its capacity as *parens patriae*, could propose a law limiting the number of preembryos transferred per cycle. In addition, to ensure compliance with the regulations, an independent agency resembling the United Kingdom’s Human Fertilisation and Embryology Authority (HFEA) could be established to license fertility clinics to oversee and validate individual clinical and laboratory practices.¹⁴⁶ This agency could ensure that only those clinics and physicians that abide by federal standards and Codes of Practice, i.e. improved informed consent measures, perform infertility treatments. To assure that the public interest is adequately represented, the licensing committee should include ethicists, theologians, philosophers, lawyers, individuals who have personally experienced infertility problems, as well as, physicians and scientists.¹⁴⁷ For such a body to have moral authority it must represent a wide range of perspectives and be as insulated and independent as possible from the undue influence of election politics and consumer or business advocates.¹⁴⁸

¹⁴³ See generally *Planned Parenthood v. Casey*, 505 U.S. 833 (1992).

¹⁴⁴ Studies indicate that patients with fertility problems express a considerable desire for multiple births as long as multiple conceptions do not exceed triplets in number...they are also willing to accept a minor risk to themselves and their offspring. Gleicher et al., *The Desire for Multiple Births in Couples with Infertility Problems Contradicts Present Practice Patterns*, 10(5) HUM REPROD. 1079, 1082-83 (1995).

¹⁴⁵ See Pinchuk, *supra* note 13; see also Strong, *supra* note 8; see also Noah, *supra* note 21.

¹⁴⁶ Strong, *supra* note 8, at *8.

¹⁴⁷ See Human Fertilisation and Embryology Authority, *HFEA Annual Report 2003/04: Facing Up to the Challenge*, (2004).

¹⁴⁸ The idea of a licensing authority to improve safety, efficiency, and accountability in reproductive medicine has found some support in the provider-consumer community. In a 1996 editorial in *Fertility and Sterility*, Jones Institute of

A. Malpractice is an Ineffective Regulatory Mechanism

Given the limits of existing regulations, tort law has emerged as the primary mechanism for curbing the irresponsible use of assisted reproductive technologies. Unfortunately, the literature contains little sophisticated discussion regarding the potential utility of this regulatory mechanism.¹⁴⁹ Research reveals that only a handful of malpractice actions have arisen out of fertility treatments.¹⁵⁰ Most of these malpractice claims allege negligence by the physician for failing to adequately inform patients of the potential for multifetal pregnancy when prescribing pharmaceutical products that induce superovulation. Interestingly however, only a few of these cases involved lawsuits against the drug manufacturer.¹⁵¹ Although physicians have a duty to warn patients of the potential risks and complications associated with treatment methods and medications, is it not the duty of pharmaceutical companies to assure that their medications limit the potential for adverse side-effects? The threat of tort liability was anticipated to operate like the threat of sanctions for violations of regulatory edicts.¹⁵² But it has done so in a clumsy fashion, disregarding the appropriate reach of litigation on activities and practice it seeks to regulate.¹⁵³ Thus far, tort litigation has only had success resolving claims that perhaps should have been directed elsewhere.

Moreover, self-interest may underlie the intentions of those that find sufficient protection of reproductive autonomy in tort litigation, specifically wrongful birth claims, but oppose closer regulation.¹⁵⁴ Tort litigation must not become a refuge for those who regret reproductive choices that reflect an *over*-pursuit of liberty without foresight of

Reproductive Medicine founder, Howard Jones, endorsed recommendations by the now-defunct National Advisory Board on Ethics in Reproduction (NABER) to license fertility centers. It was also supported by ASRM, SART, and RESOLVE, a consumer advocacy group. See Parens and Knowles, *supra* note 16.

¹⁴⁹ Noah, *supra* note 21, at 633.

¹⁵⁰ See *Provenzano v. Integrated Genetics*, 287 A.D.2d 541 (2001) (where the Court refused a motion for summary judgment after the defendants failed to detect chromosomal defects during an amniocentesis that would have led plaintiffs to selectively reduce one of their twins); Noah, *supra* note 21, at 635 (In *Morgan v. Christman* the defendants failure to disclose the risk of multifetal pregnancy from Clomid resulted in quadruplets born with disabilities and led to a \$2.1 million settlement).

¹⁵¹ Noah, *supra* note 21, at 635.

