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## FETAL TISSUE TRANSPLANTATION: ETHICAL AND LEGAL CONSIDERATIONS

by Kimberly Fox Duguay\*

Editor's Note: On May 28, 1992, the House of Representatives overwhelmingly approved a three-year reauthorization for the National Institutes of Health which included a provision restoring federal funding of fetal tissue research. In spite of congressional support, the 260-148 vote is just shy of the required 2/3 majority for overriding the expected veto by President Bush.

### INTRODUCTION

By age fifty-three, Donald Nelson had suffered for twenty years from the muscle rigidity and tremors often associated with Parkinson's Disease.<sup>1</sup> In November of 1988, he became the first American to have the cells of an aborted fetus implanted into one side of his brain.<sup>2</sup> This procedure was conducted in hopes that the fetal tissue would begin to prompt his brain to secrete dopamine, the chemical whose deficiency causes the symptoms of Parkinson's Disease.<sup>3</sup> Since the implant, Mr. Nelson's regular dosage of medicine has decreased by forty-five percent. He has also regained the use of his left hand and rarely requires the use of crutches.<sup>4</sup>

Until recently, there existed little hope for the one million Americans who suffer from Parkinson's Disease. Previously thought to be untreatable, this is just one of the many conditions which researchers are studying in relation to fetal tissue transplantation.<sup>5</sup> As with other forms of biotechnology, transplantation of fetal tissue raises a number of complicated issues. This article will focus on fetal tissue transplant technology, the current state of regulation and surrounding ethical and legal considerations.

### OVERVIEW OF THE TECHNOLOGY

Fetal tissue has had a role in medical research since the 19th century.<sup>6</sup> During the 1930's, researchers began to study the biochemical properties of fetal tissue in efforts to find new treatments.<sup>7</sup> In

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<sup>1</sup> Freundlich, *New Hope for Neurotransplants*, BUS. WK., JULY 23, 1990, at 69-70.

<sup>2</sup> *Id.*

<sup>3</sup> Bauer, *Bioethical and Legal Issues in Fetal Organ and Tissue Transplantation*, 26 HOUS. L. REV. 955, 957 (1989).

<sup>4</sup> Freundlich, *supra* note 1, at 69.

<sup>5</sup> Other conditions include Alzheimer's Disease, blindness, diabetes, epilepsy, hemophilia, leukemia, spinal cord injuries and Tay-Sachs. Bregman, *Conceiving to Abort and Donate Fetal Tissue: New Ethical Strains in the Transplantation Field--A Survey of Existing Law and a Proposal for Change*, 36 UCLA L. REV. 1167, 1168 (1990). The treatment of some forms of cancer, Huntington's Disease and strokes are also being researched in relation to the use of fetal tissue. Frankowska, *Fetal Tissue Transplants: A Proposal to Amend the Uniform Anatomical Gift Act*, 4 U. ILL. L. REV. 1095, 1098 (1989).

<sup>6</sup> Burlingame, *Commercialization in Fetal-Tissue Transplantation: Steering Medical Progress to Ethical Cures*, 68 TEX. L. REV. 213, 223 (1989).

<sup>7</sup> *Id.*

1954, the Nobel Prize for medicine was awarded to researchers who developed the polio vaccine through the use of cell lines created from human fetal kidney cells.<sup>8</sup>

Fetal tissue transplantation is often utilized in the treatment of conditions involving a traumatic injury or a degenerative process which has destroyed the vital tissue responsible for the production of hormones, enzymes, and other chemicals necessary for the proper functioning of a healthy body.<sup>9</sup> In treating conditions that involve an affected area, physicians may prescribe drug therapy which includes the administration of daily doses of the deficient chemical. However, prescription drugs often fail to treat the underlying disease and sometimes cause undesirable side effects and even death.<sup>10</sup>

Another alternative for the patient is the utilization of cadavers and living donors to provide transplantable tissue. However, this is limited because of the shortage of available donors.<sup>11</sup> Fewer than twenty percent of accident victims become organ donors, it is estimated that over 15,000 Americans are waiting for organs each day.<sup>12</sup> Moreover, the cells from these sources are generally incapable of reproducing. Since adult tissue contains antigens and other chemical markers which cause the recipient's body to identify them as foreign, a transplant involves a high risk of rejection by the recipient's immune system.<sup>13</sup>

In contrast, the use of fetal tissue has several advantages. Currently, there is no shortage of available fetal tissue due to the 1.6 million elective abortions which occur annually in the United States.<sup>14</sup> Many believe that without any practical alternatives, this readily available source of tissue should not be needlessly discarded.<sup>15</sup> Since fetal tissue is "immunologically naive," it is less likely to possess the antigens which cause the recipient's immune system to reject the tissue cells. Moreover, it grows far more rapidly than adult tissue, and the development continues "both physically and functionally after transplantation."<sup>16</sup>

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<sup>8</sup> *Id.*

<sup>9</sup> *Id.* at 217. In 1988, it was estimated that "as many as 5 million Americans suffering from Parkinson's Disease (1 million), Alzheimer's disease (2.5 to 3 million), Huntington's disease (25,000), type I diabetes (600,000), stroke (400,000), and spinal cord injuries (several hundred thousand)" could be helped if the treatments involving fetal tissue transplantation proved to be successful. Thorne, *Regulating Commerce in Fetal Tissue*, 26 Soc'y 61 (1988).

