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Fetal Tissue Transplants: Restricting Recipient Designation

by
MARK W. DANIS*

Recent progress in fetal-cell surgery foreshadows a growing demand for fetuses as a source of transplant tissue. Tissue taken from aborted fetuses is being transplanted into humans to treat diabetes and immunodeficiency diseases. Researchers also hope that fetal tissue will provide a cure for Parkinson's, Alzheimer's, and Huntington's diseases as well as spinal cord injuries and hemophilia.

Because a primary source of tissue for these transplants has been electively aborted fetuses, there is growing concern over the means by which researchers obtain such fetuses as well as concern for protecting the welfare of the fetus. In response, the Reagan Administration recently placed a temporary ban on all human experiments using electively aborted fetal tissue at the National Institute of Health (NIH) until an advisory committee can study the ethical, medical, and legal implications of this procedure. This ban, however, does not extend to transplants conducted in the private sector, those not funded by the NIH. Consequently, in many instances, regulation of tissue transplants is left to state fetal research laws as well as state tissue and organ donation statutes.

While restrictions of state fetal research laws vary, some regulate

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* Member, Second Year Class.
4. Id.
5. McAuliffe, supra note 1, at 70.
8. Ethical Options, supra note 3, at 13.
10. See Baron, Fetal Research: The Question in the States, 15 HASTINGS CENTER REP., Apr. 1985, at 14-15 (twenty-five states have conditions ranging from requiring maternal consent for fetal experimentation to prohibiting any nontherapeutic research on an electively aborted dead fetus).

"Fetal research" is often defined to include virtually any nontherapeutic use of fetal tis-
the conditions of fetal research to the extent that fetal tissue transplants may, arguably, be prohibited in those jurisdictions. In states with less restrictive or no fetal research legislation, the procurement of fetal tissue is governed by the Uniform Anatomical Gift Act (UAGA), a set of laws adopted by all states which governs the donation of tissue and organs. Unfortunately, neither the UAGA nor the research laws address certain unique issues of this new medical procedure.

Of the many dilemmas this new procedure presents, this Note specifically addresses the propriety of women deliberately becoming pregnant to supply relatives, friends, or themselves with fetal tissue. Several cases have been reported of women desiring to do this, though there are no reported instances of it actually occurring. The likelihood of this scenario, however, cannot be ignored considering the following: the current shortage of fetal tissue for recent experimental transplants, and the potentially staggering demand for tissue should the procedure prove as successful as presently indicated; the greater need for compatibility between the fetal tissue and recipient for certain types of treatment; the present high cost and limited types and quantities of cloned fetal tissue; the danger of "flawed" tissue received from an anonymous donor; and the possibility of storing fetal tissue, like blood, for future family use.

As originally promulgated, the express language of the UAGA authorizes either parent of an aborted fetus to donate the remains to a

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11. See, e.g., CAL. HEALTH & SAFETY CODE § 25956 (West 1984) (prohibiting "use [of] any aborted product of human conception . . . for any type of scientific or laboratory research or for any other kinds of experimentation or study, except to protect or preserve the life and health of the fetus.")


13. See, e.g., Gorman, A Balancing Act of Life and Death, TIME, Feb. 1, 1988, at 49 (woman desired to become pregnant to supply tissue to father with Parkinson’s disease); Express: Fetal Cell Transplants. (KQED television broadcast, Mar. 1, 1988) (audio tape on file at The Hastings Law Journal) (woman suffering from diabetes expressed an interest in becoming pregnant to supply herself with fetal pancreatic tissue); Thorne, Trade in Human Tissue Needs Regulation. Wall St. J., Aug. 19, 1987, at 16, col. 3 (woman attempting to aid ailing father sought to be artificially inseminated with his sperm so as to later abort fetus in third trimester and supply her father with the fetal kidney tissue).

14. Maugh, supra note 9, at 1.

15. See infra note 40.

16. See infra notes 58-60 and accompanying text.

17. See infra note 47-48 and accompanying text.


19. Id. § 1(b), 8A U.L.A. 30.
specific individual\textsuperscript{20} and permits this tissue to be used for transplantation.\textsuperscript{21} Thus, in states regulating fetal tissue use solely through the UAGA, deliberate production of fetal tissue by a woman for transplant purposes appears permissible.

While the potential clinical benefits of fetal tissue transplantation are undisputed, the manner of obtaining such tissue deserves careful review. An appropriate legislative or judicial response to issues surrounding fetal tissue use must balance the interests of those needing this lifesaving tissue against the interest of society in preventing the degradation of women and the reproductive process. To achieve this balance, this Note proposes that states amend their enactment of the UAGA to prohibit either parent from designating the recipient of fetal tissue resulting from an elective abortion.\textsuperscript{22} By denying a parent the ability to designate a recipient, this amendment will discourage women from becoming pregnant to supply fetal tissue. Moreover, in the case of an accidental pregnancy, the amendment would prevent an ailing friend or relative from pressuring the mother into aborting for donative purposes. At the same time, parents should not be prevented from consenting to an anonymous tissue donation. Thus, while an individual recipient could not receive tissue donated by a relative or friend, he or she could receive it from an anonymous donor through a tissue bank.

A primary concern in prohibiting recipient designation\textsuperscript{23} is that the proposal may interfere with a woman's constitutionally protected right to privacy in reproductive decisions. This Note, however, argues that the ability to designate the recipient of one's fetal tissue does not fall within the right to privacy. To a substantial degree, courts have limited protection of reproductive choices to a woman's decision whether to bear a living child\textsuperscript{24} and, in some instances, to the intimacies of the physical relationship.\textsuperscript{25} The proposal does not infringe on this decision or any other privacy right.

Since the proposal does not interfere with the exercise of a fundamental right, it is subject to review under the rational basis test.\textsuperscript{26} To withstand this constitutional scrutiny, the state must show that the legis-

\textsuperscript{20} Id. § 4(c), 8A U.L.A. 41.
\textsuperscript{21} Id. § 3(4), 8A U.L.A. 41.
\textsuperscript{22} Several commentators have mentioned this proposal without elaboration. See, e.g., Dempsey, Use of Fetal Remains in Medical Treatment Provokes a Furor Over Ownership of Tissue, The Recorder, Sept. 8, 1987, at 19, col. 1. (citing Patricia King, Associate Professor of Law, Georgetown University Law Center); Sherman, The Selling of Body Parts, Nat'l L.J., Dec. 7, 1987, at 1, col. 1.
\textsuperscript{23} “Recipient designation,” as used herein, refers to the parent's ability to choose (designate) what person (recipient) will receive the fetal tissue resulting from an elective abortion.
\textsuperscript{24} See infra notes 165-68 and accompanying text.
\textsuperscript{25} See infra note 124 and accompanying text.
\textsuperscript{26} J. NOWAK, R. ROTUNDA & J. YOUNG, CONSTITUTIONAL LAW, § 14.29(b), at 696 (3d. ed. 1986).
lation furthers a legitimate state interest.\footnote{27} The proposal satisfies this test because the state has a legitimate interest in preventing the exploitation of women and fetuses. This interest is protected by regulating the donation procedure.

In section I, the Note provides an overview of the medical and statutory background of fetal tissue use. Current regulatory inadequacies are discussed in Section II and a proposal is made to prohibit either parent from designating the recipient of fetal tissue from an elective abortion. Section III analyzes the right to privacy and its role in challenges to fetal experimentation statutes. This section argues that the proposal would not violate a woman's right to privacy because her fundamental reproductive right extends primarily to decisions regarding childbearing, which do not include designation of a fetal tissue recipient. Section III also argues that the proposal is rationally related to a legitimate state interest and is not unnecessarily overbroad. Finally, the Note concludes that this proposal would withstand a constitutional challenge and is necessary to protect against the degradation of women and the reproductive process.