¹⁵² *Id.* at 634.

¹⁵³ *Id.*

¹⁵⁴ *Id.*

potential consequences or consideration of the attended ethical responsibilities.¹⁵⁵ Furthermore, while wrongful birth claims may “make whole” the void left in an injured party, it leaves fewer resources to be spread amongst the rest of society given the collective nature of healthcare dollars.

B. Strict Limitation Does Not Significantly Impede Clinical Discretion

Current SART and ASRM guidelines allow treatment plans to be individualized after careful consideration of each patient’s unique circumstances.¹⁵⁶ The patient and clinic factors that influence the number of embryos transferred include: patient age, a history of failed cycles, embryo quality, the opportunity for cryopreservation, and a clinic’s experience with newer techniques.¹⁵⁷ While noble in concept, any guideline that does not contain a strict limitation on the number of embryos that may be transferred is incompatible with the goal of eliminating multiple gestation and the consequent fetal reduction. Instead, their guidelines permit, in “extraordinary circumstances” the transfer of nonspecific “additional embryos” based upon individual particularized circumstances.¹⁵⁸ This increases the risk of a multiple pregnancy and its associated complications.

¹⁵⁵ *Id.*, *supra* note 21, at 634.

¹⁵⁶ See The Practice Committee of SART and ASRM, Guidelines on the Number of Embryos Transferred, 82(3) FERTILITY AND STERILITY 773 (September 2004).

¹⁵⁷ In the absence of data generated by an individual fertility program, the following guidelines are recommended:

- A) *In patients under the age of 35, no more than 2 embryos should be transferred in the absence of extraordinary circumstances. For patients with the most favorable prognosis, consideration should be given to transferring only a single embryo. Patients having the most favorable prognosis include those undergoing their first IVF cycle, have good quality embryos as judged by morphologic criteria, and have excess of embryos of sufficient quality to warrant cryopreservation...*
- B) *For patients between 35 and 37 years of age having a more favorable prognosis, no more than 2 embryos should be transferred. All others in this age group should have no more than 3 embryos transferred."*
- C) *For patients between 38 and 40 years of age, no more than 4 embryos should be transferred...*
- D) *For most patients greater than 40 years of age, no more than 5 embryos should be transferred.*
- E) *For patients with two or more failed IVF cycles and have less favorable prognosis, additional embryos may be transferred according to individual circumstances after appropriate consultation. Id.*

¹⁵⁸ *Id.*

Although physician discretion is important to assure that treatment is tailored to the individual needs of patients, it cannot occur unbridled by structure when tort litigation has proven an ineffective weapon against its abuse. Federal legislation providing a cap on the number of embryos transferred would neither interfere with a physician's discretion, provided the recommended course of treatment remained within the parameters set by law, nor would it impede the development of new techniques.

Although the potential for politicization¹⁵⁹ always exists with external regulation, self-regulation is particularly inappropriate in a highly controversial and ethically-charged fertility industry powered by the twin engines of desire: an infertile couple's shortsighted desire for genetically related children and a provider's desire for prestige.¹⁶⁰ This leaves society particularly vulnerable to "at risk" multiples and potential downstream psychological consequences that result from decisions to reduce. The conflict of interest that arises when an industry must regulate away from profitability leaves independent federal regulation as the best alternative. The future of assisted reproductive technology is "too important to be decided solely by the market."¹⁶¹

C. Federal Legislation Limiting Embryo Transfer Withstands Constitutional Objections

The Supreme Court recognized the right to procreate as a liberty interest protected by the United States Constitution.¹⁶² The Court has defined this liberty interest broadly: "At the heart of liberty is the right to define one's own concept of existence, of meaning, of the universe, and of the mystery of life. Beliefs about these matters could not define the attributes of personhood were they formed under compulsion of the State."¹⁶³ Therefore, any restriction on the availability of ART would undoubtedly trigger constitutional objections. However, this liberty interest is not absolute. Courts have allowed States to interfere in a couple's decisions if the State possesses a compelling interest and uses means necessary and narrowly-tailored to further that interest.¹⁶⁴ Under

¹⁵⁹ With external regulation there always exists the potential for political conservatives to use the government regulatory process to place severe restrictions on the industry through licensing proceedings. Strong, *supra* note 8, at *7.

