NOTES

THE LEGAL STATUS OF FROZEN EMBRYOS: ANALYSIS AND PROPOSED GUIDELINES FOR A UNIFORM LAW*

INTRODUCTION

The twentieth century has seen some of history's most important and life-impacting advancements in medical science. One area of medicine that has advanced rapidly over the past thirty years concerns new reproductive technologies which help infertile couples have babies. In fact, the "infertility business" has grown into a two billion dollar a year industry.[1]

Two major components of this industry are in vitro fertilization—the uniting of an egg and sperm in a laboratory dish—and the process of freezing human embryos. As of 1987, there were approximately 4,000 frozen human embryos in existence as compared to only 300 in 1985.[2] These dynamic medical advancements have challenged the legal community to keep reins on practices affecting embryos. It appears that state and federal legislatures, however, have failed to enact effective laws to provide the judicial system with guidelines on how to decide issues connected with these new reproductive technologies.

Justice Michael Kirby[3] has recognized the dangers of the law failing to keep up with science. "It is for our society to decide whether there is an alternative or whether the dilemmas posed by modern science and technology, particularly in the field of bioethics, are just too painful, technical, complicated, sensitive and controversial for our institutions of government."[4]

Part I of this note examines in vitro fertilization and the process of freezing human embryos, including a description of the various factual contexts which raise important moral and legal issues surrounding these new reproductive techniques. Part II reviews case and statutory law that has either directly or indirectly dealt with some of these issues. Part III analyzes various factual scenarios and answers some of the legal questions, in accordance with the opinion of the Supreme Court in *Webster v. Reproductive Health Services*.[5] Finally, part IV

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1. Bonnicksen, *Whose Frozen Embryos?*, New York Newsday, Oct. 1, 1989 at 4.

2. *Id.*

3. The Hon. Justice Michael Kirby has been a Judge of the Supreme Court of New South Wales, Australia since 1984.

4. Keenan, *Science and the Law - Lessons from the Experience of Legislating for the New Reproductive Technology*, 59 AUSTRALIAN L.J. 488, 489 (Aug. 1985) (citing M. KIRBY, REFORM THE LAW 238-239 (1983)).

5. 109 S. Ct. 3040 (1989). For a more detailed discussion of the case, see *infra* notes 111-118 and accompanying text.

proposes a framework that should be followed by drafters of state laws or a uniform law to regulate the creation and freezing of human embryos.

I. FACTUAL BACKGROUND

A. Explanation of Artificial Conception

1. Fertilization and Cryopreservation of Embryos

Many couples and individuals who long to have children and suffer from infertility have, until recently, relied on adoption as the only way to raise a child. In response to this dilemma, medical researchers developed new ways to assist such people. One procedure used today is artificial insemination ("AI") of a woman with sperm from either her husband or a donor.

Another method is in vitro fertilization ("IVF"). Infertile couples typically use this method to overcome the man's low sperm count or to bypass the woman's blocked or damaged fallopian tubes.[6] IVF (also known as the "test-tube baby" technique) is accomplished by retrieving an egg from the woman and sperm from the man, and uniting them in a laboratory dish.[7] The resulting embryo is then implanted in the woman's uterus. If this implantation is successful, the woman will bear a child just as if that child had been conceived naturally.

Unfortunately, this procedure is not as free of complications as the parents hope. Ova are retrieved from a woman's ovaries in a delicate surgical procedure called a laparoscopy,[8] performed under general anesthesia.[9] The process involves the normal risks and pain associated with surgery so it is done as few times as possible.[10] Practitioners of IVF generally administer hormones to the woman before the surgery to induce the release of more than the usual single egg during ovulation.[11] Therefore, more than one egg can be retrieved during a particular laparoscopy and subsequently fertilized in the laboratory, preventing the need for another laparoscopy. To increase the possibility of pregnancy, some clinics implant more than one fertilized egg at a time; however, this also increases the chances of a multiple pregnancy.[12] In many IVF cases a mother will give birth to two babies in one pregnancy, but less than one percent will have more than two.[13]

Some IVF clinics ask their patients if they desire to have any non-implanted embryos frozen for use at a future date. Other clinics avoid this sensitive issue altogether by either removing only those eggs which they expect to fertilize, implanting all of the fertilized eggs which they deem healthy, or both.[14]

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6. Wurmbrand, *Frozen Embryos: Moral, Social, and Legal Implications*, 59 S. CAL. L. REV. 1079, 1082 (1986).
7. *Id.*
8. Schwartz, *Frozen Embryos: The Constitution on Ice*, 19 LOY. L.A.L. REV. 267, 268 (Nov. 1985).
9. L. ANDREWS, NEW CONCEPTIONS 127 (1984).
10. Schwartz, *supra* note 8, at 268, 269.
11. Wurmbrand, *supra* note 6, at 1083.
12. L. ANDREWS, *supra* note 9, at 256.
13. Rudd, *Quadruplets Making Thanksgiving Special*, Chicago Tribune, Nov. 22, 1990, § 2 at 18.
14. Wurmbrand, *supra* note 6, at 1083 (citing Grobstein, *The Moral Uses of "Spare" Embryos*, 12 HASTINGS CENTER REP. 5 (June 1982)).

Cryopreservation is a process in which embryos are preserved by freezing them in liquid nitrogen.[15] Embryos are usually frozen at the two-, four-, or eight-cell stage of development since earlier stage embryos are more difficult to freeze and later stage embryos are too advanced to develop normally after thawing.[16] These frozen embryos are then stored until the egg-donor or another woman is ready for implantation.

Those IVF practitioners who fertilize more eggs than are immediately implanted in the woman, freezing the remainders for later use, do so for two primary reasons. First, the woman may not be able to produce a healthy egg in the future. If the woman anticipates radiation or other therapy which may damage her ovaries or cause defects in the eggs that she produces, the freezing process gives her the opportunity to take advantage of these healthy fertilized eggs for a subsequent pregnancy.[17] If the woman is medically unable to go through another laparoscopy, the eggs harvested from the first surgery can be used for future implantation.[18] If the woman's ovaries cannot be accessed because of adhesions or other damage, a subsequent laparoscopy is difficult or impossible.[19]

Second, cryopreservation of human embryos may lessen the costs and reduce the amount of risk and strain that the woman goes through prior to and during the laparoscopy.[20] In fact, implantation with thawed embryos may increase the likelihood of a successful pregnancy because they can be implanted during a nonstimulated cycle.[21] Some IVF clinics also use the cryopreservation process to avoid the moral issues created by destroying excess embryos. By freezing the fertilized eggs indefinitely, they hope to avoid being accused of murder or abortion.[22]

Cryopreservation is also a helpful technique in other artificial conception procedures such as embryo transfer for surrogate motherhood.[23] Embryo transfer is the introduction of an embryo into a woman's uterus after in vitro or in vivo fertilization.[24] This process allows women who are unable to ovulate or who

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15. Other uses of cryopreservation include: freezing human sperm (L. ANDREWS, *supra* note 9, at 176); freezing human ova (*Human-egg Banks: Frozen to Life*, ECONOMIST, May 14, 1988, at 88) [hereinafter *Frozen to Life*]; and freezing animal embryos (Seidel, *Superovulation and Embryo Transfer in Cattle*, 211 SCIENCE 351 (1981)).

16. Wurmbrand, *supra* note 6, at 1083.

17. L. ANDREWS, *supra* note 9, at 256-257.

18. *Id.*

19. *Id.*

20. Robertson, *Embryos, Families and Procreative Liberty: The Legal Structure of the New Reproduction*, 59 S. CAL. L. REV. 939, 949 (1986). In 1983, the average cost of an initial treatment (screening, laparoscopy, and embryo transfer) was about $7500, with each subsequent attempt (without screening) costing about $5000. *Id.* at 943 n.6 (citing Grobstein, Flower & Mendelhoff, *External Human Fertilization: An Evaluation of Policy*, 222 SCIENCE 127, 130 (1983)).

21. Robertson, *supra* note 20, at 949. Not administering hormones prior to and anesthesia during laparoscopy can make it more likely that the implantation will be successful since these drugs may render the uterus less likely to accept a transferred embryo. *Id.*

22. Hundley, *Legal Status of Embryos Faces Another Day in Court*, Chicago Tribune, Sept. 28, 1989, § 1A, at 25, col. 3.

23. L. ANDREWS, *supra* note 9, at 257. A surrogate mother or carrier is a woman who contracts and usually receives compensation for becoming pregnant through insemination with the sperm of the husband of an infertile woman. This surrogate mother then relinquishes any rights to the child after it is born in favor of the other woman. *Id.* at 291.

24. *Id.* at 287. In vitro fertilization involves the uniting of egg and sperm outside of the woman's body, whereas in vivo fertilization takes place within the woman's body. *Id.* at 288.

produce defective eggs to bear a nonbiologically related child.[25] Usually, because the implantation is made immediately after in vitro or in vivo fertilization, the embryo transfer process requires the donor's and recipient's menstrual cycles to be perfectly synchronized.[26] Thus, an elaborate matching system must be used to find the right donor-recipient combination.[27] If frozen, however, the embryo can be stored until the recipient is biologically ready for implantation.[28] Similarly, a surrogate mother arrangement can be facilitated much more easily by storing the frozen embryo until the surrogate is at the correct stage of her menstrual cycle to accept the embryo.[29]

2. Egg-Freezing - A Promising Alternative

The most effective and promising alternative to embryo-freezing is egg-freezing. As is usual in IVF, multiple eggs are removed from the woman for the possibility of fertilization. But, instead of immediately fertilizing all of the eggs, the doctor selects one egg for fertilization and immediate implantation, and the remaining eggs are frozen for possible later use.[30] Though some eggs may become unusable in the freezing and thawing process, this is of little moral and ethical concern because an egg alone is not yet a human being.[31] Egg-freezing circumvents moral consequences resulting from the fact that forty to fifty percent of frozen embryos die during freezing and thawing.[32] Since eggs can be fertilized as needed for the specific immediate purpose of implantation, egg-freezing avoids the quandary of what to do with unused embryos.[33] Freezing eggs is difficult, but not impossible. As early as 1986, children were born from the egg-freezing procedure.[34]

B. The Moral and Legal Dilemmas Inherent in In Vitro Fertilization

While artificial conception has benefitted many couples who could not bear children by traditional means, the next step is to examine the different factual contexts which present moral and legal dilemmas.