\section{I. Fetal Tissue Uses and Regulation}

\subsection{A. Uses}

The results of experimental treatment for Parkinson’s disease well illustrate the potential benefits that can be realized with fetal tissue transplantation. Parkinson’s is caused by a deterioration of brain cells that produce dopamine,\footnote{28} a neurochemical responsible for proper motor coordination.\footnote{29} A dopamine deficiency results in tremors and rigidity.\footnote{30} By removing dopamine producing brain cells from the appropriate part of a fetal brain and transplanting them into an adult brain, scientists have succeeded in nearly eradicating symptoms of Parkinson’s in monkeys.\footnote{31} This same procedure has been used several times on human subjects with apparent success.\footnote{32} The first reported human recipients of fetal brain tissue showed marked improvement within eight weeks of the transplant.\footnote{33}

Recent experiments suggest a vast array of medical uses for fetal

\begin{footnotesize}
\begin{enumerate}
\item[27.] "Normally the legislature may regulate activities so long as the legislation has some rational relationship to a legitimate state interest." \textit{Id.}
\item[29.] McAuliffe, \textit{supra} note 1, at 69.
\item[30.] \textit{Id.}
\item[31.] \textit{Id.}
\item[33.] \textit{See id.} This may be explained by the tendency of fetal brain tissue “to find its way to the brain site appropriate to its physiological function.” \textit{Ethical Options, supra} note 3, at 9.
\end{enumerate}
\end{footnotesize}
tissue. In addition to treating Parkinson's disease, fetal brain tissue may be used to treat Alzheimer's, and Huntington's diseases. To the one million Americans afflicted with Parkinson's, two and a half to three million afflicted with Alzheimer's, and 25,000 suffering from Huntington's disease, these experiments represent significant hope. "Fetal research has also shown promising preliminary results in treatment of diabetes and certain blood disorders such as anemia, radiation sickness, and leukemia. AIDS researchers are beginning to experiment with fetal tissue to determine whether it can help protect the immune system."

The procedure for performing a fetal tissue transplant resembles the typical organ transplant operation. Human organ transplants involve the transfer of an organ from the body of a donor to the body of a recipient at the same or different site as that from which the organ originated. Tissue transplantation involves the same procedure except that a portion of an organ or other tissue mass is transferred, rather than the entire organ. For purposes of this Note, fetal tissue transplantation refers to the removal of tissue from a fetus ex utero (out of womb) and the implantation of that tissue into another human.

For transplantation, fetal tissue may be preferable to adult tissue for the following reasons. Transplanted fetal tissue is less likely to result in compatibility problems because fetal cells are immunologically naive: they have yet to develop the distinctive antigens which often cause a re-

35. McAuliffe, supra note 1, at 69-70.
36. Thorne, supra note 13, at 16, col. 3. Use of fetal brain tissue poses unique ethical problems for some because it suggests a greater violation of the fetus than the removal of other types of tissue. As one physician commented, implanting fetal brain tissue stirs a public misconception "based on Frankenstein, that we are transplanting personalities." Do Brain Cells Suffer? Tough Questions in the Lab, U.S. NEWS & WORLD REP., Nov. 3, 1986, at 69 (quoting Dr. Ake Seiger) [hereinafter Tough Questions]. Yet, just as there are no restrictions on what organs or tissue may be removed from a cadaver and transplanted into a living human being, there would appear to be no reason to place restrictions on the types of fetal tissue that can be used for transplants if the fetus is dead. As with cadaver donors, it is more appropriate to regulate the conditions and circumstances under which the fetal tissue is procured and distributed.

38. 3 ENCYCLOPEDIA OF BIOETHICS 1160 (W. Reich ed. 1978).
39. Generally, fetuses aborted within the first two trimesters of a pregnancy (the first six months) are too immature to provide viable organs but may supply useful tissue. Telephone interview with Dr. Frank Sharp, Professor of Neurology, University of California at San Francisco, V.A. Medical Center (Mar. 3, 1988) [hereinafter Sharp]. Consequently, it is important to distinguish between tissue or cell transplantation using fetuses from early to mid-gestation, which this Note discusses, and organ transplantation using infants born within the last trimester of a pregnancy. For a discussion on harvesting organs from anencephalic infants see Harrison, The Anencephalic Newborn as Organ Donor, 16 HASTINGS CENTER REP., Apr. 1986, at 12.


recipient's body to reject transplanted tissue. The tissue's lack of maturity also reduces the incidence of graft-versus-host reaction, which occurs when the transplant tissue attacks the host tissue in the recipient's body. Additionally, because of its immaturity, fetal tissue has a greater capacity than adult tissue to regenerate and grow once transplanted.

Biologically, the tissue used for a fetal tissue transplant can come from either a spontaneous abortion (miscarriage) or an elective abortion. In practice, however, tissue from electively aborted, healthy fetuses is usually preferable because a spontaneous abortion often involves a defective fetus. Also, the location and conditions under which a spontaneous abortion typically occurs—outside of medical facilities—make miscarried fetuses an unreliable source given the proper planning needed to retrieve the tissue while it is still useful.

Several factors are important to effective transplantation. With current technology, the timing of transplantation is crucial to successful treatment. Fetal tissue ceases to function and develop within several hours after death and normally requires immediate transplantation. Some scientists, however, have successfully transplanted fetal neural tissue which had been frozen and revived in rats and monkeys. This suggests the possibility of fetal tissue banks which surgeons could draw upon for future operations and which families could use to store their own tissue supply.

The maturity of the fetus when aborted may also affect the quality of the tissue. In the case of Parkinson's, the optimal tissue for treatment reportedly comes from a fetus no later than nine weeks. To treat diabe-

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42. Ethical Options, *supra* note 3, at 10.
44. *Id.*
48. *Id.*
tes, the fourteenth week of gestation may be the best time to obtain fetal islet cells from the pancreas. The type of abortion procedure employed may also impact on the desirability of the tissue.

Many questions about this procedure, however, remain unanswered. For instance, scientists have yet to study the long term effectiveness of fetal tissue in the treatment of Parkinson's, diabetes, or other disorders. Also unknown at this time is the quantity of tissue required to treat a disease. One researcher has indicated that up to twenty-five fetal pancreases are needed to treat successfully one adult diabetic. Alternatively, much less tissue is apparently needed to treat a Parkinson's patient.

The use of freshly aborted fetuses for these transplants is currently being supplemented by tissue cloned from previously aborted fetuses. One biotechnology firm has developed techniques to propagate pancreas cells extracted from aborted fetuses, potentially allowing them to mass produce fetal tissue. "[T]he company is now able to grow enough cells from one fetal pancreas to treat 20 adult diabetics." A similar technique is being developed for the production of brain cells to treat Parkinson's.

There are certain limits, however, to the use of cloned fetal tissue. When compatibility is a concern, a potential recipient would have to have tissue cloned from a compatible fetus. Also, there is limited availability of the only tissue presently cloned, pancreatic tissue. The company developing this tissue hopes to be able to provide pancreatic cells for 15,000 patients per year by 1991; there are, however, approximately 600,000 insulin-dependant diabetics in the United States. The cost of cloned fetal cells, about $5,000 for diabetes treatment, may still provide

50. Maugh, supra note 9, at 28, col. 2. The appropriate stage of fetal development for treating all diseases, however, remains unclear. "Taking the tissue too early, for example, might result in runaway growth that could wreak havoc . . . ." Jaroff, supra note 28, at 57.
51. Hysterotomy, while presenting the greatest danger to a pregnant woman, is the least damaging to the fetus, thus providing superior tissue. Conversely, dilation and evacuation is the least dangerous for a pregnant woman but the most damaging to the fetus. Ethical Options, supra note 3, at 13. Potential for manipulation of the method and timing of the abortion suggests that some form of "Chinese wall" should be erected between the woman having an abortion and the transplant surgeon. Cf. 45 C.F.R. § 46.206(a)(3) (1987) ("Individuals engaged in [fetal research] will have no part in: (i) Any decision as to the timing, method, and procedures used to terminate the pregnancy . . . .")
52. Jaroff, supra note 28, at 57.
53. Maugh, supra note 9, at 28, col. 1.
54. See, e.g., Parkinson's Transplantation, supra note 32 (tissue from a single fetus used to treat two Parkinson's patients).
55. Petit, supra note 7, at A4, col. 5.
56. Maugh, supra note 9, at 28, col. 4.
57. Id. at 29, col. 2.
58. Id. at 29, col. 1.
59. Petit, supra note 7, at A4, col. 6.
60. Id.
a woman with the incentive to provide her own tissue. Finally, there remains the danger of unknown viruses or diseases present in anonymously donated tissue.

