STUDENT SCHOLARSHIP

ARTIFICIAL WOMBS, FROZEN EMBRYOS, AND ABORTION: RECONCILING VIABILITY'S DOCTRINAL AMBIGUITY

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I. INTRODUCTION

Dr. W. David Hager, the current head of the Bush administration's Reproductive Health Drugs Advisory Committee recently stated, "*Roe v. Wade* should be repealed anyway. But if we had the technology to be able to placentize or incubate in a placental environment, then I would say that would be an argument in favor of repeal."[2] Although Hager's comments are highly problematic, they are not without some merit. Once ectogenesis, or the science of the artificial womb, fully materializes, it will dramatically highlight the ambiguity currently present in abortion law's viability standard as articulated by the Supreme Court in *Planned Parenthood v. Casey*.[3]

Casey dismantled *Roe's*[4] trimester framework, citing its rigidity and failure to recognize the state interest in protecting potential life during the first trimester.[5] In its place, *Casey* created a continuum of competing forces—the state interest in protecting

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2. Sacha Zimmerman, *Fetal Position - The Real Threat to* Roe v. Wade, THE NEW REP., Aug. 18 & 25, 2003, at 14, 16.

3. Planned Parenthood v. Casey, 505 U.S. 833 (1992).

4. Roe v. Wade, 410 U.S. 113 (1973).

5. *Casey*, 505 U.S. at 870.

potential life on one side and the mother's fundamental right in terminating her unwanted pregnancy on the other.[6] During the early stages of pregnancy, the woman's right outweighs the state interest.[7] Upon fetal viability, however, the state interest outweighs the mother's interest in terminating her pregnancy.[8]

Viability as the point of demarcation was upheld in *Casey* because the Court reasoned it embodied two principles holding legal significance. The first principle of viability states that a fetus capable of surviving outside the mother's womb is a potential life which warrants state protection.[9] The second principle is that viability[10] represents a normative quantity of time deemed sufficient for a woman to have thoughtfully pondered and carried out her decision to abort.[11] As a result of these two principles working in tandem, *Casey* held after viability, a state's interest in protecting the potential life of the fetus may override the mother's interest in terminating her pregnancy—even if it means proscribing abortion.[12] In other words, after reaching the viability threshold in pregnancy, a state may place great restrictions on abortion to the practical point of prohibition.

However, consider the not too distant future and the technological fruition of the artificial womb. Ecotegenetic technology holds the possibility of advancing embryonic viability to occur precisely at or at least very near the moment of conception. This means that the freshly conceived embryo can gestate to full term outside the mother's womb and inside a separate and discrete man-made womb.

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6. *Id.*

7. *Id.*

8. *Id.* at 870. *Casey* held that the woman's liberty interest in terminating her pregnancy can be found under the auspices of the Fourteenth Amendment's right to privacy. *Id.* at 875.

9. *Id.*

10. *Id.* at 860. At the time *Casey* was decided, viability was held at twenty-three to twenty-four weeks.

11. *Id. See also* RONALD DWORKIN, LIFE'S DOMINION (1993). Ronald Dworkin also supports the fairness proposition. In the chapter titled, "Abortion in Court: Part II," Dworkin advances two reasons why the court is justified in choosing viability as the point where states may restrict abortion. The first reason is that around fetal viability, the fetus' brain may be developed enough to have sentience, which makes the fetus closer to the spectrum of an infant. *Id.* at 169. The second reason is, as the court notes, that "a pregnant woman has usually had ample opportunity to reflect upon and decide whether she believes it best and right to continue her pregnancy or to terminate it." *Id.* While he acknowledges that there are some young women who are "unaware of their pregnancies until they are nearly at term," he discounts this consideration as a rare exception. *Id.*

12. *Casey*, 505 U.S. at 876.