1. The Legal Status of Artificial Conception

The predominant issue from which all others flow is whether it is morally or legally acceptable to use artificial conception techniques. This question becomes

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25. Wurmbrand, *supra* note 6, at 1085.
26. L. ANDREWS, *supra* note 9, at 257.
27. *Id.* at 248.
28. *Id.* at 257.
29. *Id.* at 254-256.
30. *Frozen to Life*, *supra* note 15 (discussion of the egg-freezing process and of an egg bank in Singapore); *Interview: Alan Trounson*, OMNI, Dec. 1985, at 82, 124-125 [hereinafter *Trounson*].
31. *Trounson*, *supra* note 30, at 126; *Frozen to Life*, *supra* note 15, at 88.
32. *Trounson*, *supra* note 30, at 124. The process of freezing embryos has been criticized as riskier than the alternative practice of freezing eggs for later fertilization. Freezing allows doctors to perform implantation at the best point in the mother's cycle and provides an alternative to destruction of leftover embryos generated in IVF. Freezing eggs, however, serves these purposes effectively without creating the enormous ethical problems presented by embryo-freezing. *See* Grenard, *Embryos in Legal Limbo*, MACLEANS, July 2, 1984, at 44-46; Bonnicksen, *Embryo Freezing: Ethical Issues in the Clinical Setting*, 18 HASTINGS CENTER REP. 26-30 (Dec. 1988); Ohlendorf, *A Small Life's Icy Beginning*, MACLEANS, May 16, 1983, at 43.
33. *Frozen to Life*, *supra* note 15; *Trounson*, *supra* note 30.
34. *Frozen to Life*, *supra* note 15; *Trounson*, *supra* note 30.

extremely difficult to answer when discussed in the context of embryos which are unwanted because they are abnormal, orphaned or for some other reason left without a womb in which to grow. This issue is discussed in depth in Part III.

2. *Acts Harmful to the Embryo*

Many contracts or policies made by IVF clinics permit acts which are directly harmful to a human embryo. For example, many clinics require couples to sign a contract with the clinic before acceptance into the program. The contract typically allows the couple to choose between the destruction of the embryos which are not implanted and the donation of the embryos to another couple.[35] Although in practice most couples choose the donation option,[36] the mere availability of the choice to discard the embryos is troubling.

By comparison, some clinics try to avoid the repercussions of discarding embryos by following a policy of indefinite freezing.[37] Many clinic operators believe that this policy is safe from attack by pro-life supporters because it attempts to postpone the decision of whether to discard the embryos. This treatment indirectly destroys the embryo, however, because the frozen embryo deteriorates over time to a point at which it can no longer survive implantation.[38]

Although this note does not discuss in detail human embryo experimentation, commercial sale of embryos, or eugenics,[39] these practices do occur. While only a minority of states have enacted laws which exclude or limit experimentation on human embryos,[40] some scientists believe that their research on embryos should not be restricted.[41]

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35. Hundley, *supra* note 22, at 25, col. 3. Individual clinics use a wide variety of contractual terms in their IVF agreements with patients. For example, the Cleveland Clinic Foundation's standard contract asks the couple to choose between the clinic destroying the embryos or donating them to an anonymous donor in the event of a divorce. The IVF program at Mt. Sinai Hospital Medical Center in Chicago has an underlying principle that the embryos are the couple's property. Mt. Sinai also gives couples the same two choices in the event of a divorce as the Cleveland Clinic. In contrast, Detroit's Hutzel Hospital has no contractual option for the destruction of embryos. Instead, in the event of a divorce, the hospital gives custody of the embryos to the wife or, if she does not want them, to an infertile couple. *Id.*

36. *Id.*

37. *Id.*

38. Ozar, *The Case Against Thawing Unused Frozen Embryos*, 15 HASTINGS CENTER REP. 7, 9 (Aug. 1985). *See also* Davis v. Davis, No. E-14496 (Equity Division I Sept. 21, 1989) (LEXIS, Tenn library, Cases file).

39. Eugenics concerns the belief that the human species can be improved through selective breeding. This idea has actually been introduced into practice at the Repository for Germinal Choice. This clinic in Escondido, California, opened in 1980 by Robert Graham, has attempted to use sperm donated by Nobel prize winners to create superior embryos. Friedrich, *"A Legal, Moral, Social Nightmare"*, TIME, Sept. 10, 1984, at 56. *See* Bray, *Personalizing Personalty: Toward a Property Right in Human Bodies*, 69 TEX. L. REV. 209 (Nov. 1990) (advocates creation of legal property right in human bodies; discusses sale of embryos).

40. The following states have enacted legislation (including criminal sanctions) which restricts fetal research: Arizona, Arkansas, California, Florida, Illinois, Kentucky, Louisiana, Maine, Massachusetts, Michigan, Minnesota, New Mexico, North Dakota, Ohio, Oklahoma, Pennsylvania, Rhode Island, South Dakota, Tennessee, Utah, and Wyoming. Andrews, *The Stork Market: The Law of the New Reproduction Technologies*, 70 A.B.A. J. 50, 54-55 (Aug. 1984).

41. Friedrich, *supra* note 39, at 56. Scientists who believe that embryo experimentation should not be restricted argue that such experimentation could lead to a vast array of medical knowledge that might be beneficial to society. Wurmbrand, *supra* note 6, at 1095 n.110.

3. *Custody Battles Between Egg Donor, Sperm Donor, Gestational Mother and/or Medical Institutions*

Much of the legal debate concerning the status of frozen human embryos has been centered around custody issues. These can arise when two married people who went through the IVF procedure are fighting each other for custody,[42] fighting together against a third party such as the IVF clinic,[43] or have died, thus leaving an orphaned frozen embryo.[44] As discussed earlier, some clinics present options to the couple regarding the fate of the embryo should the couple divorce or die while an embryo is still frozen.[45] The couple is required to select one of these options before the clinic creates the embryo. The contracts in such cases, however, do not usually spell out who will have control of the embryos.

This issue was raised in *York v. Jones*,[46] in which Risa and Steven York challenged the IVF clinic which fertilized and froze their embryos.[47] After having one of their embryos frozen at the Howard and Georgeanna Jones Institute for Reproduction Medicine ("Jones Institute") in Norfolk, Virginia,[48] the couple decided to have the embryo implanted at a clinic in California (where they were moving) because it was more convenient and had a higher success rate of pregnancy.[49] The Jones Institute, however, insisted that the embryos be implanted at their clinic and refused to surrender them.

In perhaps the most notorious case, *Davis v. Davis*,[50] a married couple divorced and then fought among themselves for control of their frozen embryos. This case has received extensive media coverage because of the seven frozen embryos created by the couple during their marriage. The conflict arose because Mary Sue Davis wanted custody of the embryos so that the couple's original intent, implantation and pregnancy, could be achieved.[51] The father, Junior Davis, argued that the embryos should remain frozen indefinitely. Mr. Davis claimed that, because the couple was divorced, he did not want to become the biological father of any child which might result from implantation of those frozen embryos in Mary Sue Davis's uterus.[52]

4. *Fate of Orphaned Embryos*

In a more tragic case, a Los Angeles couple, Mario and Elsa Rios, went to the Queen Victoria Medical Center in Melbourne, Australia to have Mrs. Rios' eggs fertilized with sperm from an anonymous donor.[53] Some of the embryos were implanted in Mrs. Rios, and the remaining two were frozen and kept at

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42. *See infra* notes 50-52, 119-130 and accompanying text.
43. *See infra* notes 46-49, 131-135 and accompanying text.
44. *See infra* notes 53-58 and accompanying text.
45. *See supra* notes 35-36 and accompanying text.
46. 717 F. Supp. 421 (E.D. Va. 1989).
47. *Id.* at 422.
48. *Id.* at 423, 424.
49. Milloy, *7 Embryos in Divorce Tug-of-War*, New York Newsday, Aug. 6, 1989, at 15.
50. No. E-14496 (Equity Division I Sept. 21, 1989) (LEXIS, Tenn library, Cases file).
51. Smothers, *Tennessee Judge Awards Custody of 7 Embryos to Woman*, N.Y. Times, Sept. 22, 1989, at A13, col. 1.
52. Milloy, *supra* note 49.
53. Schwartz, *supra* note 8, at 267.

the clinic.[54] The implants failed, and the couple later died in an airplane crash in Chile, in the spring of 1983.[55] The question remained: who is to decide what to do with the remaining orphaned frozen embryos and what options are legally available?[56]

The Rios case raises yet another complex legal issue concerning probate law and inheritance. The common law rule is that an unborn child can inherit under intestacy statutes if his or her parent(s) left no will, provided that the child was conceived before the decedent(s) died.[57] Where the fertilized egg has been frozen, as in the Rios case, however, the law does not say whether a child which results from the frozen embryo being thawed and implanted may inherit from the deceased parents regardless of when the child is born. As William Salmond states: "[t]here is nothing in the law to prevent a man from owning property before he is born. His ownership is contingent, for he may never be born at all, but it is nonetheless a real and present ownership. . . . A posthumous child, for example, may inherit . . . ."[58]

II. HISTORY OF THE LEGAL STATUS OF THE EMBRYO

When artificial conception was new, there was little practical anticipation of the many conflicts which would arise from it. In spite of the controversy,[59] IVF is legal,[60] and so is the process of freezing embryos, which has brought with it several new moral and legal issues.[61] The following is a sampling of the insufficient statutory and case law which touches on these issues.