B. Current Regulation of Fetal Tissue Use

Fetal tissue use is regulated by laws concerning fetal research as well as laws governing organ and tissue donations. At the federal level, regulations cover only research funded through the Department of Health and Human Services (DHHS). Currently, the DHHS has placed a temporary ban on all fetal tissue transplants conducted at the NIH. At the state level, the UAGA regulates tissue and organ donations in all fifty states, and approximately one half of the states have specific statutes governing fetal research.

(1) Federal Regulation of Fetal Tissue Use

Recently, the DHHS, in response to a researcher's proposal to implant fetal brain tissue into a Parkinson's patient, banned all human experiments at the NIH that use tissue from an aborted fetus. The ban will remain effective until an advisory committee has had an opportunity to consider the ethical, medical, and legal implications of fetal tissue transplants. Significantly, this federal ban applies to research only at the NIH and does not prevent privately funded fetal tissue transplants. Because the NIH is perceived as the nation's research leader, however, many hospital institution review boards overseeing academic research may take into account the NIH ban. Moreover, the impact of this ban cannot be underestimated given the significant funding the NIH provides for fetal research.

Not surprisingly, shortly following Roe v. Wade, an analogous moratorium was imposed on federally funded fetal research. Likewise, a commission was appointed which drafted the current regulations governing fetal research funded through the DHHS. Until the recent ban, these research regulations presumably would have governed fetal tissue

61. See 45 C.F.R. § 46.201(a) (1987) (providing that federal regulations pertaining to research, development, and related activities involving, inter alia, fetuses and pregnant women "are applicable to all [DHHS] grants and contracts").
63. See infra note 95 and accompanying text.
64. Specter, supra note 37, at A1.
65. Id.
66. Maugh, supra note 9, at 1, col. 1.
67. "In 1987, about 118 U.S. research groups received $11.8 million—about 2% of NIH's total budget—for research involving fetal cells . . . ." Id. at 28, col. 1.
68. 410 U.S. 113 (1973)
69. Ethical Options, supra note 3 at 11.
70. Id.
transplants at the NIH. Undoubtedly, the inadequacies of these guidelines as applied to fetal tissue transplants influenced the decision to effect a temporary ban. Nonetheless, it is instructive to review the research regulations to highlight various distinctions certain to play a role in any federal transplant regulations.

As with the ban on fetal tissue transplants, federal regulation of fetal research applies only to research funded through the DHHS.71 These regulations expressly state they do not preempt state laws.72 “Research” is defined by the regulations as a “systematic investigation designed to develop or contribute to generalizable knowledge.”73 Even if a particular procedure does not meet the definition of “research” or the work is not federally funded, these regulations are often an important source of guidelines for medical institutions conducting fetal experiments.

The federal research regulations, as well as many state fetal research laws, recognize certain common distinctions. The first is between live and dead fetuses. Federal law defers all regulation of research on dead fetuses ex utero to state and local laws.74 With respect to live fetuses ex utero, the federal regulations provide an intricate scheme built upon distinctions between therapeutic and nontherapeutic research, and viable and nonviable fetuses. Therapeutic research is that which is intended to benefit the subject.75 Measurement of fetal heart activity in utero is an example of such research.76 Experimental surgery on the fetus ex utero intended to save the fetus’ life would also be classified as therapeutic research. Alternatively, nontherapeutic research is that which cannot possibly benefit the research subject, although it may benefit others.77 Because fetal tissue transplants involve two subjects—a donor (fetus) and a recipient—the procedure is best described as nontherapeutic for the fetus and therapeutic for the recipient.

A second distinction made by the regulatory scheme is between viable and nonviable fetuses. Viability and nonviability are defined by the regulations as follows:

(d) “Viable” . . . [refers to a fetus which is] able, after either spontaneous or induced delivery, to survive (given the benefit of available medical therapy) to the point of independently maintaining heartbeat and respiration. . . . If a fetus is viable after delivery, it is a premature infant.

(e) “Nonviable” . . . [refers to] a fetus ex utero which, although living,

71. 45 C.F.R. § 46.201 (1987).
72. Id. § 46.201(b).
73. Id. § 46.102(e).
74. Id. § 46.210.
75. 2 ENCYCLOPEDIA OF BIOETHICS 490 (W. Reich ed. 1978).
76. Id.
77. Id.
Employing the above distinctions, the federal regulations prohibit a viable fetus ex utero from being the subject of research. In addition, if a fetus’ viability is uncertain, it may not be the subject of research unless there is no added risk to its life from the research or the research enhances the fetus’ possibility for survival. If fetal transplants are regulated in a similar fashion, transplants would be prohibited from the viable infant, as well as the questionably viable fetus, unless the procedure posed no added risk to the fetus.

Perhaps the most pertinent federal restriction is the ban on research of any kind on a live nonviable fetus ex utero that would prematurely terminate the fetus’ life. This ban may be significant because the procedure required for removing fetal brain tissue transplantation would hasten the death of a live fetus. Thus, if a similar restriction were imposed on fetal tissue transplants, it would prohibit the removal of fetal brain tissue and, potentially, other types of tissue, from live nonviable fetuses.

Significantly, the federal research regulations do not distinguish between fetal materials resulting from elective and spontaneous abortions. The directive from the DHHS to the NIH imposing the current ban did not oppose the use from miscarriages or stillbirths, but specifically asked the advisory committee to consider whether the use of fetal tissue in research encourages women to have abortions.

(2) The Uniform Anatomical Gift Act

The Uniform Anatomical Gift Act (UAGA) is the most widely used system of statutes governing tissue and organ donation. The UAGA was drafted by the National Conference of Commissioners on Uniform State Laws to encourage anatomical gifts within and among states. It has been
adopted, with minor modifications, by all fifty states. The UAGA provides a number of guidelines that an individual can follow to effectuate an organ donation.

The UAGA deals only with postmortem gifts of all or part of a body, including tissue. The definition of decedent under the UAGA includes a stillborn fetus. Notably, as with the federal research regulations, the UAGA does not distinguish between a stillborn fetus resulting from a spontaneous abortion and one resulting from an elective abortion. Hence, it may be presumed to apply to tissue donations in either situation.

Under section 2(b), the donor of a fetus may be, in descending order of priority, "either parent, . . . an adult brother or sister, . . . a guardian of the decedent at the time of his death, . . . [or] any other person authorized or under obligation to dispose of the body." There are two important qualifications to this hierarchy of donors. First, if a person in a prior class is available at the time of death, then a person lower in line cannot effectuate the donation. Thus, for all effective purposes, only the parents of an aborted fetus could donate the fetal tissue since they are highest in priority and the mother would almost always be available at the time of the fetus' death. Second, if one parent opposes the donation, he or she may block the other from donating the fetal tissue.

The purpose of an anatomical gift under the UAGA may be for research, therapy, or transplantation. Most importantly, a gift may be made to a specified donee, which may be an individual, hospital, university, or storage bank.

In sum, the terms of the UAGA appear to permit the use of fetal tissue for transplants. Furthermore, either parent can designate a recipient of fetal tissue resulting from an elective or spontaneous abortion. Consequently, nothing contained within the terms of the UAGA prohib-

86. Id. § 2(a), 8A U.L.A. 34.
87. Id. § 1(e), 8A U.L.A. 30.
88. Id. § 1(b), 8A U.L.A. 30.
89. Id. § 2(b), 8A U.L.A. 34.
90. Id.
91. Id. § 2(c), 8A U.L.A. 34. Section 2(c) of the UAGA prohibits a donee from accepting a gift if the donee knows that the gift is opposed by one parent. For example, if the mother wants to donate fetal tissue to a relative but the husband opposes it, the relative may not accept the donation if the relative has knowledge of the father's opposition. For a related discussion of whether a parent should be allowed to consent to organ donation from incompetent minors or adults who are alive, see R. SCOTT, THE BODY AS PROPERTY 101-39 (1981), and Note, The Sale of Human Body Parts, 72 MICH. L. REV. 1182, 1193-201 (1974).
93. Id. § 4(e), 8A U.L.A. 44.
94. Id. § 3, 8A U.L.A. 41.
its a woman from becoming pregnant for the sole purpose of supplying a specific individual with tissue.