Upon the technology's fruition, viability in its current form is divorced from the current twenty-three to twenty-four week norm and can occur immediately upon conception. Under the first principle of the viability doctrine, fetal independence from the mother's womb occurs immediately and therefore, the state's interest in protecting potential life should immediately trump the mother's right in terminating her pregnancy. This result is simultaneously inconsistent with the second principle driving the viability doctrine— the time allowance for the mother to make an informed and thoughtful decision. The mother, precisely at the moment of conception, would not have a meaningful quantity of time to consider her decision to abort, much less have acted upon the option. Furthermore, the mother's liberty interest in terminating her pregnancy is completely smothered by the competing state interest in protecting life capable of surviving on its own. When viability remains at the twenty-third to twenty-fourth week of pregnancy, the two principles of the viability doctrine are in harmony with each other. When ectogenesis is realized, the two principles clash and collapse; thus undermining *Casey's* abortion jurisprudential standard.

Impending technology shows the viability doctrine is vulnerable because it is based upon ambiguous legal principles. *Casey* couches the state interest in protecting potential life in the theory of fetal independence—whether or not the fetus has a chance of surviving on its own outside the mother's womb.[13] However, it should be clarified that the morally significant core, or the true entity which the Court is striving to protect through its conception of the competing state interest, is the protection of *advanced* fetal development and not merely independence from the womb. In addition, the possibility of ectogenesis allows for a clearer comparison between abortion jurisprudence and the emerging body of law concerning dispositional disputes over cryo-preserved embryos. This comparison will show that abortion jurisprudence will falter with developing embryo disposition law and requires a clarification of the mother's liberty interest in terminating her pregnancy to include the right not to become a genetic parent. Including the right not to become a genetic parent will

13. "[T]he concept of viability, as we noted in *Roe*, is the time at which there is a *realistic possibility of maintaining and nourishing a life outside the womb, so that the independent existence of the second life can in reason and all fairness be the object of state protection* that now overrides the rights of the woman." (emphasis added). *Id.* at 870.

give the mother's liberty interest more weight against the competing state interest in potential life at the advent of developing embryonic technologies.

In order to resolve *Casey's* doctrinal ambiguity, courts should first change the first principle driving *Casey's* viability doctrine to encompass the notion that advanced fetal development—not fetal independence—is the proper principle which warrants state protection. Next, courts should adopt the reasoning of the Tennessee Supreme Court in *Davis v. Davis*[14] and include the right not to become a genetic parent in their construction of a woman's liberty interest in terminating her pregnancy,[15] in addition to the previously delineated interests, such as the right of a woman to control her body and her economic destiny. *Davis*, a case dealing with the genetic parents' custody and dispositional rights over their cryo-preserved embryos, held there was a right not to become a parent. In doing so, *Davis* paid special importance to the mental anguish of being forced into undesired parenthood.[16] These two refinements in abortion jurisprudence will allow the doctrine to withstand future technological advancements.

Section II of this Comment will outline the problematic definition of viability and its current use in abortion jurisprudence. It will introduce a hypothetical scenario of embryonic extraction legislation and discuss several alternate redefinitions of viability. It will conclude with a discussion on why advanced fetal development is the correct morally significant state. Section III will dis-

14. Davis v. Davis, 842 S.W.2d 588 (Tenn. 1992), *cert. denied*, 113 S. Ct. 1259 (1993). *See generally*, Joan Biskupic, *High Court Won't Hear Embryo Case, Women Had Sought Control After Divorce*, WASH. POST, Feb. 23, 1993, at A5.

15. For an expanded discussion on the woman's liberty interest *see* ROSALIND POLLACK PETCHESKY, ABORTION AND WOMAN'S CHOICE: THE STATE, SEXUALITY & REPRODUCTIVE FREEDOM (Northeastern Univ. Press 1990) (1984) (discussing abortion's role in allowing women to fully participate as economic equals to men); Nancy Ehrenreich, *The Colonization of the Womb*, 43 DUKE L.J. 492 (1993) (arguing the woman's liberty interest as defined by the courts is not in fact a recognition of the woman's right because it is contingent upon her physician. Furthermore, the dependence upon the doctor differentially subjects women of color and poor women to their physicians' interpretations of their wishes); Cass R. Sunstein, *Neutrality in Constitutional Law (with Special Reference to Pornography, Abortion, and Surrogacy)*; 92 COLUM. L. REV. 1 (1992) (arguing for an equal protection analysis of abortion legislation); Reva Siegel, *Reasoning from the Body: A Historical Perspective on Abortion Regulation and Questions of Equal Protection*, 44 STAN. L. REV. 261, 265 (1992) (arguing both historical and current physiological-based arguments for anti-abortion legislation shows value judgments about a woman's "natural" role as mother and should trigger heightened scrutiny).