A. Statutory Review

1. United States

To date, federal and state legislatures have been virtually silent on issues affecting pre-implanted embryos, with the exception of some legislation dealing

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54. Friedrich, *supra* note 39, at 56.

55. *Id.*

56. The Waller Committee produced a report in August 1984 which recommended that the Rios embryos be destroyed. However, the legislature of the state of Victoria rejected this advice and passed the Infertility (Medical Procedures) Bill in October 1984 which called for an attempt to have the embryos implanted in a surrogate mother. There has been no further word on the actual outcome of the Rios' embryos. Ozar, *supra* note 38, at 7.

57. J. DUKEMINIER & S. JOHANSON, WILLS, TRUSTS, AND ESTATES 109 (1984).

58. W. SALMOND, JURISPRUDENCE (12th ed. 1966). *See generally* Ozar, *supra* note 38, at 7 (proposing that if embryos are more than just property, they must be treated so, regardless of who has or has not died).

59. *See generally* Robertson, *In the Beginning: The Legal Status of Early Embryos*, 76 VA. L. REV. 437; TEST-TUBE BABIES, (W.A.W. Walters & P. Singer eds. 1982); C. GROBSTEIN, FROM CHANCE TO PURPOSE: AN APPRAISAL OF EXTERNAL HUMAN FERTILIZATION (1981); Iglesias, *In Vitro Fertilization: The Major Issues*, 10 J. MED. ETHICS (1984) (all forms of fertilization other than intercourse are profoundly unnatural and immoral); Richards, *Invasion of the Body Snatchers*, NEW STATESMAN, July 5, 1985, at 23-25 (discusses IVF, surrogate motherhood, and embryo experimentation in Great Britain).

60. *See* 45 C.F.R. §§ 46.201-.211 (1985). The Ethics Committee of the American Fertility Society concluded that "in vitro fertilization [is an] ethically acceptable practice." Postell, *Establishing Guidelines for Artificial Conception*, TRIAL, Nov. 1986, at 93-95.

61. *See supra* note 32 and accompanying text.

mostly with embryo experimentation and research.[62] Neither federal nor state governments have enumerated the legal rights of a frozen embryo and its parents.[63]

In the United States, following the Supreme Court's 1973 decision in *Roe v. Wade*,[64] many state legislatures passed laws restricting research on fetuses to maintain respect for human dignity.[65] Because many of these laws define the term fetus to include an embryo or any product of conception, these laws may apply to such practices as IVF, embryo transfer, and embryo freezing.[66] Although these statutes were not specifically designed to prohibit artificial conception and transfer of embryos, they can be interpreted as prohibiting such conduct, since these procedures might be considered experimental and provide no clear and immediate therapeutic benefit to the embryo.[67]

Many states have enacted laws which restrict fetal research only when it is done prior to an anticipated abortion, subsequent to the actual abortion, or on a fetus which exhibits characteristics which are present only at such an advanced state that it must have been already present in the woman's uterus.[68] Such laws would not apply to IVF or freezing of embryos. Broader statutes however, can be interpreted to forbid IVF.[69] In any event, these laws should be updated to specifically cover advancements in medical technology. Without new laws, practitioners in some states are uncertain of their potential criminal and civil liability if an IVF procedure or cryopreservation of an embryo fails.[70]

Illinois law illustrates how a statute can be ambiguous and subject to more than one interpretation. In *Smith v. Hartigan*,[71] the plaintiffs, an infertile couple and their physician, challenged the constitutionality of a provision of the Illinois Abortion Law of 1975.[72] The statute read:

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62. *See, e.g.*, 45 C.F.R. §§ 46.201-211 (1985) (including statutes involving review of IVF procedures by an Institutional Review Board and regulating the safety of IVF). Michigan has restricted experimentation and research on live embryos. Andrews, *supra* note 40, at 51. An Illinois statute criminalizes neglect of an embryo, once it is created. Note, *Reproductive Technology and the Procreative Rights of the Unmarried*, 98 HARV. L. REV. 669, 672 (1985) (citing Smith v. Hartigan, 556 F. Supp. 157 (N.D. Ill. 1983)). In addition, the Dept. of Health, Education, and Welfare has issued a report on IVF and embryo transfer: Ethics Advisory Board, *Report and Conclusions: HEW Support of Research Involving Human In Vitro Fertilization and Embryo Transfer* (May 4, 1979). A state may prohibit experimentation on any living human conceptus. *See, e.g.*, MINN. STAT. ANN. § 145.422 (West 1989).

63. For the purposes of this note, "parents" or "natural parents" refers to the egg and sperm donor in external fertilization.

64. 410 U.S. 113 (1973).

65. Andrews, *supra* note 40, at 50.

66. *Id.* For example, Minnesota prohibits experimentation on a living human conceptus and defines a human conceptus as "any human organism, conceived either in the human body or produced in an artificial environment other than the human body, from fertilization through the first 265 days thereafter." MINN. STAT. ANN. § 145.421-.422 (West 1989).

67. Andrews, *supra* note 40, at 51.

68. *Id.* For example, Ohio prohibits experimentation on the product of human conception which is aborted. OHIO REV. CODE ANN. § 2919.14 (Anderson 1987).

69. Andrews, *supra* note 40, at 51. For example, Minnesota prohibits research on any human conceptus unless verifiable scientific evidence has shown such research to be harmless to the conceptus. MINN. STAT. ANN. § 145.422 (West 1989).

70. Friedrich, *supra* note 39, at 54.

71. 556 F. Supp. 157 (N.D. Ill. 1983).

72. Illinois Abortion Act of 1975, P.A. 78-225 (codified as amended at ILL. ANN. STAT. ch. 38, ¶ 81-21 to 81-35 (Smith-Hurd 1977 & Supp. 1989)).

> Any person who intentionally causes the fertilization of a human ovum by a human sperm outside the body of a living human female shall, with regard to the human being thereby produced, be deemed to have the care and custody of a child for the purposes of Section 4 of the Act to Prevent and Punish Wrongs to Children, approved May 17, 1877, as amended . . . .[73]

The plaintiff, an Illinois physician, challenged the statute because it prevented him from performing IVF for an infertile couple.[74] The court avoided the complex legal and moral issues by ruling that the action failed to present a case or controversy because the defendants, the State's Attorney and the Attorney General, both had interpreted the statute as not prohibiting the IVF procedure and represented that the plaintiffs would not be prosecuted if they proceeded.[75]

In response to that ruling, the Illinois Legislature passed an amendment in 1985 which rewrote section 6(7) of the Illinois Abortion Law of 1975 to say:

> No person shall sell or experiment upon a fetus produced by the fertilization of a human ovum by a human sperm unless such experimentation is therapeutic to the fetus thereby produced. Intentional violation of this section is a Class A misdemeanor. Nothing in this subsection (7) is intended to prohibit the performance of in vitro fertilization.[76]

Although this new law expressly allows IVF, it fails to address the freezing of embryos. It may be argued, however, that the freezing procedure falls within the definition of "experiment." Because cryopreservation is not necessarily therapeutic, it may nevertheless be prohibited by the statute.

2. *Australia - A Leader in Embryo Legislation*

Australia has been the world leader in legislation addressing IVF ever since that country was faced with the controversy surrounding the Rios case.[77] Examination of the laws that two Australian states have enacted, and their criticisms, provides an insightful starting point for other legislative bodies seeking to enact similar laws.

In 1984, the State of Victoria introduced the Infertility (Medical Procedures) Bill which was the first attempt in a common law country to regulate IVF programs.[78] The Victorian Parliament finally passed the bill in October 1984 after much debate and controversy. Major provisions of the Infertility (Medical Procedures) Act of 1984 are:

1) Establishment of a Standing Review and Advisory Committee consisting of people from a variety of backgrounds (philosophy, medical science, religion, social work, law, and education) which would advise the Minister for Health in relation to infertility and procedures for alleviating infertility;[79]

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73. 1984 Ill. Laws 1001 (current version at ILL. ANN. STAT. ch. 38, ¶ 81-26 § 6(7) (Smith-Hurd Supp. 1989)).
74. 556 F. Supp. at 159.
75. *Id.* at 164.
76. ILL. ANN. STAT. ch. 38, ¶ 81-26 § 6(7) (Smith-Hurd Supp. 1989).
77. *See supra* notes 53-58 and accompanying text.
78. Keenan, *supra* note 4, at 489.
79. VICT. ACTS, Infertility (Medical Procedures) Act of 1984 § 29(1).