¹⁶⁰ Crossley, *supra* note 85, at 1230.

¹⁶¹ See Parens and Knowles, *supra* note 16.

¹⁶² See generally *Planned Parenthood*, 505 U.S. 833.

¹⁶³ Rosato, *supra* note 1, at 96.

¹⁶⁴ See e.g., *Planned Parenthood*, 505 U.S. 833.

this standard, the Constitution would tolerate limited regulation of assisted reproductive technologies.

A bright-line limitation establishing maximum transferable embryos by federal legislation is likely to be adamantly opposed by patients and physicians alike. Patients will argue that their right to procreational autonomy has been infringed.¹⁶⁵ Doctors will likely assert that such a limitation is too restrictive and prevents them from making informed medical determinations based on the unique circumstances of each case and, more generally, that lawmakers do not have the expertise to legislate medicine.¹⁶⁶ However, these objections are based on an outdated theory that the probability of pregnancy increases as greater numbers of embryos are transferred to the uterus. Experts at the ASRM recently reported that the pregnancy rates after transferring one embryo is not significantly different than the rate after transplanting two, given modern techniques for growing and selecting healthy embryos.¹⁶⁷ In Sweden, the transfer of more than one embryo was recently banned except in extraordinary circumstances. Nevertheless, the rate of pregnancy (33%) has remained constant since passage of the legislation while the frequency of twin pregnancies fell from 23% to 6%.¹⁶⁸ Likewise, the Human Fertilisation and Embryology Authority (HFEA) in Great Britain reported that the transfer of three preembryos, as opposed to two, did not improve the birth rate but increased the rate of multiples by 4% to 11%.¹⁶⁹ Both these countries have ART live-birth rates that exceed the 31% rate¹⁷⁰ of the United States where the number of embryos transferred is largely unregulated.¹⁷¹ The success of an IVF cycle is determined not by the number of embryos, transferred but by the morphologic characteristics and favorable implantation prognoses of these embryos. Thus challenges¹⁷² to federal limits on the number of embryos that can be implanted would lack merit.

¹⁶⁵ *Id.* at 87.

¹⁶⁶ *Id.*

¹⁶⁷ See Pearson, *supra* note 27.

¹⁶⁸ Two studies from US fertility clinics mirrored the Swedish results. *Id.*

¹⁶⁹ Strong, *supra* note 8, at *5.

¹⁷⁰ See Wright, *supra* note 9.

¹⁷¹ In 2002, 71% of transfers involved three or more embryos. *IVF League Tables Encourage Bad Practice*. NEW SCIENTIST. (July 2002).

¹⁷² A woman is going to the High Court to challenge Great Britain's three-embryo transfer limitation (IVF) claiming it is destroying her chances of having a baby. She has undergone treatment for four years at a cost of 13,000 pounds. *Legal Fight Over IVF Embryos* (November 2004), available at <http://news.bbc.co.uk/1/hi/health/955002.stm>.

Moreover, constitutional arguments that have been advanced in the area of procreational autonomy harken back to a bygone era of expansive liberalism.¹⁷³ The well-established right to avoid procreation by choosing among safe and effective methods of contraception and abortion does not necessarily translate into a right to procreate by any means one may desire.¹⁷⁴ While the right of self-determination allows patients to refuse a course of treatment, it does not empower patients to compel physicians to prescribe treatments that are fruitless or inappropriate.¹⁷⁵ A patient's right to direct the course of her treatment is bound by what is therapeutically beneficial. In this case, evidence that increasing the number of embryos only improves the probability of a multifetal pregnancy and resulting complications is hardly a beneficial result.

Further undercutting the argument that strict limitations on ART impede a person's autonomy is the fact that primarily white women can afford the \$10,000 per cycle cost of ART. In 2002, 184 per 100,000 live births were higher order multiples; however, a healthcare disparity in ART utilization is evident by the fact that whites accounted for 206 per 100,000 births of higher order multiples while blacks reported only 102.6 per 100,000.¹⁷⁶ In the past thirty years the overall rise in the triplet and other higher order multiple birth ratio (or triplet birth ratio) can be attributed almost exclusively to the rise in triplet births in white mothers.¹⁷⁷ The right to procreate is strongest when it involves invasions of bodily integrity; however, interfering in the private decision making of an affluent minority population has not been traditionally protected.¹⁷⁸ The Court has never directly addressed the extent to which this right protects the freedom of a couple to pursue any technological means of reproduction they choose.¹⁷⁹ Thus, while a woman's right to obtain a pregnancy reduction is grounded in a concern that State interference would deny her the opportunity of a healthy pregnancy, ART decisions that are generally made well before the preembryo is implanted in the woman's uterus can not be assumed to have the same degree of protection.