(3) State Fetal Research Regulations

Although the UAGA implicitly authorizes the use of fetal tissue for "research" or "transplantation," approximately one half of the states supplement and sometimes preempt this broad authorization with specific statutes governing fetal experimentation or research. A majority of regulating states prohibit nontherapeutic research on live fetuses ex utero. In these states, the removal of tissue from live fetuses for use in transplantations would be prohibited, if the transplantation is considered research.

In comparison, a majority of regulating states permit nontherapeutic research on dead fetuses. Again, as applied to fetal tissue transplants, the removal of tissue from dead fetuses for transplantation would be allowed in such states. These laws are consistent with the UAGA, which also permits the use of tissue from dead fetuses for transplants.

A small number of states prohibit any nontherapeutic research on dead fetuses and thus, apparently prohibit fetal tissue transplants. The constitutionality of several of these statutes, however, has been challenged on the grounds that they interfere with a woman's protected right to an abortion or are unconstitutionally vague.

Some states require parental consent before research may be performed. Unlike the UAGA, however, no state statutes specifically address the issue of recipient designation because research regulations were not originally intended to cover tissue donations much less tissue transplants.

95. Terry, "Alas! Poor Yorick," I Knew Him Ex Utero: The Regulation of Embryo and Fetal Experimentation and Disposal in England and the United States, 39 VAND. L. REV. 419, 446 n.195 (1986); see also Baron, supra note 10, at 14-15 (twenty-five states have no restrictions on fetal research other than under the UAGA; restrictions in the remaining states range from requiring only maternal consent to prohibiting any nontherapeutic research on dead fetuses from elective abortion).

96. See Baron, supra note 10, at 14-15.

97. "Research" is often defined to include virtually any nontherapeutic use of fetal tissue. See, e.g., CAL. HEALTH & SAFETY CODE § 25956 (West 1984) (prohibiting the "use [of] any aborted product of human conception . . . for any type of scientific or laboratory research or for any other kind of experimentation or study, except to protect or preserve the life and health of the fetus").


100. See infra text accompanying notes 138-63.

101. See, e.g., S.D. CODIFIED LAWS ANN. § 34-23A-17 (1977) (providing that "experimentation with fetuses without written consent of the woman shall be prohibited").
II. The Proposal: Prohibiting Recipient Designation

The possibilities for therapeutic use of fetal tissue were unknown to the drafters of the UAGA and the fetal research guidelines. Consequently, in some instances, research laws may inhibit successful fetal tissue transplants by affording too much protection to the fetus.102 Yet, the majority of state organ and tissue donation statutes inadequately regulate fetal tissue use by failing to prohibit certain problematic donations.

For example, some women have expressed a desire to become pregnant in order to supply fetal tissue to specific individuals.103 Even if a woman has not intentionally conceived for the purpose of supplying tissue, the ability to designate a tissue recipient may increase a woman’s incentive to abort. Two possible incentives are to receive remuneration for the fetal tissue, and to aid a friend, a relative, or herself.

Remuneration for supplying human organs for use in transplantation is prohibited under the National Organ Transplant Act.104 Specifically, the Act provides that “[i]t shall be unlawful for any person to knowingly acquire, receive, or otherwise transfer any human organ for valuable consideration for use in human transplantation if the transfer affects interstate commerce.”105 Preventing an exchange in fetal materials could be accomplished by expanding the Act to ban the sale of any fetal organs or tissue.106 Recently, petitions have been filed with the DHHS requesting this amendment.107

Prohibiting the sale of fetal tissue, however, does not remedy the equally problematic situation of women deliberately conceiving with the intention of supplying themselves, a relative, or a friend with aborted fetal tissue. Also troublesome is the specter of women who, having become pregnant accidentally, feel pressured into having an abortion to aid an ailing friend or relative. Both scenarios are possible under the current UAGA provisions, which permit either parent of a dead fetus to donate

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102. See supra note 11.
103. See sources cited supra note 13.
104. 42 U.S.C. § 273-274e (Supp. III 1985). Although the prohibition applies only to sales affecting “interstate commerce,” the court’s broad reading of this term is likely to encompass intrastate sales. See Note, Regulating the Sale of Human Organs, 71 VA. L. REV. 1015, 1025 (1985) (footnote omitted) (suggesting that “the courts . . . will probably continue their broad construction of Congress’ Commerce Clause power and will find that intrastate organ sales do ‘affect interstate commerce’ ” (quoting generally, Heart of Atlanta Motel v. United States, 379 U.S. 241 (1964); Katzenbach v. McClung, 379 U.S. 294 (1964); Wickard v. Filburn, 317 U.S. 111 (1942))). Id. at 1025 n.98.
all or part of the fetus to a specific individual. Only the NIH and the small minority of states that prohibit or severely restrict any nontherapeutic research on a fetus foreclose this possibility.

Before considering how such conduct could be prevented, it is appropriate to consider briefly the state's interests in preventing the deliberate production of fetal tissue. The position of this Note is that allowing a woman to conceive for the purpose of subsequent transplantation is an abuse of the reproductive process. The woman becomes, in essence, an organ farm. Moreover, while a woman has a constitutionally protected right to become pregnant or have an abortion regardless of her motivation, these rights do not eliminate the state's interest in protecting the fetus. Although the fetus may not be a person within the meaning of the fourteenth amendment, the pregnant woman does not have the unquestioned right to exploit the fetus for her own or others' benefit. As one author stated in the context of fetal research, "[e]ven if [the fetus'] personhood is denied, the dignity it is accorded, while not sufficient by itself to countermand the needs of medical research, should be sufficient to compel elaborate safeguards to eliminate offensive and degrading forms of research." Similar safeguards are appropriate to prevent the deliberate production of fetal tissue. In addition, the state has a strong interest in protecting a woman from being pressured by others into donating or intentionally producing fetal tissue.

An acceptable regulatory response would be to construct a "Chinese wall" between the donor and the recipient. Because tissue donation may only be effectuated in accordance with the state's enactment of the UAGA, this Note proposes that states amend their versions of the UAGA to prohibit either parent from being able to donate fetal tissue resulting from an elective abortion to a specific individual. Such an amendment would remove an important incentive for a woman conceiving for the purpose of supplying tissue, or, if accidentally pregnant, choosing to abort for this purpose, because neither parent could insure that a desired individual would receive the tissue. The proposal repre-

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109. See supra note 11.
110. For a more in-depth discussion of these interests, see infra notes 192-97 and accompanying text.
112. Cf. **Wilson**, *Fetal Experimentation: Legal Implications of an Ethical Conundrum*, 53 **Den. L.J.** 581, 618 (1976) One commentator has described the pro-life movement's position on allowing recipient designation as "'going to a murderer and asking him if he would like to donate the victim's [remains]." Dempsey, supra note 22, at 18, col. 2 (quoting Patricia King, Associate Professor of Law, Georgetown University Law Center).
113. See infra note 195-96 and accompanying text.
114. Assuming fetal tissue transplants are allowed under the law, a woman might still feel compelled to supply fetal tissue to help anonymous donors. Thus, the proposal does not purport to remove all possible incentives to conceive and abort.
sents a practical solution given the difficulty of enforcing a regulation with a mens rea element; one which would prohibit women from intentionally becoming pregnant for the purpose of supplying fetal tissue.115

In prohibiting recipient designation, however, neither parent should be prevented from donating the aborted tissue for transplantation purposes to an unspecified individual. For instance, a parent should still be able to donate the tissue to a hospital, tissue bank, or medical school for use in tissue transplants to anonymous donees.116 Even some opponents of legalized abortion recognize that as long as this valuable tissue is available, it should be used for a productive purpose.117

In contrast to many state fetal research statutes and the federal research regulations, the proposed ban on recipient designation should not depend on the status of the fetus following the abortion procedure (i.e., viable, nonviable, or dead). While the determination of the fetus' status is important in minimizing or eliminating the risk of fetal suffering in experiments and transplants, the status of the fetus is inconsequential to the proposal's twin goals of preventing a woman ab initio from becoming pregnant in order to supply fetal tissue and removing an increased incentive to abort. If the prohibition on recipient designation is to be effective, it must apply whether the fetus is live or stillborn, viable or nonviable.