2) The Committee shall respect the principle that childless couples should be assisted in fulfilling their desire to have children;[80]

3) The Committee shall ensure that the highest regard is given to the principle that human life shall be preserved and protected at all times;[81]

4) A complete ban on cloning and interspecies mixing of gametes;[82]

5) A ban on the fertilization of ova outside of the body except for purposes of future implantation of those resulting embryos;[83]

6) A complete ban on any experimental procedure (defined as research on an embryo which would cause damage to the embryo, make the embryo unfit for implantation, or reduce the prospects of a pregnancy resulting from the implantation of the embryo) not specifically approved by this Act or the Standing Review and Advisory Committee;[84]

7) A ban on freezing embryos unless it is carried out for the purposes of future implantation in a woman's womb;[85]

8) Permission for research on techniques for freezing and storing ova removed from the body of a woman;[86]

9) Provision requiring specific application and licensing procedures for a hospital or clinic seeking approval from Minister;[87]

10) A requirement that if an embryo cannot be implanted in the original woman's body because of death or accident, and if both persons who produced the gametes consent, then the embryo be made available, in accordance with the gamete donors' plan, to another woman for implantation. If consents cannot be obtained because the persons are dead or cannot be found, the IVF hospital shall make the embryo available for implantation in another woman;[88]

11) A complete ban on all forms of commercial surrogacy and makes volunteer surrogacy agreements nonenforceable;[89] and

12) Penalties for violation of each provision of the Act of one to four years imprisonment.[90]

The passage of this Act was met with serious debate and challenges, including the passage of the Infertility (Medical Procedures) (Amendment) Act of 1987.[91] This amendment, as well as removing minor ambiguities in the law, was primarily passed to clear up any uncertainty surrounding the term "embryo." The amendment, recognizing that fertilization is a process which lasts about twenty-two hours,[92] allows research to be done "involving the fertilization of a human ovum

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80. *Id.* § 29(7)(a).
81. *Id.* § 29(7)(b).
82. *Id.* § 6(2).
83. *Id.* § 6(5).
84. *Id.* § 6(3),(4).
85. *Id.* § 6(6),(7).
86. *Id.* § 6(8).
87. *Id.* § 7.
88. *Id.* § 14.
89. *Id.* § 30.
90. *Id.* § 1-34.
91. VICT. ACTS, Infertility (Medical Procedures) (Amendment) Act of 1987.
92. Kasimba, *The South Australian Reproductive Technology Act of 1988*, 62 LAW INST. J. 728, 730 (Aug. 1988).

from the point of sperm penetration prior to but not including the point of syngamy."[93]

After four years of observing the IVF laws enacted by the State of Victoria, the State of South Australia passed its own version of that law with the hope that it had learned from Victoria's mistakes. In March of 1988, the South Australian Parliament passed the Reproductive Technology Act of 1988.[94] Similar to the Victoria act, it sets up a Council on Reproductive Technology to "issue and keep under review a 'code of ethical practice' (the "Code") for IVF and experimentation on human reproductive material."[95] The Act also mandates that the Code must prohibit embryo flushing (which is not defined)[96] and that "persons for whom embryos are cryopreserved have to retain the right to decide the embryos' fate and to be able to review such decision within every twelve months."[97] Finally, the Act also establishes criteria for clinics to be licensed and approved to practice IVF procedures.[98]

Criticism of South Australia's attempt to legislate IVF and related practices has centered around the definitions of such key terms as "reproductive technology," "artificial fertilization," and "embryo."[99] In addition, the 1988 Act seems to apply equally to a human embryo, ovum, and semen,[100] appearing to require that a person be licensed under the Act to do research involving experimentation on either sperm or ova.[101]

B. Case Law Review

Judges complain that they have virtually no guidance for resolving embryo issues. They do not know whether to apply constitutional law, criminal law, property law, family law, or contract law.[102] Many judges acknowledge that intuition plays a large role in their bioethical decisions for which they have no legislative guidance.[103] The cases described below provide a starting point for understanding embryo-related common law.

1. United States Supreme Court Law

The Supreme Court has indirectly addressed the issues which affect frozen embryos through its decisions in *Roe v. Wade*[104] and the more recent case of *Webster v. Reproductive Health Services*,[105] both involving the constitutionality of state abortion legislation. The majority in *Roe* held that any state statute

93. VICT. ACTS, Infertility (Medical Procedures) (Amendment) Act of 1987 § 9A(1). The Amendment also defines syngamy as "the alignment on the mitutic spindle of the chromosomes derived from the pronuclei." *Id.* § (4)(d).
94. S. AUSTL. ACTS, Reproductive Technology Act of 1988.
95. Kasimba, *supra* note 92, at 728.
96. *Id.* (citing S. AUSTL. ACTS, Reproduction Technology Act of 1988 § 10(3)).
97. *Id.*
98. *Id.*
99. *Id.* at 730.
100. *Id.*
101. *Id.*
102. Steinfels, *Judges Anguish Over Medical Issues*, N.Y. Times, Sept. 11, 1989, § A, at 19, col. 1.
103. *Id.*
104. 410 U.S. 113 (1973).
105. 109 S. Ct. 3040 (1989).

which criminalizes abortions which are not necessary to save the mother's life violates the due process clause of the fourteenth amendment.[106] The basis for this decision was the Court's precedent that the fourteenth amendment's concept of personal liberty and restrictions upon state action imply a right of personal privacy.[107] The Court held that this privacy right encompasses a woman's decision whether or not to terminate her pregnancy.[108]

The Court explicitly refrained from deciding when life begins:

> We need not resolve the difficult question of when life begins. When those trained in the respective disciplines of medicine, philosophy, and theology are unable to arrive at any consensus, the judiciary, at this point in the development of man's knowledge is not in a position to speculate as to the answer.[109]

The Court continued "[w]ith respect to the state's important and legitimate interest in potential life, the compelling point is at viability. This is so because the fetus then presumably has the capability of meaningful life outside the mother's womb."[110]

In 1989, the United States Supreme Court modified and narrowed *Roe* in *Webster*.[111] *Webster* held, *inter alia*, that the preamble of a Missouri statute did not violate the Constitution by including "findings" by the state legislature that "[t]he life of each human being begins at conception."[112] This reiterates the holding in *Maher v. Roe*[113] to the same effect and clears the way for state legislatures and judiciaries to declare such findings as they relate to both implanted embryos and implicitly to frozen embryos. *Webster* reconsidered the *Roe* trimester framework on the grounds that it proved "unsound in principle and unworkable in practice,"[114] although the Court was quick to note that it was not overruling *Roe*.[115] The Court held that "there is no reason why the State's compelling interest in protecting potential human life should not extend throughout pregnancy

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106. *Roe*, 410 U.S. at 164.

107. *Roe*, 410 U.S. at 152 (citing Skinner v. Oklahoma, 316 U.S. 535, 541-542 (1942); Griswold v. Connecticut, 381 U.S. 479, 485 (1965)).

108. *Roe*, 410 U.S. at 154.

109. *Id.* at 159.

110. *Id.* at 163. A definition of viability which was accepted in Planned Parenthood v. Danforth, 428 U.S. 52, 62-65 (1979) was "that stage of fetal development when the life of the unborn child may be continued indefinitely outside of the womb by natural or artificial life-support systems." 428 U.S. at 63 (quoting Mo. REV. STAT. § 188.015(6) (1974)).

111. *Webster*, 109 S. Ct. at 3058.

112. *Id.* at 3042, referring to Mo. REV. STAT. § 1.205.2. There have been conflicting interpretations of *Roe*, regarding whether it invalidates any legislation which contains a conclusive presumption that life begins at the moment of conception. For example, a U.S. District Court found certain Rhode Island statutes to be unconstitutional because of such a conclusive presumption. Doe v. Israel, 358 F. Supp. 1193 (D. R.I. 1973) (referring to R.I. GEN. LAWS §§ 11-3-1 - 11-3-5). The court held that *Roe* precluded such a presumption, as well as the presumption that a fetus is a "person" within the meaning of the fourteenth amendment. *Id.* However, the United States Supreme Court put this question to rest in Maher v. Roe, 432 U.S. 464 (1977). The Court emphasized that *Roe* "implies no limitation on the authority of a state to make a value judgment favoring childbirth over abortion." *Maher*, 432 U.S. at 474. It follows that a state may enact frozen embryo legislation which finds that human life begins at conception.

113. 432 U.S. 464, 474 (1977).

114. *Webster*, 109 S. Ct. at 3056 (quoting a phrase from Garcia v. San Antonio Metropolitan Transit Authority, 469 U.S. 528, 546 (1985)).

115. *Webster*, 109 S. Ct. 3040, 3058.

rather than coming into existence only at the point of viability."[116] The plurality added that "we do not see why . . . there should therefore be a rigid line allowing state regulation after viability, but prohibiting it before viability."[117] This concern for pre-viable life is important to the embryo.

It is difficult to extract from *Webster* a definite principle applicable to frozen embryos. Nonetheless, *Webster* clearly shows that the Supreme Court is becoming increasingly willing to permit each state to legislate according to its own theory of when life begins.[118] *Webster* implied a higher degree of respect for young human life than *Roe* by resolving up some of the ambiguity surrounding the states' rights to restrict abortion. This trend is important to states that are attempting to enact legislation to protect unborn life, which will not be held unconstitutional.

2. State Case Law

State courts have had little opportunity to address embryo-related questions. In deciding the *Davis*[119] embryo custody case, a Tennessee trial court expressly held that "human life begins at conception," and that "the common law doctrine of *parens patriae* controls children, in vitro."[120] The Knoxville, Tennessee IVF clinic apparently did not require a contractual agreement that would have decided the fate of any excess embryos upon the couple's divorce.[121] Furthermore, the courts lacked any contractual terms on which to base their opinions and had no direct legal precedent to follow.