¹⁷³ Noah, *supra* note 21, at 663.

¹⁷⁴ *Id.*

¹⁷⁵ See Miles, *Informed Demand for "Non-Beneficial" Medical Treatment*, 325 NEJM 514 (1991).

¹⁷⁶ Martin, et al., *Births: Final Data for 2002*, 52(10) NATIONAL VITAL STATISTICS REPORTS (CDC) 1, 98 (December 17, 2003).

¹⁷⁷ *See Id.*

¹⁷⁸ Rosato, *supra* note 1, at 97.

¹⁷⁹ *Id.*

In short, constitutional regard for reproductive liberties should not stand as an obstacle to a strict limitation on transferable embryos since any benefit that may accompany unchecked discretion is mitigated by the serious health risks to mothers and children that ART presents.

D. Insurance Reform Provides Some Relief if Federal Legislation is Found Unconstitutional

In the event that courts find that procreational autonomy can be extended to assisted reproductive technologies and the government cannot meet strict scrutiny, better insurance coverage may solve the multiple pregnancy problem. Insurance status has been shown to affect the number of embryos transferred and the risk of high-order multiple gestation.¹⁸⁰ Generally, insurers have been reluctant to provide coverage for infertility because fertility treatments are not medically necessary to preserve a patient's health, and insurers consider ART to be experimental and infertility to be a preexisting condition.¹⁸¹ However, in *Bragdon v. Abbott*, the Supreme Court held that reproduction is a "major life activity" and that a substantial limitation on a person's ability to reproduce meets the definition of disability under the Americans with Disabilities Act (ADA).¹⁸² While the ramifications of this decision remain to be seen, it has been hypothesized that insurers will no longer be able to discriminate against infertile patients.¹⁸³

In short, insurance coverage of ART may abate the economic pressure to complete a family in a single IVF attempt. Also, insurance coverage of IVF would address a growing healthcare disparity in ART by increasing minority participation in reproductive technologies from which they have been historically disenfranchised.

¹⁸⁰ A recent study from SART and the CDC found a modest reduction in the proportion of high-order embryo transfers in Massachusetts and Rhode Island (insured states) than in three noninsured states (Indiana, Michigan, and New Jersey) among women 35 years of age and younger. William Schlaff, *Impact of Insurance Coverage on In Vitro Fertilization Practice Patterns: A Complex Relationship*, 80(1) FERTILITY AND STERILITY 30, 30 (July 2003).

¹⁸¹ Strong, *supra* note 8, at *4.

¹⁸² *Id.*

¹⁸³ *Id.*

CONCLUSION

The objective of this Article is not to make a case that multifetal pregnancy reduction should be banned. Undoubtedly, there is bound to be some utility for this technique even if presently unforeseeable. However, the availability of multifetal pregnancy reduction should not be used as a justification for creating a significant likelihood of high-order multiple gestation through multiple embryo implantation. The procreational autonomy bestowed by the Constitution cannot be extended to permit the unbridled, willful creation and destruction of fetuses. Autonomy does not grant society a license to absolute freedom from intervention in all matters regarding our reproductive capacity. Lines need to be drawn to prevent advancing technology from destroying the boundaries of ethics and morality. Thus far, the government, however unwillingly, has refused to entertain this debate.

Assisted reproductive technologies, like other medical technologies, do not exist in a vacuum. The potential economic and social harms that may result from irresponsible practice extend beyond the ART participants. Since *Roe*, the fertility industry has advanced bound only by the limits of the participants' ambition, and countless children born with debilitating injuries have been left in its wake. Thus far, reactive tort litigation and self-regulation have done little to curb industry practice. In an era where government silence equals acquiescence and where unregulated technology threatens to devalue humanity, political stalemate is not a valid excuse. Proactive federal oversight is central to cure the problems created over the past twenty-five years by the lack of regulation over ART.