Because of its unanimous acceptance within the fifty states, the UAGA is the most logical piece of legislation for states to amend in enacting this proposal. Naturally, the success of the proposal depends on the cooperation of all states in enacting similar legislation. Otherwise, if only certain states prohibit recipient designation, a woman could travel to a state without such a prohibition in order to designate the recipient. One commentator has gone so far as to advocate international regulations, since a donor could effectuate a desired tissue transfer by simply going to a country with no similar restrictions.118

On a practical level, the effectiveness of the proposed amendment might be questioned in certain situations. For instance, the proposal may prove ineffective when the pregnant woman shares a rare tissue and blood type with an intended recipient and a match is important for the type of tissue to be transplanted.119 Even if the statute prohibits the woman from specifying the donee, she is still free to donate the fetus to a tissue bank. The tissue bank, in turn, could donate the tissue to the intended recipient if that person is the first in order of priority to receive

115. See infra notes 200-01 and accompanying text.
116. Donating the tissue to organizations such as a tissue bank, however, still leaves issues beyond the scope of this Note, such as who should receive the tissue and by what procedure this should be determined.
117. Tough Questions, supra note 36, at 68.
118. Thorne, supra note 13, at 19, col. 3.
119. See supra note 39.
the tissue. In such cases, as long as neither parent retains control over
the tissue, the tissue bank should have the discretion to donate the tissue
as it determines necessary and appropriate, even if it goes to the parents' desired recipient. To the extent that this may occur, the proposal repre-
sents a middle ground between no regulation of fetal tissue donations and
an overly broad regulation prohibiting any tissue donations amongst
friends and relatives.

III. The Constitutional Right to Privacy and Fetal Tissue Use

Regulating a parent's control over the disposition of fetal tissue arguably may impact on reproductive decisions. For example, a woman's inability to specify the recipient of tissue may dissuade her from conceiving in order to supply fetal tissue. If this is true, the proposal could be attacked on grounds that it violates the right to privacy. The question then becomes, how closely connected is the asserted liberty of recipient designation to the reproductive rights protected under the right to privacy? In addressing this question, this section begins with a brief overview of the right to privacy and its application in the area of reproductive autonomy.

A. The Right to Privacy Standard

The right to privacy is not expressly enumerated in the Constitution. Its roots, however, have been found "in the penumbras of the Bill of Rights, in the Ninth Amendment, or in the concept of liberty guaranteed by the first section of the Fourteenth Amendment." Given this diverse genealogy, it is not surprising that the issues of what falls within the ambit of the right to privacy, and whether such a right even exists, are sharply debated.

The United States Supreme Court has described the right to privacy as "the interest in independence in making certain kinds of important decisions." Accordingly, the Court has held that the right of parents

120. Tissue and organ banks determine the order of priority "in terms of need, probability of success, and time on the waiting list. Probability of success will hinge in part on a match." Donahue (Multimedia Entertainment, Inc., television broadcast, Sept. 24, 1987) (quoting Dr. James F. Childress, Ph.D., Professor of Religious Studies and Medical Education, University of Virginia) (transcript on file at The Hastings Law Journal).


122. Whalen v. Roe, 429 U.S. 589, 599-600 (1977). To determine whether a right (or a decision) falls within the zone of privacy, one approach of the present majority of the Court has been to examine two questions: (1) whether the right is "implicit in the concept of ordered liberty," or (2) whether the right is "deeply rooted in this Nation's history and tradition." Bowers v. Hardwick, 106 S. Ct. 2841, 2844 (1986) (quoting Moore v. East Cleveland, 431 U.S. 494, 503 (1977)). The dissent in Bowers stated the right to privacy more broadly as the "right to be let alone." Id. at 2848 (Blackmun, J., dissenting, joined by Brennan, Mar-
to make decisions concerning their children's education, the decision to use contraception, and a woman's choice to terminate a pregnancy by abortion are the types of important decisions encompassed within the right to privacy. The right to make these decisions is deemed "fundamental," and as such is protected from unwarranted governmental intrusion.

Even when government action does not directly interfere with the exercise of privacy rights, a regulation may still constitute undue interference if it indirectly hinders, discourages, or penalizes the exercise of a protected right. For example, in Margaret S. v. Edwards (Margaret I), the plaintiffs challenged a legislative scheme requiring parents to choose between burial and cremation of an aborted fetus. The court struck down the statute, finding that it would have a "chilling affect on a woman's right to obtain an abortion and represents an impermissible attempt of the State to influence a woman's abortion decision."

The right to privacy and the protection it affords, however, are not absolute. State intrusion is warranted when there is a "compelling" state interest in interfering with the fundamental right. The Court has never enunciated a clear standard for determining what constitutes a compelling interest, and has only made that determination on a case-by-case basis. In Roe, the Court gaged the substantiality of the state's interest in regulating abortion by correlating it to the stage of fetal development. The state's interest in protecting the potential life of the fetus, the Court determined, increases as the pregnancy advances. At the point of fetal viability, the state's interest in protecting fetal life crosses the line from strong to compelling because it is at this point that the fetus can presumably live outside its mother.

In summary, constitutional scrutiny of regulations challenged as violating the right to privacy requires a two-part analysis. First, the court determines whether the law or regulation burdens a fundamental right. Second, the court considers the state interest furthered by the regulation. If the regulation infringes on a fundamental right, the state's interest must be compelling for the regulation to be upheld. Alternatively,

shall, and Stevens, JJ.) (quoting Olmstead v. United States, 277 U.S. 438, 478 (1929) (Brandenburg, J. dissenting)).

124. Griswold, 381 U.S. at 485-86.
128. Id. at 223.
129. Roe, 410 U.S. at 155-56.
130. Id. at 162-64 passim.
131. Id. at 162-63.
132. Id. at 163.
133. Id. at 155-56.
even if the regulation neither implicates nor unduly burdens a fundamental right, it is invalid unless the regulation is rationally related to a legitimate state interest.134

B. Right to Privacy Attacks on Fetal Research Statutes

The area of privacy most analogous to recipient designation, addressed by the courts, concerns reproductive autonomy. At the heart of a woman’s reproductive autonomy is “[t]he decision whether or not to beget or bear a child.”135 Access to contraception, abortion, and fetal research all have been protected as essential to a woman’s exercise of her right to privacy.136 Abortion, contraception, and fetal research, however, are not themselves fundamental rights but are protected when “essential to exercise of the constitutionally protected right of decision in matters of childbearing that is the underlying foundation of the holdings in Griswold, Eisenstadt v. Baird, and Roe v. Wade.”137

To understand how the right of decision is implicated in the disposition of fetal tissue, it is particularly helpful to examine prior constitutional challenges to state fetal research statutes. In Margaret S. v. Treen (Margaret II), the plaintiffs challenged a Louisiana statute prohibiting nontherapeutic research on any dead or live fetus.138 They argued that the provision unduly burdened a woman’s right to undergo an abortion. Specifically, they contended that the statute would deter women from having abortions because the performance of an abortion would render illegal, pathological exams “necessary to preserve the life and health of the mother” and to disclose the likelihood of fetal deformities in future pregnancies.139 The plaintiffs also asserted that the provision unconstitutionally infringed on a doctor’s right to conduct medical research.140 Finally, the phrase “born as a result of an abortion” was attacked as

134. See supra note 26; see also Henkin, Privacy and Autonomy, 74 COLUM. L. REV. 1410, 1426 (1974):

Most aspects of an individual’s life are not “fundamental,” and in these his liberty is subject to the police power of federal and state governments, with presumptions of statutory validity, and a heavy, generally hopeless, burden on a resisting individual to show that a regulation has no conceivable public purpose, or that there is no rational relation between means and ends.

Id. (footnote omitted).


137. Carey, 431 U.S. at 688-89 (emphasis added).

138. 597 F. Supp. at 671-76.

139. Id. at 672.

140. Id.
unconstitutionally vague.\textsuperscript{141}

In holding that the statute unduly burdened a woman’s reproductive rights, the district court reasoned along two lines. First, the statute was found to “violate[\textsuperscript{142}] the fundamental rights of women . . . to make reproductive choices.”\textsuperscript{143} By depriving a woman of information concerning the likelihood of fetal deformities in future pregnancies, a woman was denied the opportunity to make an informed decision whether to bear a child at a later date.\textsuperscript{144} Hence, the opinion can be interpreted as holding that fetal research that may inform or benefit a woman’s reproductive choices will be afforded protection and cannot be unduly burdened absent a compelling state interest.