<sup>10</sup> See Burlingame, *supra* note 6, at 217.

<sup>11</sup> Bauer, *supra* note 3, at 961.

<sup>12</sup> *Id.* at 962.

<sup>13</sup> See Burlingame, *supra* note 6, at 218. Researchers have also attempted to find other sources of transplantable material which do not create such a high risk of rejection. For example, several research groups have attempted to transplant the tissue from Parkinson's disease patient's adrenal gland into the patient's own brain in hopes that the tissue will begin to produce the levels of dopamine which the recipient's brain lacks. Utilizing the patient's own tissue eliminates the risk of rejection while avoiding the ethical dilemmas associated with fetal tissue transplantation. However, the results of this procedure have been inconclusive. Bauer, *supra* note 3, at 962.

<sup>14</sup> Archibald, *Embryonic Enterprises: Researchers Reap Harvest in Abortions*, Washington Times, Jan. 6, 1992, at A1.

It should also be noted that many of the abortions conducted in the United States are conducted with the use of a vacuum suction machine which destroys much of the tissue, thereby rendering the tissue unusable for research purposes. Dr. Janice Raymond, a medical ethics and women's studies professor at the University of Massachusetts, testified in front of the House Energy and Commerce Subcommittee on Health in April of 1991 that only 90,000 of the early aborted fetuses in the United States are fit for use under current fetal tissue transplantation or research practices. *Id.*

<sup>15</sup> Bauer, *supra* note 3, at 963.

<sup>16</sup> Bregman, *supra* note 5, at 1170. See also Bauer, *supra* note 3, at 961.

Researchers have developed processes which cause certain types of fetal cells to proliferate in the laboratory. This greatly increases the number of recipients who can be treated from a small sample of fetal tissue.<sup>17</sup> For example, one biotechnology firm has developed a method making it possible to treat twenty diabetics from the pancreas cells of a single fetus.<sup>18</sup> In addition to these benefits, cryopreserved fetal cells have been found to be ninety-eight percent viable for up to two months.<sup>19</sup> Cryopreservation allows researchers time to make certain they have the correct cells and to test for bacteria and viruses.<sup>20</sup>

Even though the techniques for fetal tissue transplantation are the same, the type of tissue and its subsequent placement may vary depending upon the particular disease being treated. The optimal age of transplantable fetal tissue varies according to the different diseases being treated.<sup>21</sup>

The method of abortion may affect the desirability of the fetal tissue. Although a hysterotomy is the least damaging to the fetus and provides superior tissue, this method poses the greatest health risk to the woman. On the other hand, dilation and evacuation is more destructive to the fetus and is usually ineffective in safeguarding the necessary organs for transplant. However, this procedure presents the least health risk to the woman.<sup>22</sup> This creates a dilemma because the woman's safety may be pitted against extracting usable fetal tissue.

Material for fetal tissue transplantation may come from either elective abortions or spontaneous abortions (miscarriages). For some people, spontaneous abortions present fewer ethical problems because they are similar to normal donor situations. In such a situation, the donor's death is not a result of a purposeful act by the "next of kin" who has the intent to terminate the donor's life.<sup>23</sup>

However, because the time and place of a spontaneous abortion is unpredictable, there is increased difficulty in preserving the fetal tissue. Researchers prefer the fetal tissue from an elective abortion

<sup>17</sup> Burlingame, *supra* note 6, at 221. For example, in search of a treatment for diabetes, researchers at Hana Biologics have isolated pre-islet cells from pancreatic fetal tissue and have discovered procedures which cause these cells to multiply in the laboratory. The islet cells are implanted in a fold of fat which connects the patient's "abdominal viscera with the stomach." The necessity for intrusive surgery is eliminated due to the cells functional independence from the pancreas, and the estimated time period for this out-patient procedure is fifteen minutes. In addition, since the use of fetal cells eliminates the risk of rejection by the body's immune system, this procedure may be conducted without any tissue matching, or the use of immuno-suppressive drugs. *Id.*

<sup>18</sup> Danis, *Fetal Tissue Transplants: Restricting Recipient Designation*, 39 HASTINGS L.J. 1079, 1085 (1988). In fact, similar technology is being developed to produce cloned fetal material to supplement aborted material in the production of brain cells for the treatment of Parkinson's Disease. *Id.*

<sup>19</sup> Freundlich, *supra* note 1, at 70. Cryopreservation is a method of "low temperature preservation" which facilitates the storage and transportation of fetal tissue. *See* Burlingame, *supra* note 6, at 214.