The trial court awarded Mary Sue Davis temporary custody of the embryos, for the purpose of implantation, to protect the children's best interest and to give them the chance to be born.[122] The court ruled that the embryos were human beings, not property,[123] since "the cells of human embryos are comprised of differentiated cells, unique in character and specialized to the highest degree of distinction."[124] Thus, the court concluded that "human life begins at the moment of conception [and] that Mr. and Mrs. Davis have accomplished their original intent to produce a human being to be known as their child."[125] Thereafter, the court treated the case like a typical custody dispute, finding that "it is to the manifest best interest of the children, in vitro, that they be made available for

116. *Id.* at 3044.

117. *Id.* at 3057. David Ozar notes that the viability standard is particularly unworkable in the context of unused frozen embryos. Ozar, *supra* note 38, at 8-9.

118. Changes in the U.S. Supreme Court over time will most likely cause changes in the laws regarding the rights of the unborn. If the Court continues the trend it started from *Roe* to *Webster*, the law may ultimately evolve to the point where unborn persons, including frozen embryos, will enjoy constitutional protection.

119. Davis v. Davis, No. E-14496 (Equity Division I Sept. 21, 1989) (LEXIS, Tenn library, Cases file).

120. *Id.* at 2. Junior Davis appealed this decision, which was remanded in Davis v. Davis, No. 180 (Tenn. App. Sept. 13, 1990) (WESTLAW, TN-CS).

121. Davis v. Davis, No. E-14496 (Equity Division I Sept. 21, 1989) (LEXIS, Tenn library, Cases file) at 8-9 ("the parties made no decision about [the matter of what would become of unused embryos]").

122. *Id.* at 2, 37.

123. *Id.* at 2.

124. *Id.* at 27.

125. *Id.* at 30 (footnote omitted).

implantation to assure their opportunity for live birth; implantation is their sole and only hope for survival."[126]

Since that decision, Mary Sue and Junior Davis have both remarried, and Mary Sue says she no longer is interested in implanting the embryos, but wants to donate them to another childless couple.[127] Nonetheless, Junior Davis appealed the decision. The Court of Appeals of Tennessee stated that "the sole issue on appeal is essentially who is entitled to control [the embryos]."[128] The court remanded the cause to the trial court to "enter a judgment vesting Mary Sue and Junior with joint control of the fertilized ova and with equal voice over their disposition."[129] The ultimate fate of the embryos is not yet known. The Tennessee Supreme Court has agreed to hear Mary Sue Stowe's appeal from the Court of Appeals decision, and the case is expected to appear on the May, 1991 docket.[130]

In the *York* "kidnapping case,"[131] administrators at the Jones Institute relied on an existing contract to try to prove that the clinic deserved custody of the embryo. The clinic's interpretation of the contract was that if implantation of the embryo in Risa York did not take place there, then the embryo should either remain part of the clinic's study, be donated to an infertile couple, or be allowed to expire in the clinic.[132] In addition, the clinic claimed that transporting the frozen embryo would risk possible thawing or ransom demands by the courier.[133] The Jones Institute contended that it was simply protecting its legal interests by refusing to release the frozen embryo to the Yorks.[134]

The couple sued in federal court for custody of the embryo and damages for unlawful retention, claiming breach of contract, quasi-contract, detinue, and violation of federal civil rights. The district judge rejected the defendant's motion to dismiss for failure to state a claim, instead finding that the plaintiffs' complaint contained valid claims based on the existence of a bailor-bailee relationship. The judge reasoned that "[t]he essential nature of a bailment relationship imposes on the bailee, when the purpose of the bailment has terminated, an absolute obligation to return the subject matter of the bailment to the bailor."[135] Shortly after this ruling, the parties settled the claim out-of-court and the Yorks removed their frozen embryo from the Jones Institute.

III. ANALYSIS

A. Does the Probability of Unwanted Embryos Call for Prohibition of Artificial Conception?

At this point, it is necessary to analyze in depth the questions which will shape the states' laws regarding embryos. Professor John A. Robertson[136] has

126. *Id.* at 37.
127. Davis v. Davis, No. 180 (Tenn. App. Sept. 13, 1990) (WESTLAW, TN-CS) n.1.
128. *Id.* at 1.
129. *Id.* at 3.
130. Telephone interview with Court Clerk, Knoxville Division, Tenn. Sup. Ct. (Feb. 12, 1991). *See also* Stowe v. Davis (Tenn. Sup. Ct. Dec. 3, 1990) (1990 Tenn. LEXIS 466) (LEXIS Tenn. library, Tenn. file) (granting appeal); Curriden, *Joint Custody of the Frozen Seven*, 76 A.B.A. J. 36 (Dec. 1990).
131. York v. Jones, 717 F. Supp. 421 (E.D. Va. 1989). *See also* Bonnicksen, *supra* note 1, at 1.
132. Milloy, *supra* note 49.
133. *Id.*
134. Bonnicksen, *supra* note 1.
135. 717 F. Supp. at 425 (citing 8 AM. JUR. 2D *Bailments* § 178 (1980)).
136. Baker and Botts Professor of Law, University of Texas at Austin.

divided "the new reproduction" into five important sets of issues.[137] These issues deserve contemplation and have spawned much discussion, however, this note will only address the issues surrounding the independent moral status of the pre-implanted embryo and the right to noncoital reproduction.

The underlying issue is whether artificial conception should be legal. First, the low success rate of implantation guarantees that the majority of embryos created in the process will die at some point before birth,[138] especially during the freezing and thawing process.[139] Second, the process is expensive and is accused of benefitting only high-income couples.[140] Third, the process raises concerns that reproductive technologies and genetic engineering will reach uncontrollable proportions.[141] We will analyze this issue in the context of the worst-case scenario—what will become of embryos which are "unfit" or unwanted for implantation?

At the outset, we note that many embryos created in vitro are rendered abnormal by the process, and have a high risk of resulting in ectopic pregnancies, being born with a low birth weight, or being spontaneously aborted.[142] Regardless of how the law treats such embryos, there is the potential for very undesirable results. If society cannot find an acceptable answer to this question, we must consider the possibility of prohibiting artificial conception altogether.

1. Artificial Conception Prohibited

One possibility is for legislatures to prohibit artificial conception in an attempt to prevent the dilemma of what to do with abnormal or otherwise unwanted embryos. The disadvantage is that this would clearly be undesirable

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137. Robertson, *supra* note 20, at 953. The first issue is the new meaning of reproduction for individuals when different aspects of it are isolated and recombined. This includes the question of whether procreative liberty gives persons and couples the right to acquire children noncoitally. The second set of issues asks whether or not the embryo has independent moral status. The third set of issues concerns the physical and psychosocial welfare of children born as a result of IVF, and the appropriateness or inappropriateness of parental selection of offspring characteristics. A fourth issue is whether or not the third party donation of eggs, sperm, embryos, or gestation changes the family drastically enough to justify regulation. The fifth set of issues involves the threat which noncoital reproduction may possibly pose to relations of men and women to each other and to the natural order. *See generally The Randolph W. Thrower Symposium: Genetics and the Law*, 39 EMORY L.J. 619 (1990) [hereinafter *Thrower Symposium*].

138. Alan Trounson told an interviewer that the IVF success rate is about 20 percent. *Trounson*, *supra* note 30, at 124. It would be difficult to outlaw IVF on the basis of its low success rate, because of the fundamental right to procreative liberty. Consider, for example, a woman who wants to conceive naturally, but whose doctor has told her that she only has a 50% chance of carrying to term. If a law forbade her from attempting to have a baby, in spite of the odds, it would never pass strict scrutiny because of the Supreme Court's protection of procreative rights. *See supra* note 107 and accompanying text. It is difficult to draw a line between the rights of such a hypothetical woman and the rights of a woman who wants to attempt external fertilization.

139. *See supra* note 32.

140. *See supra* note 20 and accompanying text. *See also* GROBSTEIN, *supra* note 59.

141. For some discussion of the prospect of sending frozen embryos into space, see Bova, *Star Blazers*, OMNI, Dec. 1984, at 22; *Trounson*, *supra* note 30. On genetic engineering, see generally Attanasio, *The Constitutionality of Regulating Human Genetic Engineering: Where Procreative Liberty and Equal Opportunity Collide*, 53 U. CHI. L. REV. 1274 (Fall 1986); Attanasio, *The Genetic Revolution: What Lawyers Don't Know*, 63 N.Y.U. L. REV. 662 (June 1988); *Thrower Symposium*, *supra* note 137; Y.M. CRIPPS, CONTROLLING TECHNOLOGY: GENETIC ENGINEERING AND THE LAW (1980); A. HUXLEY, BRAVE NEW WORLD (1932) (fictional account of mass-produced human beings).

142. Rowland, *Technology and Motherhood: Reproductive Choice Reconsidered*, 12 SIGNS: JOURNAL OF WOMEN IN CULTURE AND SOCIETY 520 (1987).

for persons who cannot conceive naturally. It is also likely that if such a state law passed, it would be found unconstitutional by the United States Supreme Court, which is protective of the procreative rights of citizens.[143]

In addition, legislatures must deal with unwanted or orphaned embryos which may be illegally created and those which were created before prohibition. If an embryo is a human being, as the authors contend, then the law should prohibit its destruction. If a state prohibits destruction, it must be sure not to violate the Supreme Court's prevailing doctrine on pre-born life. This doctrine is difficult to ascertain in this context because the Supreme Court has never directly declared the status of nonimplanted embryos. This lack of definition is discussed at length in subsection C. Although the authors believe that existing abortion law does not apply to artificially created or transferred embryos while outside the womb, and it is debatable whether it applies to those already implanted, we must anticipate that courts may hold to the contrary. If so, it may be legal to destroy an embryo before implantation.