16. *Davis*, 842 S.W.2d at 601.

cuss the *Davis* standard for embryo disposition and the right not to become a parent. It will delineate the proposed solution of adopting the legal analysis of *Davis* into the abortion jurisprudential standard.[17]

II. ABORTION JURISPRUDENCE AND VIABILITY THEORY

Ectogenesis is fast becoming a reality.[18] Scientists have already been able to deliver a baby goat from an artificial womb, and some argue that human fetal use is not far behind.[19] Research aimed at aiding infertile couples is advancing the realization of human embryonic ectogenesis such that a woman's uterus has been duplicated in a lab.[20] When fully developed, ectogenesis would advance viability to occur at or near conception. As a result, when a woman conceives, she could have her embryo removed into an ectogenetic chamber for continued growth if she desires not to gestate the embryo herself.

The artificial womb is not a new subject to the abortion debate. The artificial womb and its impact on abortion jurispru-

17. *See* Christina L. Misner, *What if Mary Sue Wanted an Abortion Instead? The Effect of* Davis v. Davis *on Abortion Rights*, 3 AM. U. J. GENDER & L. 265 (1995). The general thesis of adopting the *Davis* framework into abortion jurisprudence was first advanced by Christina Misner. In her article, Misner provides a feminist critique of the abortion standard and argues that viability is "an arbitrary marker—a convenient legal compromise balancing the Court's slavish adherence to the *Roe* precedent with the anti-abortion fervor purportedly sweeping the nation." *Id.* at 291. However, my contribution to her general thesis is that viability is still a good standard if the existing ambiguity is reconciled by the Court. Instead of a general proposition that the Court should adopt the *Davis* standard, I provide a detailed analysis of how and why this should be done in the *Casey* context.

18. *See* Sacha Zimmerman, *Technology's Threat to Abortion Rights*, S.F. CHRON., Aug. 24, 2003, at D3, *available at* 2003 WL 3761171; Scott D. Gelfand, *Are We Ready for an Artificial Womb?*, TULSA WORLD, Feb. 3, 2002, *available at* 2002 WL 7107556. *Contra* Julie Sevrens Lyons, *Artificial Wombs Could Take Pregnancy into Laboratory: Technology Far from Reality, Scientists Say*, SAN JOSE MERCURY NEWS, Feb. 23, 2003, *available at* 2002 WL 14807658.

19. Zimmerman, *supra* note 2, at 16. Zimmerman reports that Dr. Yoshinori Kuwabara, a Japanese Professor of Obstetrics at Juntendo University has "successfully delivered goats from [an] artificial womb after just three weeks of gestation. Kuwabara says that, with enough funding, his ectogenetic chamber could be ready to use on a human fetus within five years." *Id.*

20. *Id.* at 14. Zimmerman further notes that "Cornell University's Dr. Hung-Ching Liu has taken steps toward developing an artificial womb by removing cells from the lining of a woman's womb and then, using hormones, growing layers of these cells on a model uterus. The model eventually dissolves, leaving a new, artificial womb that continues to thrive. What's more, Liu's team found that, within days of being placed in the new womb, embryos will attach themselves to its walls and begin to grow." *Id.*

dence was a popular topic of philosophical debate during the whirlwind of controversy that preceded and followed the Supreme Court decision in *Roe v. Wade*.[21] Constitutional scholar Laurence Tribe predicted that, "[o]ne effect of any such technology would be to accelerate the time of fetal 'viability,' the time at which the fetus can survive outside the original mother's uterus."[22] Accordingly, one scholar argued that the artificial womb presented the need for clarification of the woman's right to terminate her pregnancy—whether it also included the right to destroy an embryo.[23] Another scholar argued that the artificial womb presented the need to focus the abortion standard away from viability to a question of when life begins.[24] Still others claimed it would show that first trimester abortions may be proscribed if none of the woman's fundamental rights are infringed.[25] No clear consensus was formed, but most agreed that the artificial womb technology had the potential to destabilize the Supreme Court's decision in *Roe* as it would displace the temporal point in pregnancy that viability represented.[26]