<sup>20</sup> Freudlich, *supra* note 1, at 70. It should be noted that there is some controversy in the medical community that there may be a risk of transferring some disorder or disease present in the fetal tissue to the recipient. Dr. William M. Landau, chief of neurology and neurosurgery at the Washington University School of Medicine stated "[A]ny time one implants potentially infected tissue into someone else's body, then there's always going to be a risk." Archibald, *supra* note 14, at A1.

<sup>21</sup> Bregman, *supra* note 5, at 1170. Procedures requiring fetal organs must necessarily utilize older tissue, whereas the tissue utilized in the treatment of disorders such as Parkinson's disease and diabetes may be between nine and fourteen weeks. The fetal tissue should not be utilized too young due to researchers' fears that the transplantation could "result in runaway cell growth resembling that of a brain tumor." *Id.*

<sup>22</sup> *See generally* Frankowska, *Fetal Tissue Transplants: A Proposal to Amend the Uniform Anatomical Gift Act*, 4 U. ILL. L. REV. 1095, 1098 (1989). A hysterotomy, like a Caesarian section, involves the surgical opening of a woman's abdomen and uterus, and the removal of the fetus. Dilation and evacuation involves a mechanical evacuation of the uterus by dilating the cervix and removing the fetus through a vacuum tube. *Id.*

<sup>23</sup> Bauer, *supra* note 3, at 960.

because the fetal tissue produced by a spontaneous abortion may be adversely affected by the anomaly which caused the miscarriage.<sup>24</sup> Consequently, most of the fetal tissue used for transplantation will come from elective abortions.<sup>25</sup>

## CURRENT REGULATIONS

In 1974, the National Commission for the Protection of Human Subjects of Biomedical and Behavioral Research was established through the passage of the National Research Act.<sup>26</sup> This Commission was charged with the inquiry and examination of fetal research. The goal of its investigation was to make recommendations to the Secretary of the Department of Health, Education and Welfare regarding the conditions under which fetal research should be conducted or sustained by the Department.<sup>27</sup> Until this report was completed, Congress issued a moratorium on federally funded fetal research. This Congressional ban resulted from public criticism of the National Institutes of Health's (NIH) funding of fetal research.<sup>28</sup>

In July of 1975, the Commission's recommended guidelines were enacted with minor revisions as federal regulations and apply to all research funded by the Department of Health and Human Services (DHHS).<sup>29</sup> The regulations distinguish between viable and non-viable fetuses and defer to the States all regulation pertaining to non-viable fetuses ex-utero.<sup>30</sup> They also state that non-therapeutic<sup>31</sup> research may not be conducted on a viable fetus ex-utero and that reasonable efforts must be made to resuscitate viable fetuses. Moreover, non-viable fetuses may not be artificially maintained until tissue and organs are removed.<sup>32</sup>

The regulations mandate the maintenance of a "Chinese Wall" between the persons involved in the abortion procedures and the persons involved in the fetal research.<sup>33</sup> This means that personnel involved in the abortion counseling and procedures are legally prohibited from becoming involved in the fetal research. Thus, a woman is protected from any potential manipulation on the part of researchers to pressure her to have an abortion and/or to donate the fetus.<sup>34</sup> In addition, the federal regulations do not distinguish between spontaneously aborted and electively aborted fetuses.<sup>35</sup>

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<sup>24</sup> *Id.* See also Danis, *supra* note 18, at 1084.

<sup>25</sup> *Id.*

<sup>26</sup> Pub. L. No. 93-348, tit. II, 88 Stat. 342 (1974).

<sup>27</sup> See generally Bregman, *supra* note 5, at 1176.

<sup>28</sup> See *id.*

<sup>29</sup> 45 C.F.R. § 46 (1975).

<sup>30</sup> *Id.* at § 46.203(d)-(e). See also Specter, *Fetal Tissue "Acceptable" for Research*, Wash. Post, Sept. 17, 1988, at A1, col 4.

<sup>31</sup> Research may be termed "therapeutic" or "non-therapeutic." Therapeutic research is designed to benefit the subject involved. Non-therapeutic research is designed to gain general knowledge beneficial to others. R. LEVINE, 2 ETHICS AND REGULATION OF CLINICAL RESEARCH 8-9 (1986).