Additionally, if the embryo statute forces an egg-donor to implant, and abortion remains legal,[144] then a law-abiding woman who does not want to give birth to her embryo can implant the embryo and abort it later. Obviously, this would be a ridiculous exercise. Women who refuse to go through that exercise cannot be physically forced to implant the embryos they have created.

The only feasible enforcement mechanism for mandatory implantation is to impose a fine or even a jail term on those who disobey the mandate. This may or may not have a deterrent effect on those who contemplate artificial conception on their own terms. Fines and jail terms, however, do not provide homes for embryos. Perhaps, some women would decide to give birth to their embryos anyway, and risk having children who are handicapped or unable to be born normally,[145] which is also an undesirable result.

Therefore, a law which requires a woman to implant an embryo which she no longer wants to implant should not be passed unless there is a change in the Supreme Court's abortion law. Even if such a law were passed, it would likely create more problems than it solved.

If legislation provides that implantation is not mandatory, people will have the legal ability to create embryos and kill them as they see fit. People will be able to pick and choose the embryos which they like the best and discard the rest.[146] As science progresses, it may become possible to identify the "blue-eyed" embryo and simply flush the others. While this proposition appears morally and socially repugnant, even prohibition of artificial conception is not an easy solution to the problems discussed.

2. *Artificial Conception Remains Legal*

The second possibility is to keep IVF legal, as it is now.[147] Again, if implantation is mandatory and abortion is legal, then women who no longer

143. *See supra* notes 107-108 and accompanying text.
144. *Webster*, 109 S. Ct. 3040, 3058 (1989).
145. *See supra* note 142 and accompanying text.
146. *See generally* sources *supra* note 141.
147. *See supra* note 60.

want to give birth will either disobey the law and refuse to implant, or implant and later abort.[148] Some women might unwillingly implant and give birth to handicapped babies.[149] The same would be true if abortion were not legal.

If IVF is legal, and implantation is not mandatory, then, again, people could take human life for any reason, and kill all embryos which appear to be less than "perfect."[150] This is both undesirable and frightening.

We realize that there are no easy answers, but we hope that legislatures will consider the fate of unwanted embryos when drafting legislation. This note accepts the probability that IVF will continue to be legal.

B. An Embryo is Protected Human Life at Conception

As the abortion issue emphasizes, there is great controversy over the legal status of prenatal life.[151] The factual situations which we deal with here, however, can only be resolved after answering this key question: Is a pre-implanted[152] embryo an individual human life worthy of legal protection? We answer that it is.

1. Findings of Dr. Lejeune and Other Experts

In *Davis*, Judge W. Dale Young,[153] the presiding judge at the trial, defined embryonic life created by IVF as human. In his opinion, "[t]he answer then, to the question: When does human life begin? . . . [is] that human life begins at the moment of conception."[154] One basis for this decision was the testimony of four expert witnesses[155] that cryopreserved embryos are human.[156] Dr. Lejeune referred to an embryo as "that youngest form of a being,"[157] and expressed the idea that each human has a unique beginning which occurs at the moment of conception. In the court's words, Dr. Lejeune testified that

> [w]hen the ovum is fertilized by the sperm, the result is 'the most specialized cell under the sun . . .;' specialized from the point of view that no other cell will ever have the same instructions in the life of the individual being created. No

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148. *See supra* notes 143-146 and accompanying text.
149. *Id.*
150. *Id.*
151. Members of Congress have attempted to rally support for a constitutional amendment which states that life begins at conception. Bonnicksen, *supra* note 1, at 4. *See* NEB. REV. STAT. § 28-325 (1985), in which the members of the legislature "expressly deplore the destruction of the unborn human lives which has and will occur in Nebraska as a consequence of the United States Supreme Court's decision on abortion of January 22, 1973." NEB. REV. STAT. § 28-325 (1985). *See generally* C. RICE, BEYOND ABORTION: THE THEORY AND PRACTICE OF THE SECULAR STATE (1979); THE ETHICS OF ABORTION, (R. Baird & S. Rosenbaum eds. 1989); J. NOONAN, THE MORALITY OF ABORTION (1970).
152. Wurmbrand, *supra* note 6, at 1092.
153. Circuit Judge, Fifth Judicial District, Tennessee.
154. Davis v. Davis, No. E-14496 (Equity Division I Sept. 21, 1989) (LEXIS, Tenn library, Cases file) at 30.
155. The expert witnesses were: Dr. King, a medical doctor and specialist in infertility/reproductive endocrinology; Dr. Shivers, an embryologist experienced in lab work for IVF and cryogenic storage of human embryos; Professor John Robertson, a law professor who has written about non-coital reproduction; and Dr. Jerome Lejeune, a medical doctor, doctor in science, and professor of fundamental genetics, specializing in human genetics. *Id.* at 12-13.
156. *Id.*
157. *Id.* at 14.

> scientist has ever offered the opinion that an embryo is property. As soon as he has been conceived, a man is a man.[158]

The *Davis* Court concluded that "the cells of human embryos are comprised of differentiated cells, unique in character and specialized to the highest degree of distinction."[159] This conclusion was based on Dr. Lejeune's testimony regarding DNA manipulation of the molecules of human chromosomes, which was unrebutted,[160] and corroborated by the Florida District Court of Appeals.[161]

2. Separability Not a Prerequisite for Human Individuality

The New York State Appellate Division recognized that one important issue affecting the rights of the unborn is the separability of the unborn from its parent(s).[162] If an embryo is merely the mother's tissue, without its own identity, it would not make sense to assert that it has rights. But an embryo is more than that, as noted by the court:

> [L]egal separability should begin where there is biological separability. . . . what we know makes it possible to demonstrate clearly that separability begins at conception. . . . That [the fetus] may not live if its protection and nourishment are cut off earlier than the viable stage of its development is not to destroy its separability; it is rather to describe the conditions under which life will not continue.[163]

Just as one would not argue that a one-year-old baby is not a unique, individual human being with the right to life,[164] simply because it is completely dependent upon its caregiver[s] for survival, it is absurd to make such an argument about pre-implanted life. An externally-created embryo is even more "separable" than the implanted fetus that was at issue in the New York State Appellate Division's holding. Therefore, such an embryo has "legal separability" and its own independent moral status which must be protected,[165] despite its dependent qualities.

3. Ensoulment

Those who believe that every human being has a soul which distinguishes him or her from other humans, from animals, and from vegetable life[166] have answered the question of when human life begins with "whenever the human soul unites with the 'body.'"[167] Ensoulment is a very powerful criterion for

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158. *Id.* at 15.
159. *Id.* at 27.
160. *Id.* at 26.
161. *Id.* at n.39 (citing Andrews v. State, 533 So. 2d 841 (Fla. Dist. Ct. 1988)).
162. Kelly v. Gregory, 282 App. Div. 542, 125 N.Y.S.2d 696, 697 (1953).
163. *Id.*
164. Although infanticide was at one time pervasive in Western Europe, it has always been condemned by moralists, jurists, and criminologists. R. SHERLOCK, PRESERVING LIFE: PUBLIC POLICY AND THE LIFE NOT WORTH LIVING 75-116 (1987).
165. Wurmbrand, *supra* note 6, at 1093 ("The freedom to remove a fetus from a woman's body, as outlined by *Roe*, does not give her control over an embryo which is not physically connected to her. . . . The question of what should be done with an embryo or fetus not physically connected to the mother is a distinct issue.").
166. P.T. DECHARDIN, THE PHENOMENON OF MAN 88-89 (1959).
167. *Roe*, 410 U.S. at 133 (regarding immediate animation). *See also* TEST-TUBE BABIES, *supra* note 59, at 54; J. RATZINGER & A. BOVONE, INSTRUCTION ON BIOETHICS: RESPECT FOR HUMAN LIFE IN ITS ORIGIN AND ON THE DIGNITY OF PROCREATION 11, 13-14 (1987).

protected life, but when is a person ensouled? The Roman Catholic Congregation for the Doctrine of the Faith asserts that the human soul is present from the moment of conception.[168]

The argument contends that the most obvious time for God or Nature to ensoul human beings is the point of conception. It makes sense that Nature allows the human being's body and soul to be conceived simultaneously. It would be incongruous to suggest that ensoulment occurs at some arbitrary point in the being's gradual prenatal development. If a person is ensouled at the time of the body's conception, then an embryo is a whole human being, even if created artificially, and the law must protect it accordingly.

4. Embryos Deserve the Benefit of the Doubt

It is difficult to define the beginning of human life to the mutual satisfaction of scientists, philosophers, clergy, and those in other learned professions, as well as the general public. Thus, legislators must draft laws without a precise definition of humanness. It has been argued with great force that, if we are not sure whether an entity is a human, we should give it the benefit of the doubt.[169] Logically, if harming an embryo may be harming a human being, it should be illegal, just in case. Our legal system traditionally gives persons the benefit of the doubt—a strong presumption of innocence—before it deprives them of their life or liberty. For instance, if we believe that it is most probable that John Doe committed a crime, but we are not sure beyond a reasonable doubt, we would not deprive him of his liberty by throwing him in jail.[170] It would be inconsistent, then, to deprive an embryo of its life or liberty, on the off-chance that it does not yet possess those qualities which society can comfortably accept as making it a human being.