Second, the court concluded that enforcement of the statute would burden a woman’s decision to have an abortion.\textsuperscript{145} The statute would have the effect of inhibiting examination of the fetus which might disclose diseases or infections in the woman. The court held that the “denial of such health care for women having abortions is a significant burden on their right to choose to terminate their pregnancies.”\textsuperscript{146}

Because the statute interfered with the rights of physicians to conduct research, the court concluded that the statute did not even pass the rational basis test.\textsuperscript{147} The court recognized that although a physician’s professional right to conduct research is not fundamental, it is still protected from arbitrary infringement under the Constitution.\textsuperscript{148} Since the court found that the state’s interest in protecting fetal life did not extend beyond the death of the fetus, the court found that the provision arbitrarily burdened a physician’s professional rights.\textsuperscript{149} Even if the purpose of the Louisiana law were to afford the fetus the same dignity as a dead child, the statute would still be inconsistent with the Louisiana Anatomical Gift Act, which allows research on deceased children.\textsuperscript{150} The court also held that the term “born as a result of an abortion” is unconstitutionally vague “because it is impossible for a pathologist or other physician to distinguish tissue which is the product of an induced abortion from that which is the product of a spontaneous abortion.”\textsuperscript{151}

\textsuperscript{141.} Id.
\textsuperscript{142.} Id. at 673.
\textsuperscript{143.} Id.
\textsuperscript{144.} Id.
\textsuperscript{145.} Id.
\textsuperscript{146.} Id. at 674-75.
\textsuperscript{147.} Id. at 674.
\textsuperscript{148.} Id. at 675.
\textsuperscript{149.} Id. On appeal, the appellate court struck down the Louisiana provision because it found the term “experimentation” to be unconstitutionally vague. Margaret II, 794 F.2d 994, 999 (5th Cir. 1986). Nonetheless, the appellate court did not discredit the lower court’s reasoning, stating that it “neither approve[d] nor disapprove[d] any of the rationales put forth by the district court.” Id. at 998.
\textsuperscript{150.} Margaret II, 597 F. Supp. at 675-76.
Alternatively, when fetal research does not benefit a woman's constitutionally protected reproductive rights and implicates only the asserted rights of medical researchers, a court is likely to uphold a fetal research regulation if a legitimate state interest is served by the regulation.\textsuperscript{151} \textit{Wynn v. Scott} represents an early challenge to one of the post-\textit{Roe} fetal research regulations, the Illinois Abortion Act of 1975.\textsuperscript{152} The Act provided that no premature infant or fetus aborted alive could be used for nontherapeutic experimentation. Several physicians contended that this provision “infringe[d] on the rights of medical researchers to engage in research free from unreasonable governmental interference.”\textsuperscript{153} Consistent with \textit{Margaret II},\textsuperscript{154} the Wynn court concluded that medical researchers have no fundamental rights under the Constitution to perform fetal experiments.\textsuperscript{155}

Because the regulation did not have the effect of discouraging abortions, however, its validity was decided under the rational basis test.\textsuperscript{156} In concluding that the test was met, the court noted that the state has broad latitude in regulating social and health interests, which includes fetal research.\textsuperscript{157} Furthermore, the plaintiffs failed to show that the regulation was not rationally related to this interest.\textsuperscript{158}

\textit{Margaret I},\textsuperscript{159} although not involving a privacy challenge, also dealt with a fetal research regulation that underwent the scrutiny of the rational basis test. Here, an earlier version of the statute challenged in \textit{Margaret II}\textsuperscript{160} provided that “[n]o person shall experiment upon or sell a live child or unborn child unless such experimentation is therapeutic to the child or unborn child.”\textsuperscript{161} The court held that the danger of abuse inherent in the expansion of fetal research was a legitimate basis for a state to regulate in this area.\textsuperscript{162} The statute protected the state's interest in fetal life by proscribing nontherapeutic experiments on fetuses \textit{in utero}.\textsuperscript{163}

\textsuperscript{151}Proof of a state's interest is relatively easy to establish, given a state's broad interest in regulating matters of health. \textit{See infra} note 194 and accompanying text.

\textsuperscript{152}449 F. Supp. 1302, 1305 (N.D. Ill. 1978), \textit{aff'd sub nom.} Wynn v. Carey, 599 F.2d 193 (7th Cir. 1979).

\textsuperscript{153}Id. at 1322.

\textsuperscript{154}See supra note 147 and accompanying text.

\textsuperscript{155}Wynn, 449 F. Supp. at 1322.

\textsuperscript{156}Id. Unlike the statute in \textit{Margaret II}, the Illinois Act did not prohibit research on dead fetuses, thereby affording a woman access to information bearing on her future reproductive decisions. \textit{See Ill. Ann. Stat.} ch. 38, para. 81 (Smith-Hurd 1977).

\textsuperscript{157}Wynn, 449 F. Supp. at 1322.

\textsuperscript{158}Id.

\textsuperscript{159}488 F. Supp. 181 (E.D. La. 1980).

\textsuperscript{160}597 F. Supp. 636 (E.D. La. 1984), \textit{aff'd on other grounds sub nom.} Margaret S. v. Edwards, 794 F.2d 994 (5th Cir. 1986); \textit{see supra} notes 138-50 and accompanying text.

\textsuperscript{161}LA. REV. STAT. ANN. § 40:1299.35.13 (West Supp. 1981)

\textsuperscript{162}Margaret I, 488 F. Supp. at 221.

\textsuperscript{163}Id. at 220 n.163.
C. No Right to Privacy Violation by Restricting Fetal Tissue Recipient Designation

Just as there is no fundamental right of access to fetal research, contraception, or abortion, there is no fundamental right to designate the recipient of fetal tissue. At issue is whether the ability to designate the recipient of fetal tissue "is essential to exercise of the constitutionally protected right of decision in matters of childbearing" or is essential to decisions in any other privacy matters.

(1) Reproductive Choice

Arguably, a restriction on recipient designation will interfere with reproductive decisions on the basis of motivation. Although courts have never proscribed reproductive decisions (contraception, conception, or abortion) based on a person's particular reasons for exercising their rights, as stated in Carey v. Population Services International, the crux of the reproductive right is "[t]he decision whether or not to beget or bear a child." Hence, when a woman is protected in her right to become pregnant, it is for the purpose of bearing a living child. Alternatively, a woman's right to terminate her pregnancy has been protected in the early stages of pregnancy because a child may be unwanted or because the physical burdens of pregnancy and the potential psychological and economic detriment to the woman and the child are too great. These factors also relate to the decision of whether to have a living child. Thus, the protection of reproductive rights has centered primarily on a woman's decision whether to have a family.

Employing the reproductive system to produce a tissue mass does not involve a decision of whether to have a living child and therefore is not among the currently recognized reproductive rights. Rather, recipient designation involves a woman's interest in controlling the disposition of fetal tissue to help another individual or herself. This interest is readily distinguishable from the decision of whether to have a family. Additionally, restrictions on recipient designation do not directly infringe on a childbearing decision since a woman is still free to abort or carry to term.

While the proposal does not directly interfere with a childbearing decision, it would limit a woman's right to dispose of fetal tissue. Re-

165. Id.
166. Id. at 685 (emphasis added).
167. See, e.g., Roe v. Wade, 410 U.S. 113, 153 (1973) (discussing the impermissible psychological and physical burdens a state would place upon a woman by prohibiting the option of abortion).
168. These decisions may also be seen as vindicating a right "to engage in sex without bearing or begetting a child." L. Tribe, American Constitutional Law 1423 (2d ed. 1988).
strictions on this right have been found an unconstitutional burden on reproductive decision making in the context of fetal research. The purposes for allowing the use of fetal tissue in research and transplantation, however, are fundamentally different. In the case of fetal research, the courts have protected access to fetal tissue when such access benefits the woman’s reproductive autonomy by aiding her in future pregnancy decisions or for diagnostic purposes. The rationale for allowing a parent to designate the recipient of fetal tissue, on the other hand, is to allow the parent to provide medical assistance to an ailing individual. Recipient designation of fetal tissue, however, does not inform or otherwise benefit a woman’s future reproductive decisions, unlike access to some types of fetal research, nor is it a diagnostic tool. Therefore, the informed-decision rationale that supports the right of access to tissue in the case of fetal research will not support the right of recipient designation in the instance of fetal tissue transplants.