<sup>32</sup> 45 C.F.R. §§ 46.209(c), 46.209(b)(1)-(3) (1989).

<sup>33</sup> *Id.* at § 46.206(a)(3) (1987).

<sup>34</sup> However, under these regulations fetal research is prohibited unless both the mother and father are legally competent and give informed consent. The father's consent is not necessary if his identity is unknown, if he cannot be reached through reasonable efforts, or if the pregnancy is a result of rape. The requirement for paternal consent presents several controversial issues surrounding a woman's right to control her body, and the point at which a father's parental interests in a child should begin. *Id.*

<sup>35</sup> Specter, *supra* note 30, at A12, col. 2. See generally, Frankowska, *supra* note 5, at 1104-06.

In April of 1988, the DHHS once again declared a moratorium on fetal research at the NIH until an outside committee could analyze the ethical, medical, and legal consequences of future research.<sup>36</sup> To accomplish this task, the NIH appointed the Human Fetal Tissue Transplantation Research Panel (HFTTR), which consisted of twenty-one persons, including ethicists, biomedical researchers, attorneys, public policy experts, clinical physicians and religious leaders.<sup>37</sup> In December of 1988, the HFTTR concluded that funding of fetal research was "acceptable public policy" so long as guidelines were established to attempt to separate a woman's decision to abort from her decision to donate the fetal tissue.<sup>38</sup> However, Dr. Louis Sullivan, Secretary of DHHS, extended the moratorium indefinitely in November of 1989.<sup>39</sup>

In July of 1991, as part of a bill re-authorizing programs for the NIH, the House of Representatives passed a bill in a 274-174 vote which includes a provision lifting the ban on federally-funded fetal research.<sup>40</sup> In February of 1992, the Senate Labor and Human Resources Committee approved the bill in a 13-4 vote<sup>41</sup> and sent the vote to the Senate which overwhelmingly approved the bill in an 87-10 vote. However, President Bush has promised to veto the bill.<sup>42</sup>

Because of the current moratorium, adherence to the 1975 regulations is not mandatory. Therefore, legal regulation of fetal research is provided by the Uniform Anatomical Gift Act (UAGA) which applies to post-mortem gifts.<sup>43</sup> Adopted by all fifty States, the UAGA encourages the donation of anatomical gifts through the harmonization of applicable state laws.<sup>44</sup>

The Act defines a decedent as "a deceased individual, including a stillborn infant or fetus," but it does not distinguish between a fetus from a spontaneous abortion and one from an elective abortion.<sup>45</sup> The

<sup>36</sup> Bregman, *supra* note 5, at 1177. The ban only allows research to be conducted with fetal tissue from miscarriages and from abortions performed to save the mother's life. See *Congress: Senate CMTE Votes to End Fetal Tissue Research Ban*, AMERICAN POLITICAL NETWORK ABORTION REPORT (Feb. 6, 1992).

<sup>37</sup> Childress, *Disassociation from Evil: The Case of Human Fetal Tissue Transplantation Research*, in SOCIAL RESPONSIBILITY, 32, 37 (1990).

<sup>38</sup> *Report of the Human Fetal Tissue Transplantation Research Panel*, I CONSULTANTS TO THE ADVISORY COMMITTEE TO THE DIRECTOR, NATIONAL INSTITUTES OF HEALTH (1988), cited in Childress, *supra* note 37, at 37.

<sup>39</sup> Dr. Sullivan spoke for the Bush Administration stating that he worries that some women who are considering abortion may be swayed by the idea that their fetal tissue would aid medical research. *End the Ban on Fetal Research*, N. Y. Times, Feb. 7, 1992, at 28, col. 1. At the time of the moratorium in 1988, the NIH was annually spending approximately 11.8 million dollars on fetal tissue research. In 1989 and 1990, the spending decreased to an average of approximately 7.8 million dollars a year. Archibald, *supra* note 14, at A1.

<sup>40</sup> Neuffer, *Panel Votes to Lift Ban on Fetal Tissue Use*, Boston Globe, Feb. 6, 1992, at 3. Assuming that no representative changes her or his vote, all of the remaining sixteen members who did not participate in the initial vote would be needed to override the President's anticipated veto. See Fram, *House OKs Funding for Fetal Tissue Use*, Buffalo News, July 26, 1991, at A4..

<sup>41</sup> Neuffer, *supra* note 40, at 3.

<sup>42</sup> President Bush recently authorized government storage of fetal tissue resulting from miscarriages and ectopic pregnancies. However, critics assert that this is merely a "smoke screen" developed to diffuse Congressional efforts to overturn the ban on the federal funding of fetal tissue research. See Scanlan, *Bush Hedges as Issue Heads Toward Veto Fight: Critics See "Smoke Screen" in Decision to Keep Ban on Abortion Issue*, Buffalo News, May 20, 1992, at A3.