A large part of the problem is that there is no generally accepted list of characteristics which define a "human being." Furthermore, there is no scientific way to prove that an embryo possesses those qualities which have been suggested as being determinative. Conversely, there is no proof that an embryo does not possess those qualities. The mere possibility that an embryo possesses at least the bare minimum of those qualities which make an entity a human being is enough to render it deserving of protection. Until it is proven beyond a reasonable doubt that an embryo is not a human being at conception, this innocent life should receive the same benefit of the doubt that accused criminals receive. Legislation should protect the embryo with its humanness, or at least the probability of its humanness, in mind.

C. The Position that an Embryo is Protected Human Life is Not Inconsistent with Existing U.S. Supreme Court Abortion Law

Many state legislatures have expressed their concern for unborn life[171] and fear that *Roe v. Wade*[172] precludes valuing embryos in human terms, but this is

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168. J. RATZINGER & A. BOVONE, *supra* note 167, at 11, 13-14.

169. TEST-TUBE BABIES, *supra* note 59. The probability argument is expressed as follows: "If I act in a destructive way towards an embryo, where there is a four-out-of-five chance that it will develop, I would be held blameworthy for taking such a high risk of destroying a human being." *Id.* at 55.

170. *In re* Winship, 397 U.S. 358 (1970).

171. *See, e.g.*, NEB. REV. STAT. § 28-325 ("The Legislature hereby finds and declares: . . . [that

not the case. There are important aspects of *Roe* and its modifying decision, *Webster v. Reproductive Health Services*,[173] which indicate that embryos in the artificial conception setting have protectable rights.

1. Embryo Only Unprotected When Inside Womb of Unwilling Mother

Roe did not decide when human life begins. In fact, *Roe* held that the states have an important and legitimate interest in potential life,[174] and *Maher v. Roe*[175] and *Webster*[176] explicitly held that state legislatures may declare that human life begins at conception.[177]

In the pre-implanted embryo context, the holding in *Roe* was very narrow. When the state's interest in the "potential" human life of a pre-viable entity competes with the fundamental privacy/procreative right of a woman in whom that unborn life is implanted, the woman's privacy right prevails.[178] The key distinction is between an embryo which is implanted and interfering with a woman's autonomy and an embryo which is not. The Court in *Roe* simply applied a balancing test.[179] Although the authors believe that the Court applied this test incorrectly and therefore authorized the destruction of many unborn human lives, we do agree that a balancing test is appropriate for the resolution of such conflicts to prevent people from interfering with each other's rights.

For example, it may be wrong to force a mother whose life is endangered by her pregnancy to sacrifice her life for the baby's. Nevertheless, if a scientist plans to perform an experiment which is dangerous to an embryo, just to see how it will react, the law has a right to force the scientist to forego the experiment, weighing the embryo's right to live more heavily than the scientist's right to experiment. In other words, the embryo's rights are not as easily dismissed in most settings as they are in the abortion setting, where they are pitted against significant autonomy rights.

Sometimes the embryo's natural parents argue that their procreative freedom is violated by the possibility that their embryo may be born if they decide after fertilization that they no longer want to give birth to that child. Nonetheless, they have no right to destroy the embryo for that reason. *Roe* says that a woman has the right to remove a fetus from her womb even if this causes the unavoidable death of that fetus. This does not imply a right to destroy an embryo which is separate from her body. Assuming an appropriate woman can carry an embryo that is unwanted by the natural parent to term,[180] the "parent," who is really

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it is] the will of the people of the State of Nebraska and the members of the Legislature to provide protection for the life of the unborn child whenever possible . . . .").

172. 410 U.S. 113 (1973).

173. 109 S. Ct. 3040 (1989).

174. *Roe*, 410 U.S. at 162.

175. 432 U.S. 464, 474 (1977).

176. 109 S. Ct. 3040 (1989).

177. *Id.* at 3042. *See supra* note 112 and accompanying text.

178. *Roe*, 410 U.S. at 163-164. *See* Wurmbrand, *supra* note 6, at 1093.

179. *Roe*, 410 U.S. at 163-164. "Under *Roe*, a woman's right to an abortion can be viewed solely as her right to bodily autonomy, or the right to remove the fetus from her body, but not as the right to destroy the fetus or embryo." Wurmbrand, *supra* note 6, at 1097.

180. The infertility rate has recently climbed, and there are many couples who are willing to try adoption. Wurmbrand, *supra* note 6, at 1079. But the lack of available babies to adopt and the desire to have lineal descendants have led women to take drastic and painful measures in order to procreate. *Id.* For some women, embryo adoption might be an attractive option.

just an egg or sperm donor, is threatened simply by the idea that he or she has a child somewhere. This is far less of an intrusion on a woman's privacy than being required to carry an unwanted fetus to term, and the parents' rights in such a case are not as arguably fundamental as the interests of pregnant mothers which are protected by the Court. Therefore, unimplanted embryos are outside the scope of abortion law and their status is yet to be determined.

2. Abortion Law is Implicitly Limited to Cases of Unintended Conception

At first glance, *Roe* appears to allow the destruction of unwanted embryos because it allows a woman to destroy an unborn person whose presence in her womb interferes with her autonomy. *Roe*, however, implies that the context contemplated by the Supreme Court was limited to that of unintended conception, arising from an accident, rape, or other unplanned scenario. Abortion cases differ from unwanted, non-implanted embryo cases in that the artificially created embryo was created voluntarily by adults with the intention of creating a person, assuming the risks and responsibilities related to conception. Moreover, the embryo is not yet inside a womb, infringing on the woman's autonomy.

These differences make the artificially created, non-implanted embryo's right to life more significant than that of the would-be aborted fetus or embryo. The authors contend, therefore, that *Roe* is not controlling for cases involving non-implanted embryos. The Supreme Court's implicit purpose is to protect the right of a person to make his or her own procreative decisions. This right has been freely exercised by the parents in an artificial conception scenario.

As discussed in Part II(B), the *Webster* opinion respects states' rights to decide for themselves how to classify unborn life, indicating that the Supreme Court at this time might uphold legislation which affords a degree of respect to a pre-implanted embryo.

IV. PROPOSED LEGISLATIVE FRAMEWORK

Although we would prefer to see federal legislation addressing embryo issues, we anticipate that individual states will be first to enact such legislation. Therefore, these guidelines pertain to the drafting and enacting of uniform legislation or legislation of an individual state, attempting to effectively deal with the rights of pre-implanted embryos. We recommend that all such issues be addressed in one bill, which could be entitled the Comprehensive Pre-Implanted Embryo Protection Act. Such an act should contain provisions that draw from different subject matters of law, including provisions for criminal sanctions and implications to family, probate and contract law.

A. Declarations

Three fundamental principles should be declared as a preamble to the act: (1) human life begins at conception; (2) the legislation balances the embryo's rights with any competing rights, weighing the embryo highly; and (3) wherever possible, the law will try to take a preventative approach to bioethical dilemmas.

1. Protectable Human Life Begins at Conception

Ideally, embryo legislation should declare that human life begins at conception and embryos must, therefore, be legally protected from the moment fertili-

zation occurs. As discussed, Supreme Court decisions may affect such declarations, however, we encourage legislatures to do whatever possible to protect embryos. The Supreme Court may distinguish pre-implanted from post-implanted embryos, or may set forth holdings which affirmatively protect embryos in all contexts. For now, it must be clear that the embryo's right to live will be considered, at a minimum, a substantial right. Once an embryo has been created, efforts must be made to protect its life and liberty by arranging for it to be implanted as soon as possible to avoid its death or its parents' death before implantation. Surrogate and adoptive mothers may be considered for this purpose.

2. Legislation Balances Embryo Rights with Competing Rights

If a state government acts to protect the embryo in a way that infringes upon a fundamental right of a U.S. citizen, the state must prove that such protection of the embryo serves a "compelling state interest," and that the government action does not go beyond what is necessary to protect that interest.[181] If protection of the embryo interferes with some right that is less than fundamental, the state need only show that its action is rationally related to a constitutionally permissible purpose.[182] Therefore, the second important principle in frozen embryo legislation is to properly employ a balancing test in the specific scenarios which affect pre-implanted embryos by determining whether the competing rights are fundamental.

3. Preventative Approach to Bioethical Dilemmas

The third important purpose of frozen embryo legislation is to take a preventive approach to problems regarding the embryo. It is best to control artificial conception, freezing, experimentation, and genetic engineering to prevent tragic situations such as those in which the embryo is unwanted, experimented upon, frozen indefinitely, or discarded because it is imperfect. Ultimately, proactive legislation is much more desirable than letting these scenarios occur and then trying to solve them after the situation has become impossibly complex.

These basic principles—the embryo's humanity, a proper balancing test, and a preventive approach—should be incorporated into such a legislative act.

B. Statutory Provisions Addressing Specific Issues

1. Definitions

Such important terms as "embryo," "fetus," "research," "experimentation," "humanity," and "life" must be defined unambiguously, and in terms which are not degrading to the embryo.

2. No Unnecessary Creation or Freezing of Embryos

The creation of an embryo must be prohibited unless it is for the purpose of immediate implantation in a willing mother. Moreover, embryos should never be frozen unless necessary due to an unanticipated externality. In no event should

181. C. GROBSTEIN, *supra* note 59, at 187.
182. *Id.*

an embryo be frozen or kept frozen for the sole purpose of avoiding any moral/legal issues. An egg donor must agree in advance to implant every embryo she creates.[183] The act should require clinics to counsel infertile couples and require both the egg-donor and the sperm-donor to sign an agreement which expressly governs the disposition of any embryos (frozen or not) in case of death of both parents or divorce. The only options available should be to donate the embryos to an infertile couple or, in case of divorce, to allow a court to decide which parent should gain custody of the embryos, following traditional child custody considerations.