A. *Hypothetical Embryonic Extraction Under Casey*

Consider that some scientists predict that human embryonic ectogenesis may become a reality within five years.[27] The need

21. Roe v. Wade, 410 U.S. 113 (1973). *See generally*, Alan Zaitchik, *Viability and the Morality of Abortion*, 10 PHIL. & PUB. AFF. 18, 26 (Fall 1980) (noting "viability is not morally arbitrary just because it is a shifting standard"); Roger Wertheimer, *Understanding the Abortion Argument*, 1 PHIL. & PUB. AFF. 67, 82 (Fall 1971) (noting "eventually the fetus may be deliverable at any time, perhaps even at conception").

22. LAURENCE TRIBE, ABORTION: THE CLASH OF THE ABSOLUTES 220 (new ed. 1992) (noting the types of technology that were pondered included a wide array of possibilities such as the "artificial womb or placenta" or even the technology to allow men to become "pregnant").

23. Michael Buckley, *Current Technology Affecting Supreme Court Abortion Jurisprudence*, 27 N.Y.L. SCH. L. REV. 1221, 1242 (1982) (discussing the need for the Court to clarify between the right to terminate a pregnancy with the right to destroy an embryo).

24. Ken Martyn, *Technological Advances and* Roe v. Wade*: The Need to Rethink Abortion Law*, 29 UCLA L. REV. 1194, 1194 (1982) (arguing the artificial womb technology shows a need to refocus viability away from technological advancements to the "more fruitful question of when human life begins").

25. Mark A. Goldstein, *Choice Rights and Abortion: The Begetting Choice Right and State Obstacles to Choice in Light of Artificial Womb Technology*, 51 S. CAL. L. REV. 877, 882 (1978) (arguing the artificial womb technology shows that a "state may proscribe first trimester feticidal abortions as long as none of the woman's fundamental rights are infringed").

26. TRIBE, *supra* note 22.

27. Zimmerman, *supra* note 2, at 16.

to address the questions posed by scholars some thirty years ago is again resurfacing. Once ectogenesis becomes readily available, it is plausible that states could enact legislation that proscribes abortion post-viability. Since technological advancement would allow fetal independence to occur at or near conception, the practical effect of banning abortion would follow and the mother's liberty interest in terminating her pregnancy would have no legal significance.

An alternate scenario, which I term the "embryonic extraction legislation," proposes states could mandate a woman desiring abortion to extract her embryo into an ectogenetic chamber instead of destroying it through traditional abortion methods. The embryonic extraction legislation would also include provisions proscribing any maternal contact with the potential child and relieving any financial and/or emotional support obligations. The constitutionality of the hypothetical legislation under *Casey* is unclear. While this Orwellian hypothetical may be highly unlikely, it serves to illustrate the need to resolve the ambiguities in viability doctrine. Because viability doctrine is based upon fetal independence, the hypothetical embryonic legislation could pass constitutional muster under the current abortion framework. However, this result could also shock the conscience of society and would require the courts to rework its abortion jurisprudential standard.

The analysis begins with *Casey*. *Casey*'s dismantling of *Roe's* trimester framework purported to clarify the abortion standard.[28] *Casey* maintained the fundamental constitutional judgment of *Roe*: the state's interest in protecting potential life is weighed against the mother's interest in terminating her pregnancy.[29] However, the problems *Casey* addressed with *Roe's* trimester framework were two fold.[30] *Roe* first misjudged the nature of the mother's interest in terminating her pregnancy. *Casey* held the woman's interest is not absolute, even during the first trimester as a state could constitutionally regulate to ensure her choice is an informed one.[31] However, under *Roe*, "almost no regulation at all is permitted during the first trimester of pregnancy."[32]

28. *Casey*, 505 U.S. at 871.

29. *Id.* at 860.