<sup>43</sup> UNIF. ANATOMICAL GIFT ACT, 8A U.L.A. 1-47. Since fetal tissue transplantation is non-therapeutic and involves a non-viable fetus, under the 1975 regulations many of the safeguards pertaining to fetal tissue transplantation are supplied by the UAGA.

<sup>44</sup> *Id.* at Prefatory Note. See generally Frankowska, *supra* note 5, at 1106.

<sup>45</sup> *Id.* at § 1(b), 8A U.L.A. 30. See Danis, *Fetal Tissue Transplants: Restricting Recipient Designation*, 39 HAST-

UAGA also gives the biological parents the right to donate the fetus.<sup>46</sup> However, if either parent objects, she or he has the power to veto the other parent's decision to donate.<sup>47</sup> Although the sale or purchase of bodily parts is prohibited under the UAGA,<sup>48</sup> the Act permits a donor to designate the recipient.<sup>49</sup>

To date, twenty-five states have not enacted specific restrictions beyond the UAGA.<sup>50</sup> The other twenty-five states have a variety of legislative acts. According to one survey, two states "permit fetal research of all sorts provided that maternal consent is granted,"<sup>51</sup> nine states permit research on dead fetuses under the terms of the UAGA,<sup>52</sup> eight more do the same with very slight modifications,<sup>53</sup> and the remaining six states prohibit non-therapeutic research on dead fetuses if obtained from elective abortions.<sup>54</sup> Thus, state laws applying to fetal research resemble a "patchwork-quilt," ranging from very strict to very liberal.<sup>55</sup>

### ETHICAL CONSIDERATIONS

Fetal tissue transplantation has been highly criticized because of its association with the highly controversial issues surrounding abortion.<sup>56</sup> James F. Childress, a professor of religious studies and of medical education, notes: "A well-developed ethical theory provides a framework of principles within which an agent can determine morally appropriate actions."<sup>57</sup> Often, a practice or policy may be criticized

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INGS L.J. 1079 1089 (1988)..

<sup>46</sup> *Id.* Section 2(b) of the UAGA states that the donor of a fetus may be, in descending order of priority "either parent . . . an adult brother or sister . . . a guardian of the descendant at the time of his [sic] death . . . or any other persons authorized or under obligation to dispose of the body."

<sup>47</sup> Section 2(c) of the UAGA prohibits a person from accepting a donation if the donee is aware of one of the parent's opposition.

<sup>48</sup> Additionally, Congress enacted the National Organ Transplant Act in 1984 which prohibits the interstate commerce of human body parts for "valuable consideration for the use in human transplantation." According to the drafters of this act, "human body parts should not be viewed as commodities," and organizations and individuals should be prevented from profiting by their sale. *See Frankowska, supra* note 5, at 1103.

<sup>49</sup> UAGA at § 6(a)(3).

<sup>50</sup> *See Frankowska, supra* note 5, at 1108.

<sup>51</sup> These survey results are borrowed from Bregman, *supra* note 5, at 1180. The states which provide fetal research with only maternal consent are South Dakota and Tennessee.

<sup>52</sup> These states are Kentucky, Maine, Minnesota, Missouri, Montana, Nebraska, New Mexico, Utah, and Wyoming.

<sup>53</sup> These states are Arkansas, California, Florida, Massachusetts, Michigan, North Dakota, Pennsylvania, and Rhode Island.

<sup>54</sup> These states include Arizona, Illinois, Indiana, Louisiana, Ohio, and Oklahoma.

<sup>55</sup> Bauer, *supra* note 3, at 977. The most liberal approach was taken by South Dakota in a 1973 statute which states, "Experimentation with fetuses without written consent of the woman is prohibited." Conversely, Arizona's 1975 statute, which is one of the most narrow, states:

A person shall not knowingly use any human fetus or embryo, living or dead, or any parts, organs or fluids of any such fetus or embryo resulting from an induced abortion in any manner for any medical experimentation or scientific or medical investigation purposes except as is strictly necessary to diagnose a disease or condition in the mother of the fetus or embryo and only if the abortion was performed because of such disease or condition.

*See Bregman, supra* note 5, at 1180.

<sup>56</sup> For example, Senator David Durenberger, a Republican from Minnesota and a leading opponent of federal funding of fetal tissue transplantation, stated, "This debate is about abortion" when referring to the proposed reauthorization of federal funding for fetal tissue transplants. *Quoted in Neuffer, supra* note 40, at 3.