Courts have also invalidated fetal experimentation statutes that indirectly burden a woman’s choice to have an abortion. Arguably, a prohibition on recipient designation could discourage a woman from becoming pregnant or, if already pregnant, dissuade her from undergoing an abortion because she knows she may not specify the recipient of the fetal tissue. In this respect, the prohibition resembles certain fetal disposal statutes. Such statutes are unconstitutional when they discourage abortion by psychologically penalizing a woman for exercising this right. This proposal is distinguishable in that it merely removes an incentive to abort rather than imposing a psychological penalty.

Although fetal disposal statutes are distinguishable from restrictions on recipient designation, the issue remains whether the indirect burden imposed impermissibly infringes on the exercise of reproductive choice. An argument in the affirmative assumes that the decision to become pregnant or to abort is always “essential to exercise of the constitutionally protected right of decision in matters of childbearing . . . .” The decision to designate a tissue recipient, however, is related, but not essential, to a childbearing decision. Restrictions on recipient designation in-

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169. See supra notes 138-45 and accompanying text.
170. The only way recipient designation could influence future childbearing decisions is if the ability to supply tissue to a specific individual, the parents included, improves that individual's health and thereby permits that individual to bear or father a child. Nevertheless, because the primary motive of such designation would be to improve the recipient's general health, it is tenuous to suggest that the ability to designate a recipient enhances or benefits a woman's reproductive autonomy.
172. See id. at 221-23. Fetal disposal statutes have been held invalid in some instances because they exact a penalty upon a woman by indicating to her through procedural means, such as forcing her to choose between burial or cremation of the fetus, that abortion is equivalent to murder.
terfere primarily with the interest in supplying fetal tissue to an ailing individual. While this interest is admittedly important, it should not outweigh the state's interest in preventing the degradation of the reproductive process. The interference with reproductive decision-making is minimal, at best, and as such, does not render a restriction on recipient designation unconstitutional.\textsuperscript{174}

In summary, the courts should not recognize recipient designation as a protected reproductive right because it does not impose, directly or indirectly, an undue burden on a childbearing decision.

(2) Other Privacy Rights

Decisions recognizing an individual's right to forego life-sustaining treatment suggest an alternative rationale for protection under the right to privacy. Several state court opinions have suggested that when "an individual's health or the integrity of his body is at stake, . . . personal decisions are the sole prerogative of the person whose body will be affected by that decision."\textsuperscript{175} These decisions are distinguishable on several grounds. First, unlike the person who wishes to forego life-sustaining treatment, the "pregnant woman [is not] isolated in her privacy."\textsuperscript{176} Her decision affects not only her own body but the nascent life of the fetus as well. In short, to say that a woman has the "sole prerogative" to do with her body as she pleases ignores the balancing of interests approach embraced in \textit{Roe}.\textsuperscript{177} Second, even if the fetus \textit{in utero} is not a separate identity and is only an appendage of the woman, once the abortion procedure has separated the fetus from the woman, it is questionable whether the detached tissue mass is still the woman's body.\textsuperscript{178} Indeed, a woman's right to donate fetal tissue under the UAGA is conditioned on her status as parent of the fetus.\textsuperscript{179} If she is viewed as a parent, then by implication the statute would seem to view the woman and the fetus as distinct entities for donation purposes. If the fetus is not a part of the

\textsuperscript{174} Akron v. Akron Center for Reproductive Health, 462 U.S. 416, 430 (1983) (regulations which have no significant impact on the woman's exercise of her right may be permissible).


\textsuperscript{176} \textit{Roe}, 410 U.S. at 159.

\textsuperscript{177} \textit{Id.} at 153-54; \textit{see supra} notes 129-32 and accompanying text.

\textsuperscript{178} \textit{See generally}, Note, \textit{Fetal Experimentation: Protocols, Propriety and Parameters}, 11 QUEEN'S L.J. 166, 184-85 (1985) (discussing competing arguments between those that view the fetus as an appendage or property of the mother and those which view the fetus as a distinct human life).

\textsuperscript{179} \textit{UNIF. ANATOMICAL GIFT ACT} § 2(b)(3), 8A U.L.A. 34 (West 1983); \textit{see supra} notes 89-91 and accompanying text.
woman's body, then property law would only recognize certain quasi-
property interests in the fetus, limited substantially to burial and dona-
tive rights,180 subject to regulations relating to the health and decency of
the community.181

The position that a person, within certain boundaries, should have
complete control over decisions affecting their body and bodily products
is consistent with the dissent in Bowers v. Hardwick182 that the right to
privacy means "the right to be left alone."183 The danger of infringing
on a person's bodily integrity was expressed by Justice Stevens in Thorn-
burgh v. American College of Obstetricians and Gynecologists184 in the
context of state control over a woman's abortion decision:

For if federal judges must allow the state to make the abortion deci-
sion, presumably the state is free to decide that a woman may never
abort, may sometimes abort, or, as in the People's Republic of China,
must always abort if her family is already too large. In contrast, our
cases represent a consistent view that the individual is primarily re-
ponsible for reproductive decisions, whether the state seeks to pro-
hibit reproduction or require it.185

What Justice Stevens fears is that a majority of society will impose its
value judgement on the minority.186

A parallel has been drawn in the context of organ donations. "[O]ur
society refuses to force the donations of organs or tissue from cadavers to
benefit or save the lives of the thousands in need of them."187 This is
presumably done out of respect for the survivors of the dead as well as
the fact that such compelled donation may have been against the wishes
of the deceased. Following Justice Stevens' reasoning, it is arguable that
if federal judges must allow states to restrict an individual's decision to
donate fetal tissue, as well as prohibit recipient designation, then presum-
ably a state is free to compel fetal tissue donation.

Whether the government can legitimately restrict certain conduct or
activity, however, is a separate question from whether they can compel
that same conduct or activity. The balancing of interests between the
state and the individual differs in each instance and warrants disparate
outcomes. In the case of compelled donations, the state's interest in pro-

180. OFFICE OF TECHNOLOGY ASSESSMENT PUB. NO. OTA-BA-337, 1 NEW DEVELO-
183. Id. at 2848 (Blackmun, J., dissenting) (quoting Olmstead v. United States, 277 U.S.
438, 478 (1929) (Brandeis, J. dissenting)).
185. Id. at 2188 n.6 (citation omitted).
186. Id. at 2187.
187. Nelson & Milken, Compelled Medical Treatment of Pregnant Women, Life, Liberty,
viding organs and tissue, while of vital concern, should not outweigh the interests of relatives and the wishes of the deceased as to the disposition of the body. On the other hand, the state has an arguably much stronger interest in restricting the right to donate fetal tissue to a specific individual given the dangers of abuse outlined in sections II and III(D). Preventing the deliberate creation and termination of life is, arguably, more pressing than a state’s interest in procuring cadaver organs.

Another potential challenge to prohibition of recipient designation could be brought by potential recipients of fetal tissue who have friends or relatives willing to donate to them. While a total ban on fetal tissue transplant action might arbitrarily infringe on the rights of potential recipients to receive medical care, the proposal advocated in this Note avoids this attack because it allows a person access to fetal tissue from an anonymous source. Undoubtedly, potential transplant recipients have a stronger interest in fetal tissue than did the researchers in Wynn v. Scott and Margaret II. Because the recipient’s own health is at stake, use of the tissue produces a more immediate and material benefit than the academic gains of medical researchers. There is no precedent, however, which suggests that the recipient’s interest in the tissue is equivalent to a fundamental right to receive tissue from a particular individual.

188. This would appear to be the situation in states that prohibit any nontherapeutic research on fetuses ex utero. See Baron, supra note 10, at 14-15. The constitutionality of such statutes depends on a weighing of the individual’s right to medical care against the state’s interest in regulating the tissue donation process.

189. Some have questioned whether a parent should even be allowed to anonymously donate fetal tissue. It is argued that once an elective abortion is chosen, a parent forfeits all rights to consent to use of the fetal tissue. This argument is based on the notion that a parent’s consent for medical procedures involving a fetus requires that the parent be acting in the fetus’ best interest. Encyclopedia of Bioethics 152 (W. Reich ed. 1978). By choosing to have an abortion, the woman puts herself in a conflict with the best interest of the fetus since she has chosen its death. Dempsey, supra note 22, at 18.