30. *Id.* at 873 (noting "[t]he trimester framework suffers from these basic flaws: in its formulation it misconceives the nature of the pregnant woman's interest; and in practice it undervalues the State's interest in potential life, as recognized in *Roe*").

31. *Id.* at 872.

32. *Id.*

Roe's calculation also meant the state's interest in life was not given sufficient credence during the early months of pregnancy.

Casey noted that "[t]he trimester framework no doubt was erected to ensure that the woman's right to choose not become so subordinate to the State's interest in promoting fetal life that her choice exists in theory but not in fact."[33] However, *Roe's* framework did not allow proper expressions of state interest during the early months of pregnancy.[34] Therefore, *Casey* articulated a new standard allowing the state to regulate abortion before viability as long as it did not pose an "undue burden" upon the woman's right to choose.[35]

Casey reaffirmed a woman does indeed have a right to terminate her pregnancy. But her right is weighed against the state's interest in potential life—an interest which is present throughout the entire pregnancy.[36] Viability as the demarcation between the two interests was upheld as the proper dividing line. The justification for viability's continued use was its embodiment of two principles revered by *Casey*. The first was the functional role of viability represents fetal independence: "the time at which there is a realistic possibility of maintaining and nourishing a life outside the womb, so that the independent existence of the second life can in reason and all fairness be the object of state protection."[37] The second was that viability temporally represents the amount of time sufficient for a woman to have thought about and acted upon her decision to abort: "viability line also has, as a practical matter, an element of fairness. In some broad sense it might be said that a woman who fails to act before viabil-

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33. *Id.*

34. *Casey* noted that even during the early months of pregnancy, a state may regulate abortion:

> Even in the earliest stages of pregnancy, the State may enact rules and regulations designed to encourage her to know that there are philosophic and social arguments of great weight that can be brought to bear in favor of continuing the pregnancy to full term and that there are procedures and institutions to allow adoption of unwanted children as well as a certain degree of state assistance if the mother chooses to raise the child herself.

Id.

35. *Id.* at 874. The undue burden standard in *Casey* is defined as regulation which "has the purpose or effect of placing a substantial obstacle in the path of a woman seeking an abortion of a nonviable fetus." *Id.* at 877.

36. *Id.* at 875 (noting "there is substantial state interest in potential life throughout pregnancy").

37. *Id.* at 870.

ity has consented to the State's intervention on behalf of the developing child."[38]

Although *Casey* decided to clarify some of the problematic areas of abortion jurisprudence in *Roe*, it still contains a doctrinal ambiguity. This ambiguity is highlighted by a hypothetical embryonic extraction evaluated under *Casey*. The embryonic extraction legislation would mandate that a woman extract her embryo into an artificial womb instead of obtaining a traditional abortion. This outcome may comply with the first stated principle of *Casey's* viability standard, that fetal independence from the mother constitutes a life warranting protection by the state. Under ectogenesis, the embryo is capable of independence from the mother's womb at or near conception and may warrant state protection. However, this outcome contradicts the second stated principle of providing a woman with sufficient time to make a thoughtful decision upon her right to terminate the pregnancy. If fetal independence can occur at conception, then she has no time upon which to evaluate her choices. It is unclear under *Casey* how a hypothetical embryonic extraction would be resolved.

When *Casey* was decided, fetal independence and the amount of time deemed sufficient for a woman to decide happened to converge roughly at the same point in a woman's pregnancy. Justice O'Connor even proclaimed that advancing fetal technology would merely affect "the scheme of time limits on the realization of competing interests,"[39] and that the

> [s]oundness or unsoundness of that constitutional judgment in no sense turns on whether viability occurs at approximately 28 weeks, as was usual at the time of *Roe*, at 23 to 24 weeks, as it sometimes does today, or at some point even slightly earlier in pregnancy, as it may if fetal respiratory capacity can somehow be enhanced in the future.[40]

Their assumption abut the affect of medical technology is consistent with Justice Blackmun's opinion in *Webster v. Reproductive Health Services*[41] that, "the threshold of fetal viability is, and will remain, no different from what it was at the time *Roe* was decided."[42] However, ectogenetic technology challenges their presumption that the competing interests will converge at a

38. *Id.*

39. *Casey*, 505 U.S. at 860.