<sup>57</sup> *See Bauer, supra* note 3, at 999. Childress was a participant on the HFTTR panel established by the NIH in

or condemned for its association with another practice or policy which is considered to be morally wrong.<sup>58</sup> For example, some ethicists have analogized the relationship between fetal tissue transplantation and abortion to the Nazi experiments upon Jews and other prisoners of war.<sup>59</sup>

An English theologian and physicist, John Polkinghorne, asserts that the reasons for a woman to obtain an abortion are complex and "in circumstances of such moral complexity," it is not right to "regard the termination of pregnancy as inevitably so heinous that any subsequent use of the fetal tissue made available is morally disqualified."<sup>60</sup>

Fetal tissue transplantation has sparked public controversy and evoked a broad spectrum of responses. The use of fetal tissue is often dependent upon one's view of the fetus itself. If a fetus is viewed as a "person," abortion is often perceived as murder.<sup>61</sup> In such cases, the abuse rests in the "killing of the baby in the first place," rather than in the use of fetal tissue.<sup>62</sup> For example, a commentary in *Christianity Today* written by a woman whose mother suffers from Alzheimer's Disease states, "The procurement and use of this human fetal tissue to enhance or elongate the life of another human being is not [sic] simple salvage operation. It is purely and simply cannibalism."<sup>63</sup>

The opposite view is "tissue is tissue," and the fetus should "not be dignified to a greater degree than any other tissue which is surgically removed from a woman."<sup>64</sup> For example, a mother of a diabetic girl in Maryland stated, "If the technique were perfected today, I'd hop into bed right now ... I'd kill an unborn sibling to improve my daughter's life."<sup>65</sup>

The major reason for extreme reactions to fetal tissue transplants is because of its link to the highly publicized and heated abortion debate. Often people view the rights and wrongs of abortion and fetal tissue transplantation as standing or falling together. However, many researchers assert that the use of fetal tissue should be viewed as separate from the abortion procedure. For example, Polkinghorne outlined an ethical theory called the "Separation Principle."<sup>66</sup> This theory distinguishes the supply of fetal tissue from its use by developing a parallel between fetal cadavers and homicide victims. Similar to the medical use of a homicide victim's cadaver, fetal tissue should not be considered immoral because the use is not

1988. Childress, *supra* note 37, at 37.

<sup>58</sup> For example, much debate has surrounded the use of results from Nazi experiments on Jews and other prisoners of war, including the Dachau hypothermia and phosgene gas experiments. This debate erupted when data from Nazi phosgene gas experiments was cited in a paper presented at a colloquium sponsored by the Environmental Protection Agency (EPA). *Id.* at 32.

<sup>59</sup> Miller, *On Transplanting Human Fetal Tissue: Presumptive Duties and the Task of Casuistry*, 14 JOURNAL OF MEDICINE AND PHILOSOPHY 617, 630. James Burtchaell, a respected theologian at Notre Dame University and a member of the HFTTR Panel, explains that the researchers who experimented on concentration camp prisoners argued that they were completely absent from the torture and extermination of victims and that the deaths would have occurred with or without their research. He contends that the researchers' professional presence legitimized and endorsed the activities of the abusers and thereby made them accomplices to the wrongdoing. Nonetheless, comparing the abhorrent acts performed during the Holocaust with abortion procedures is misplaced because of the failure to recognize the difference between the attempted genocide of a population and the termination of a being that may potentially achieve "personhood."

<sup>60</sup> Quoted in Dickson, *Fetal Tissue Transplants Win U.K. Approval*, 245 SCIENCE 464, 465 (1989).

<sup>61</sup> See Terry, *Politics and Privacy: Refining the Ethical and Legal Issues in Fetal Tissue Transplantation*, 66 WASH. U.L.Q. 523, 524.

<sup>62</sup> *Id.*

<sup>63</sup> Fish, *The Scandal of Fetal Tissue Research*, 34 CHRISTIANITY TODAY 26 (1990).

<sup>64</sup> Terry, *supra* note 61, at 524.

<sup>65</sup> Morrow, *When One Body Can Save Another*, Time, June 17, 1991, at 54-58.

<sup>66</sup> See D. LAMB, ORGAN TRANSPLANTS AND ETHICS 75 (1990).



associated with the "crime."<sup>67</sup>

Public overreaction to unfamiliar scientific advances is not a novel phenomenon. It involves significant moral dilemmas surrounding the conflict between the development of biotechnology and the maintenance of respect for the sanctity of the human body and potential life. For example, when artificial insemination was introduced in the 1950's, many ethicists denounced it because they said it "separated procreation from marriage in a destructive way."<sup>68</sup> Other ethicists argue that while new technologies are initially disconcerting, when they become more familiar the common sense of society "weeds out potential horrors."<sup>69</sup>