If the donation option is exercised, the clinic will make all reasonable attempts to locate an infertile couple (either within or outside of that clinic's specific IVF program) for donation of the embryo. Clinic personnel must periodically review the parties' agreement with them and allow the sperm and egg-donors to modify their decisions.

Finally, the egg-freezing process should be developed and used as an alternative to embryo-freezing.

3. *Acts Harmful to the Embryo*

The next major chapter of the act should prohibit contracts or policies which permit any conduct directly harmful to the embryo.[184] These include discarding the embryo,[185] freezing embryos unnecessarily, freezing the embryos for long periods of time or indefinitely,[186] dangerous experimentation, selling embryos, or any other such activities. A state has a rational, if not a compelling, interest in criminalizing such actions.

Any hospital or institution which claims a right to discard or indefinitely freeze an embryo is not asserting a fundamental right. Therefore, the embryo's right to life must prevail over the weaker contract or mere convenience interests of the institution. The law should do whatever possible to discourage destruction of embryos.

The natural parents may argue that they have a fundamental right to destroy or indefinitely freeze an embryo as an extension of their procreative liberty if they do not want lineal descendants,[187] however, this should be prohibited.[188]

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183. *See supra* notes 143-144 and accompanying text for a discussion of the implications of mandatory implantation.

184. *See supra* notes 119-135 and accompanying text. THE ECONOMIST referred to a bill in Great Britain to ban the creation of human embryos for any purpose besides enabling a particular woman to bear a child, and to ban any experimentation on embryos, because a human embryo is "a thing 'of which the sole purpose . . . is that it may be a human life,' too precious to be traded for scientific knowledge." *Embryonic Backlash*, THE ECONOMIST, Feb. 23, 1985, at 14 (quoting Enoch Powell).

185. "Mt. Sinai gives couples the right to have their embryos destroyed." Hundley, *supra* note 22. "Some centers refer to 'ethical methods' of embryo disposal, . . . [o]thers give couples the option of overseeing embryo disposal, as if in a ritual of death." Bonnicksen, *supra* note 1, at 4.

186. Hundley, *supra* note 22; Bonnicksen, *supra* note 1, at 4.

187. Junior Davis testified that he would feel "raped of my reproductive rights" if Mrs. Davis implanted the embryos which the couple created during their marriage. Smothers, *supra* note 51, at A13.

188. "The mere possibility that a biologically related child exists might cause some donors discomfort, yet this cannot be considered sufficient enough harm to outweigh the state's interest in protecting and preserving the embryo's development." Wurmbrand, *supra* note 6, at 1097.

A frozen embryo may deteriorate over time to a point where it is no longer able to survive implantation.[189] To allow this to happen is to violate the embryo's right to life. The responsible parties must be required to make reasonable efforts to locate volunteers to implant embryos before it is too late.[190] This should be done as soon as possible because keeping a human life frozen in liquid nitrogen for an extended period of time deprives it of its liberty. Nature wants it to be born. A prohibition of such treatment of embryos must be a permissible state action.

Persons who want to perform dangerous experimentation on embryos are asserting a "right"[191] that is even less fundamental than those described above; it really is not a right at all, and the embryos' rights must prevail.[192]

Related to these issues is the question of selling embryos.[193] This practice is directly harmful to the dignity of the embryo and must be forbidden by the act.[194]

4. Custody Questions

It is of vital importance that the act address custody questions. These include cases where the institution that is holding the embryo claims a contractual right to the embryo in conflict with its natural parents,[195] custody battles between the natural parents,[196] and custody of an orphaned embryo whose fate was not predetermined by its parents.[197]

The bill should forbid institutions from entering into and enforcing contracts which give custody of embryos to organizations or persons other than their natural parents. The state has a compelling interest in protecting the fundamental procreative right of the natural parents to bear their embryo and the embryo's right to be gestated and raised by its natural parents. Prior to death or divorce of the parties, natural parents will always have custody rights superior to those of an IVF clinic. An institution's interest in keeping an embryo for implantation for the benefit of some other couple, for experimentation, or for indefinite freezing is clearly not fundamental, and may not prevail against the rights of the natural parents.[198]

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189. Ozar, *supra* note 38, at 9; Davis v. Davis, No. E-14496 (Equity Division I Sept. 22, 1989) (LEXIS, Tenn library, Cases file) at 8 ("reliable medical data indicated the practical storage life of the human embryos would probably not exceed two years.").

190. *See* note 88 and accompanying text.

191. Proponents of embryo research argue that it leads to better treatment of infertility, early diagnosis and prevention of genetic diseases, and improvements in contraceptive technology. *Moratoriums on Embryo Research*, 18 HASTINGS CENTER REP. 2 (June/July 1988). Opponents argue that there are other ways to treat infertility and congenital disease, and some compare embryo research to the Nazi experiments in Auschwitz. *Id.*

192. In February, 1988, the West German cabinet requested criminal penalties for research on human embryos. *Embryonic Backlash*, *supra* note 184. In Great Britain in 1987 the government proposed criminalization of research on gene manipulation of human embryos, cloning of embryos, or creating hybrid embryos. *Id.*

193. *See generally* Annas, *Redefining Parenthood and Protecting Embryos: Why We Need New Laws*, 14 HASTINGS CENTER REP. 50, 51 (Oct. 1984).

194. *Id.*

195. *See supra* notes 46-49, 131-135 and accompanying text.

196. *See supra* notes 50-52, 119-130 and accompanying text.

197. *See supra* notes 53-58 and accompanying text.

198. A holding which is consistent with this principle is found in the *York* case. *See supra* notes 46-49, 131-135 and accompanying text.

When one natural parent competes for custody against the other who is the spouse or former spouse, the embryo must be considered a person, and the matter of custody must proceed as if the embryo were born, without regard to property law.[199] The best interests of the embryo are of utmost importance. If one parent wishes to make his or her best efforts to implant the embryo, facilitate its birth, and raise the resulting child, that parent must receive priority over the other, barring evidence that such parent is unfit. If each parent intends the above, then the matter must be treated under the existing laws of custody in the state.

If one natural parent is a paid sperm or egg donor who requests custody,[200] and both parents intend to facilitate the birth of the child, then the embryo's life and liberty are not threatened. Therefore, at this point, contract law may enter into the decision, and the matter may be decided accordingly, provided the embryo's best interests are considered. The law must forbid clinics and institutions from giving custody automatically to the natural parent of a particular gender, as this may violate the equal protection rights of the other parent. Moreover, such preference tends to label the embryo as property because it determines who should get it based on who "paid" more for it.[201]

Finally, natural parents should be required to prepare a detailed will before creating an embryo, to prevent the problem of what to do with their estate, and with the embryo, should the embryo outlive them.[202]

5. Orphaned Embryos As Heirs

This issue arises when the parents of an embryo die either with or without a will.[203] In addition to the trusts and estates sections of the state code which would control this scenario, the bill should state that an existing embryo (frozen or not) should be considered a child in gestation for the purpose of inheritance.[204] If after two years — the estimated longest length of time after which a frozen embryo deteriorates to a non-implantable state[205]—the embryo has not been born, however, the estate should be disposed of without regard to the embryo.

C. Procedural Suggestions

In addition to the proposed foregoing statutory provisions, the following are other procedures which the authors believe to be essential to any such legislation:

1) Establish a standing committee (with representatives from a wide variety of backgrounds similar to the Australian model, Victoria's 1984 Act) to advise

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199. *See supra* notes 122-123 and accompanying text.

200. *See generally* Annas, *supra* note 193, at 50-51.

201. The policy of Detroit's Hutzel Hospital is that when a couple divorces, the embryo automatically goes to the wife because the laparoscopy a woman endures in egg donation involves more risk and commitment than does sperm donation. Hundley, *supra* note 22, at 25.

202. "The moral right not to be killed does not automatically imply a right to the use of a womb. For an embryo may be implanted in a womb only by the free choice of the woman whose womb it is." Ozar, *supra* note 38, at 9. This is why the parents must arrange for such a womb in advance, in case of death or other circumstances. *See also* Wurmbrand, *supra* note 6, at 1100 (participants should be required to provide for adoption).

203. *See supra* notes 53-58 and accompanying text.

204. *Id.*

205. Davis v. Davis, No. E-14496 (Equity Division I Sept. 21, 1989) (LEXIS, Tenn library, Cases file).

the state's Health Department concerning current and emerging IVF procedures (such as egg freezing);

2) Establish licensing requirements (both pre-approval and on-going reporting requirements) for any clinic or hospital seeking to provide IVF procedures;

3) Allocate government funds for research and development to perfect egg-freezing techniques that can substitute for embryo-freezing in cases where multiple eggs are removed in laparoscopies. The point at which egg-freezing can be safely and widely used is apparently not far off, and resource commitments should be encouraged to make that day arrive as soon as possible.

V. CONCLUSION

As evidenced by the numerous possible factual scenarios and court cases referred to in this note, each of which raises perplexing legal and moral issues, our judicial system clearly needs specific legislation to guide it with regard to IVF and frozen human embryos. Without such a framework, our courts will continue to stumble and create a confusing morass of rulings which have a variety of social and moral policies as their bases. Already, the revolutionary IVF and embryo-freezing practices have created conflicts which existing statutory law is inadequate to resolve. The human essence of the embryo makes it a valuable form of life which must be legally protected. It is important that uniform legislation, such as that proposed here, be adopted immediately by state legislatures to protect the fundamental rights of the embryo.

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