40. *Id.*

41. Webster v. Reproductive Health Services, 492 U.S. 490 (1989).

42. *Id.* at 554 n.9 (Blackmun, J., concurring in part and dissenting in part).

constitutionally convenient time and highlights the underlying ambiguity in the *Casey* standard.

B. *Alternative Proposals*

In order to resolve the ambiguity of the *Casey* standard, the Supreme Court should adopt the reasoning of *Davis v. Davis* and include the right not to become a parent in the calculus of a woman's liberty interest. Furthermore, the Court should clarify *Casey's* viability standard to encompass the idea that advanced fetal development, not fetal independence, is the principle that warrants state protection. Therefore, viability should represent a stage of advanced fetal development and embody the point in time when a woman has had sufficient time to act upon her choice to abort. Under this new conception of viability, advancing medical technology will not collapse the fundamental woman's interest in aborting her pregnancy. Before proceeding with the justification for this standard, I address potential alternative solutions which may be advanced by other scholars.

i. Naturalist Approach

The first alternative is what I term the "naturalist approach." This approach is an outgrowth of the general abortion debate on whether the fetus merits protection under the Constitution as a person.[43] This position advocates the redefinition of viability to represent the point at which the fetus is capable of sustaining itself with minimal or without fetal assistive technologies.[44] The reasoning behind this definition assumes the Supreme Court did not conceive of radical new technologies such as ectogenesis becoming a reality in the near-future. Therefore, instead of exposing the vulnerable definition of viability to new technologies, viability should be redefined to reflect an idea of life being able to sustain itself outside the womb without the assistance of radical reproductive technology.

This approach is problematic as it was never the original intent of *Roe* or *Casey* to exclude fetal assistive technology in its definition of viability. As previously noted, *Casey* took into ac-

43. *See* Michael Tooley, *Abortion and Infanticide*, PHIL. & PUB. AFF., 37, 44 (Fall 1972) (proposing society should recognize a "right to life only if it possesses the concept of a self as a continuing subject of experiences and other mental states").

44. *See* Buckley, *supra* note 23, at 1257 (advocating that it "would have been wiser for the Court to have defined viability as the point at which the fetus is capable of potential life outside the mother's womb *without* artificial aid").

count that fetal reproductive technology could shift the point of viability, albeit slightly, to an earlier point in a woman's pregnancy.[45] The tolerance in *Casey* for variance in the temporal definition of viability includes the availability of new fetal assistive technology.[46] Therefore, the Court always imagined the use of fetal respiratory and incubation technology in its definition of viability.

Furthermore, the naturalist approach effectively erases viability's functional use as demarcation for when the state's interests overrides the mother's. If fetal independence must occur without the aid of respiratory and incubation technology, then the naturalist approach effectively prohibits the state's interest in protecting life. Rarely would a fetus be able to survive on its own until near completion of the nine-month gestational period. Therefore, the line of demarcation would effectively be placed at birth. For the reasons given, the naturalist approach of viability is in direct contradiction with *Casey's* original intent to preserve the state interest in protecting potential life and should not be adopted to reconcile the ambiguity.

ii. French Approach

A second proposal is one I term the "French approach." This approach is derived from the French abortion standard where abortions are permitted during the first ten weeks of pregnancy, "for a woman whose condition, in her own judgment, 'place[s] [her] in a situation of distress.'"[47] The ten-week standard is fixed and not tied to advancements in fetal technology.[48] The French approach advocates choosing a specific point sufficiently late in a woman's pregnancy and rigidly adhering to it as

45. *Casey*, 505 U.S. at 860.

46. *Id.* The following passage clarifies the Court's intent on the use of fetal assistive technologies:

> The soundness or unsoundness of that constitutional judgment in no sense turns on whether viability occurs at approximately 28 weeks, as was usual at the time of *Roe*, at 23 to 24 weeks, as it sometimes does today, or at some moment even slightly earlier in pregnancy, as it may *if fetal respiratory capacity can somehow be enhanced in the future*" (emphasis added).