Although the Supreme Court and state legislatures have upheld the legality of abortion with varying degrees of constraints, widespread disagreement still exists. This leads critics to argue that the use of fetal tissue in research and transplantation will result in abortions which otherwise would not occur.<sup>70</sup> They believe this potential increase in abortions would be encouraged by "general altruism." This phenomenon occurs when a woman's motivation to abort stems from the benefit to an unknown recipient. However, the HFTTR states, "the reasons for terminating a pregnancy are complex, varied, and deeply personal," and it regards it as "highly unlikely that a woman would be encouraged to make this decision (to abort) because of the knowledge that the fetal remains might be used in research."<sup>71</sup>

Thus, there is an important distinction between choosing to abort for the purpose of donating the tissue and choosing to donate to ease the emotional pain associated with the decision to abort. Rather than choosing to abort solely to benefit an unknown recipient, it is more plausible that a woman will donate after deciding to terminate a pregnancy so that the fetal tissue may serve a useful purpose. For example, a medical research foundation in California instructed nurses to ask women who were already scheduled for abortion if "they would allow researchers to use the tissue in experiments that may lead to discoveries for better treatments for persons with chronic diseases."<sup>72</sup> The survey reported that ninety-two percent of the women agreed, stating that it would enable "some good" to result from their decision to abort.<sup>73</sup>

In addition, some critics of fetal tissue transplantation claim that the use of fetal tissue for research purposes legitimizes abortion. They believe that women who are ambivalent about their decision to abort will favor abortion due to the research benefits.<sup>74</sup> A logical flaw exists in the argument that fetal research represents a societal endorsement of abortion. The conclusion is that organ donations by homicide victims should be prohibited because this will be viewed as a societal endorsement of murder.

Another criticism of fetal tissue donation is that some women may be persuaded to abort as a result of familial and emotional pressures to help a loved one.<sup>75</sup> A woman may decide to become pregnant with the intention to abort or she may terminate an existing pregnancy so that she can donate the tissue to help an ailing friend or relative. This motive may be referred to as "specific altruism" because it is

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<sup>67</sup> See *id.*

<sup>68</sup> Morrow, *supra* note 65, at 57. In addition, Pope Pius XII denounced artificial insemination even between husband and wife. He declared, "To reduce the cohabitation of married persons and the conjugal act to a mere organic function for the transmission of the germ of life would be to convert the domestic hearth, sanctuary of the family, into nothing more than a biological laboratory." *Id.*

<sup>69</sup> *Id.*

<sup>70</sup> Childress, *supra* note 37, at 39.

<sup>71</sup> Quoted in *id.* at 38.

<sup>72</sup> Lawton, *Fetal-Tissue Transplants Stir Controversy*, 32 CHRISTIANITY TODAY 52 (1988).

<sup>73</sup> *Id.*

<sup>74</sup> See Burlingame, *supra* note 6, at 236. According to this logic, the donation of organs from suicide victims should be banned if they were ambivalent about their decision to end their lives.

<sup>75</sup> See Bregman, *supra* note 5, at 1189.

directed towards a "specific, known, and usually loved individual."<sup>76</sup>

Even though the HFTTR prohibits women from designating the recipient when donating tissue to federally-funded research, the current ban on federally funded research nullifies this provision. At this time, HFTTR regulations are adhered to on a voluntary basis, and thus, the UAGA continues to permit individuals to make directed donations. This creates a risk that women will be exploited and pressured into making donations to family members.<sup>77</sup>

Similar to abortion, the concept of viability is an important dimension in the donation of fetal tissue. In 1973, Roe v. Wade<sup>78</sup> extended the fundamental right to privacy to include a woman's right to an abortion. Under Roe, there is no legal distinction between a woman's choice to abort an accidental pregnancy and a woman's choice to abort a pregnancy intentionally conceived for donation. However, a woman's right to an abortion is not absolute. The state has an "important and legitimate interest in preserving and protecting the health of the pregnant woman" in addition to "protecting the potentiality of human life."<sup>79</sup> The state's interest increases as the pregnancy progresses. Under Roe, the state's interest in the protection of the fetus becomes compelling at the point of viability which occurs at approximately the end of the second trimester.

Since Roe, the Court has wavered in its trimester based viability standard. Justice O'Connor stated in Colautti v. Franklin<sup>80</sup> that the point of viability should remain flexible "for anticipated advancements in medical skill."<sup>81</sup> In a more recent decision, Webster v. Reproductive Health Services,<sup>82</sup> the Court recognized a state interest in the well-being of the fetus. Chief Justice Rehnquist wrote a separate opinion criticizing the "rigid" trimester framework which stated that testing a fetus at twenty weeks to determine viability is constitutional.<sup>83</sup> The trimester framework appears to be on fragile ground, and thus, the point of viability may eventually be determined by the development of a medical standard rather than a legal one.