In this situation, it may be suggested that a third party act as a proxy for the fetus to determine whether the tissue should be donated. This reasoning does not square with cases holding that parental rights in a live aborted fetus cannot be automatically terminated without due process of law simply because the mother chose an elective abortion for nonhealth-related reasons. See Keith v. Daley, 764 F.2d 1265, 1271 (7th Cir. 1986); Wynn v. Carey, 599 F.2d 193, 195 (7th Cir. 1979). This suggests that the choice of elective abortion should not automatically terminate a parent’s quasi-property right in a dead fetus. Although quasi-property rights may not be automatically terminated, they are nonetheless subject to restriction given a legitimate state interest.


D. Substantiality of the State's Interests

Because a prohibition of recipient designation would not unduly burden the right to privacy, a court would use the rational basis test to determine the proposal's constitutionality. This test is satisfied when the regulation is rationally related to a legitimate state interest.\textsuperscript{192}

States have a legitimate interest in regulating a broad array of social and health matters. Fetal tissue transplantation falls within this category.\textsuperscript{193} In particular, the state has an interest in preventing potential exploitation and commercialization of women and fetuses through this procedure. In \textit{Margaret I}, the court indicated that when a statute is designed to remove the incentives for researchers to promote abortions or manipulate timings of abortions for the purpose of supplying fetal tissue for experimentation, the statute is rationally related to an important state interest.\textsuperscript{194} A prohibition of recipient designation would similarly remove incentives for pregnancy and abortion for the purpose of supplying fetal tissue to a specified recipient.

Additionally, the state's interest in the psychological and physical well being of a woman is protected by the proposal to the extent that it discourages pregnancy for the sole purpose of supplying tissue. In the case of intrafamily organ transplants, there is a danger that the donor will feel pressured to donate fetal tissue.\textsuperscript{195} Such coercion may preclude truly voluntary consent.\textsuperscript{196} A similar danger exists when a woman can supply fetal tissue to a relative or friend. Moreover, because fetal tissue may require less compatibility between the donor and recipient,\textsuperscript{197} a much larger group of possible recipients could pressure the woman to donate fetal tissue than in the typical organ transplant situation. Even when a woman intends to use tissue to benefit herself, thus obviating the risk of outside coercion, the state still has an interest, albeit weaker, in protecting against the physical dangers of pregnancy and the abortion procedure, dangers particularly acute when a woman is already ill. In the case of a healthy woman who wishes to create tissue for storage,
perhaps the strongest interest the state could assert is the prevention of degradation of the reproductive process.

E. The Proposal is Not “Unnecessarily” Broad

*Roe* requires that when fundamental rights are infringed, regulations “must be narrowly drawn to express only the legitimate state interests at stake.”198 The Supreme Court’s use of the word “only,” however, is deceptive. In defining the permissible bounds of legislation, the Court in *NAACP v. Alabama* speaks in terms of regulation that is not “unnecessarily broad” in its scope.199 Thus, when a particular regulation unintentionally infringes upon fundamental rights, the issue is whether that regulation might be more narrowly tailored to suit only the state’s legitimate interest.

Although a prohibition on recipient designation would not trample on fundamental rights, the proposal may infringe on the actions of people not targeted by the regulation. Why, for example, should a pregnant woman with no prior intention to conceive and abort, and yet is now pregnant, be prohibited from specifying a recipient of fetal tissue when she later seeks a legitimate termination of her pregnancy? The proposal, by not taking into account a person’s intentions, would exclude any parent of an electively aborted fetus from being able to designate a recipient, regardless of the woman’s original intentions when she became pregnant.200

The key is whether the prohibition “unnecessarily” overreaches. Arguably it does not, given the impracticability of alternative regulations. For instance, to allow “innocent” parents to designate recipients, a state could require a disinterested medical board to make a determination of the facts and circumstances surrounding the pregnancy and proposed donation. This board would have to determine whether the woman intended to become pregnant for the purpose of furnishing tissue to a specific recipient. Ultimately, however, the board would have no effective means to arrive at such a determination, since the woman’s account, in many cases, would be the only evidence the board would have.201 Thus, any truly enforceable regulation in this area cannot turn on a woman’s mental state. Because practical constraints dictate that the regulation cannot distinguish between different types of elective abortion donors, the proposal does not unnecessarily infringe on the rights of cer-

198. *Id.* at 155 (emphasis added).
200. Similarly, a woman having an abortion for a legitimate health reason would not be able to donate the tissue either to herself or to anyone else she might designate.
201. Any situation when a woman becomes pregnant and at the same time has a friend or relative in need will itself suggest that she acted intentionally. Even if the woman has acted innocently, it is difficult to imagine how she could rebut this presumption.
tain parties.\textsuperscript{202}

Moreover, unlike the statute in \textit{Margaret II},\textsuperscript{203} the proposal is not unconstitutionally vague even though it restricts access to fetal tissue based on the occurrence of an elective abortion. The criminal statute in \textit{Margaret II} was struck down because a pathologist examining a fetus would not be able to distinguish spontaneously aborted fetal tissue from electively aborted fetal tissue.\textsuperscript{204} The current proposal, however, circumscribes the powers of parents who will necessarily know whether the fetal tissue resulted from a spontaneous or elective abortion.

Another scenario in which application of the proposal is arguably overbroad is when a need for tissue arises after a woman has become pregnant. For instance, if a woman became pregnant and a relative or friend was subsequently diagnosed with a disease treatable with fetal tissue, she could demonstrate that she had no ill designs in becoming pregnant because she had no anticipated need for fetal tissue when she originally conceived.

Even in those cases where a woman has not intentionally become pregnant, however, the state legitimately may retain an interest in removing incentives to have an abortion. These incentives may arise if a woman feels pressured by an ailing relative into aborting or by a physician who suggests to the woman that by aborting she may help an anonymous recipient. Thus, the state's interest in removing incentives to abort outweighs an "innocent" donor's interest in recipient designation.

\section*{Conclusion}

Current fetal tissue regulations do not adequately address the unique issues presented by fetal tissue transplantation. Fetal tissue transplantation offers promising treatments for a variety of ailments, including brain disorders, diabetes, and possibly spinal cord injuries. The growing number of therapeutic applications for fetal tissue, however, will soon outstrip the current supply. Consequently, because elective abortions will provide the primary source for the tissue, a woman will have a powerful incentive to conceive and abort to supply another or herself with tissue. Under most state's versions of the Uniform Anatomical Gift Act, this scenario is permissible since either parent can donate all or part of a dead fetus to a specific individual.

\begin{itemize}
\item [202.] A related argument can be made under the equal protection clause. The regulation could be attacked as discriminatory in allowing those who have miscarriages to designate a fetal tissue recipient but prohibiting women who have elective abortions from being able to specify. This claim should fail insofar as no fundamental right is being impinged. Moreover, the regulation does not involve any form of invidious discrimination.
\item [203.] 597 F. Supp. 636 (E.D. La. 1984) \textit{aff'd on other grounds sub nom.} Margaret S. v. Edwards, 794 F.2d 994 (5th Cir. 1986).
\item [204.] \textit{Id.} at 675-76.
\end{itemize}
This Note has proposed that states amend their enactments of the Uniform Anatomical Gift Act to prohibit parents from designating the recipient of fetal tissue from an elective abortion. The primary objection to this proposal will be that it interferes with a woman's constitutionally protected right to privacy. The Note argues, however, that the right to privacy as it relates to reproductive autonomy primarily protects decisions of whether or not to bear a child. The ability to designate the recipient of fetal tissue is not essential to the exercise of this right or any other privacy rights. Furthermore, the proposal is rationally related to a state's legitimate interest in precluding the exploitation of women and fetuses, and is, therefore, constitutional.

Admittedly, the proposal will infringe upon the rights of people in certain borderline cases in which the woman did not intend to conceive to supply fetal tissue. The most likely situation would occur when the need for fetal tissue arises after the woman becomes pregnant. Even in this situation, however, the prohibition of recipient designation removes a significant incentive to abort because of coercive pressure, thereby serving a legitimate state interest. Hence, on balance, the benefits gained by strictly prohibiting recipient designation may outweigh any harm in those isolated cases in which the regulation arguably overreaches.