## RECOMMENDATIONS

Since the ban on federal funding for fetal research continues, the UAGA represents the most logical vehicle for a proposed amendment and therefore would provide the most widespread impact on current practices utilizing fetal tissue.<sup>84</sup> In order to combat some of the social and ethical concerns surrounding the use of fetal tissue for medical and research purposes, two amendments to the UAGA should be implemented. First, the UAGA should be amended to include a provision which prohibits designating a recipient of the fetal tissue. If a woman is not able to designate the recipient, her ability to directly affect a loved one's treatment will be eliminated. In addition, prohibiting donors from specifying a recipient will discourage pregnancies motivated with the intent to donate the fetal tissue.<sup>85</sup>

<sup>76</sup> Childress, *supra* note 37, at 39.

<sup>77</sup> *See id.*

<sup>78</sup> 410 U.S. 113 (1973).

<sup>79</sup> *Id.* at 153.

<sup>80</sup> 439 U.S. 379 (1979).

<sup>81</sup> *Id.* at 387. *See generally* Bauer, *supra* note 3, at 991.

<sup>82</sup> 492 U.S. 490, 109 S.Ct. 3040 (1989).

<sup>83</sup> Rehnquist wrote that the trimester approach has resulted in "a web of legal rules, resembling a code of regulations rather than a body of constitutional doctrine." *Id.* at 3044.

<sup>84</sup> *See* Frankowska, *supra* note 5, at 1115.

<sup>85</sup> Frankowska states, "This amendment would remove the incentive for a woman to become pregnant for the purpose of supplying tissue, or, if accidentally pregnant, to choose to abort for this purpose. *Id.* at 1117.

Secondly, more specific criteria should be developed to determine viability. Recent advances in medical technology have redefined the stage at which viability may occur. Although the Supreme Court will ultimately be responsible for altering the legal trimester framework, the UAGA should develop specific medical guidelines to determine at what point a fetus can be used for research purposes. Since viability depends upon medical advancements and the rate of a fetus's development, criteria should be established to protect both the integrity of the fetus and the research.

The moratorium on federal funding of fetal tissue research should be lifted. In addition, the federal regulations should be amended to include government quality control standards which ensure the safety and integrity of the fetal tissue.<sup>86</sup> If the federal regulations were implemented, the effectiveness of the Commission's recommendations would be greatly increased.

## CONCLUSION

Fetal tissue transplantation evokes various responses. These reactions are a result of the important interests at stake: 1) the woman's interest in controlling her own body, 2) the recipient's interest in receiving life-saving treatment, and 3) the state's interest in protecting a viable fetus. There are also important societal implications as to whether fetal tissue donation should be a personal choice or whether the government should intervene and/or entirely prohibit the use of fetal tissue.

Although one may logically separate the various issues and claim their independence from one another, it is extremely complicated to separate the logical argument from its emotional components. If a person believes that abortion is morally wrong, it may be very difficult for that person to condone the use of fetal tissue from elective abortions. It would require one to emotionally separate her or his feelings about abortion from the beneficial use of fetal tissue.

In this author's opinion, when no clear public consensus exists and several interest groups are involved, ultimate decision-making should reside with the individual. However, some government regulation is needed, such as prohibiting experimentation on the fetus while it is still "alive." This is clearly justified to prevent "freedom of choice" from becoming "freedom to abuse." However, the balance between personal choice and the governmental regulation is delicate and difficult to maintain, especially when there are highly publicized "horror stories" which cause elective officials to respond with legislative backlash.<sup>87</sup>

New medical technologies to treat conditions such as Alzheimer's Disease and diabetes have vast societal implications. Although fetal tissue transplantation is not a new practice, many surrounding issues have yet to be resolved. In order to preserve the moral integrity of an enlightened society, society needs to consider the promotion of technological advancements and the protection of women's constitutional right to privacy and procreative choice. Resolution of these issues is dependent upon further research to allow a more accurate estimation of potential technological advances and upon further ethical debate to weigh the potential benefits against the potential detriments.

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<sup>86</sup> The University of Minnesota has conducted an ongoing study by twenty-five doctors and health professionals from various fields of medicine and biomedical ethics. This study is "the only systematic examination to date of worldwide fetal tissue practices." According to the first phase report, there are currently no government quality control standards for fetal tissue, and there is only limited testing for infectious agents. Archibald, *supra* note 14, at A1.

<sup>87</sup> Legislative response to public outcry due to a highly publicized event is not always negative. For example, the NIH proposed guidelines entitled "Protection of Human Subjects: Policies and Procedures" in November of 1973 was done in response to public outrage over a Yale-New Haven experiment in which a live male fetus was dissected without anaesthesia. See Bregman, *supra* note 5, at 1175-76.