Id.

47. TRIBE, *supra* note 22, at 73 ("The reality, therefore, is that in France virtually any pregnant woman can get a legal abortion during the first ten weeks of pregnancy. All abortions must be preceded by a discussion between the woman and a counselor, 'especially with a view toward enabling her to keep the child.'") (quoting MARY ANN GLENDON, ABORTION AND DIVORCE IN WESTERN LAW 16-17 (1987)).

48. *Id.*

the line of demarcation. The reasoning behind this approach is the current standard for viability is vulnerable and contingent upon advancing reproductive technologies. To avoid this problem, the Court could create an immutable point in pregnancy to serve as the demarcation between the state's and the mother's interests.

This approach is also problematic. The Supreme Court has maintained that *stare decisis* requires the court to uphold the underlying holding of *Roe*: "Any judicial act of line-drawing may seem somewhat arbitrary, but *Roe* was a reasoned statement, elaborated with great care."[49] To completely sever the reasoning provided in support of *Casey's* viability standard would disrupt the principle of *stare decisis.* The integrity of the Court and the fundamental nature of a woman's interest was of great importance in *Casey* as it stated that, "[l]iberty must not be extinguished for want of a line that is clear."[50] A complete divorce from the substantive doctrinal support given for viability in order to adopt the French approach would be too radical a departure from the original standard. Therefore, the quantitative approach should not be entertained.

C. *Advanced Fetal Development as the Proper Object of State Interest*

The idea of fetal independence driving the first principle of viability theory is a morally significant state on which reasonable persons will hold widely varying views. Whether or not the state interest in protecting potential life should even be included in the legal standard of abortion is a topic of hot debate. Whether the state interest should be included at all is the not the topic of this paper. The tradition of *Roe* and *Casey* both include this interest into the legal equation, and it must be understood as a morally significant state which the courts are trying give credence to and balance against the mother's right to an abortion.

As the proposed alternatives show, it is difficult to formulate a standard that preserves the competing interests articulated in *Roe* while effectively responding to new technologies. The naturalist and French approaches, while preserving the woman's interest, tend to collapse the state interest. On the other hand, maintaining the existing viability standard will collapse the wo-

49. *Casey*, 505 U.S. at 870.
50. *Id.* at 869.

man's interest with the advent of ectogenesis. Therefore, in order to preserve the constitutional judgment of *Roe*, the proper object of the state and woman's interests need to be reformulated.

The Supreme Court states that, "viability, as we noted in *Roe*, is the time at which there is a realistic possibility of maintaining and nourishing a life outside the womb, so that the independent existence of the second life can in reason and all fairness be the object of state protection."[51] While the Court couches the argument of advanced fetal development in terms of independence from the mother, the interests described in protecting a potential life are really a functional conduit for describing advanced fetal development. An embryo removed from a mother's womb and placed into an artificial womb does have a realistic possibility of maintaining life on its own. However, the Supreme Court's notion of fetal independence is intimately tied to the conception that viability will not occur until around twenty-three to twenty-four weeks into pregnancy. These two elements cannot be divorced from each other and still hold their legal significance. The constitutional judgment of abortion jurisprudence is to balance the protection of potential life against the woman's right to terminate her pregnancy. In order to give legal realization to both interests, the woman's interests must be given more strength earlier in pregnancy and potential life later in pregnancy. Therefore advanced fetal development is the correct formulation of viability as a morally significant state that still effectuates a woman's interests.

The morally significant state of advanced fetal development can be further understood by distillation into its polar elements. Around conception, it would not offend the average person for a woman to terminate her pregnancy. Conversely, near the ninth month of pregnancy, a reasonable person would find it offensive if the fetus were to be terminated absent a pressing medical need. Therefore, protecting advanced fetal development and not independence from the mother is the correct standard to justify viability theory as marking a morally significant state.

However, because the Court has assumed a practically fixed notion of viability, the Court has described the moral significance of potential life as fetal independence from the mother. Since ectogenesis poses a fluctuating viability point, the morally signifi-

51. *Id.* at 870.

cant state of protecting potential life should be clarified to entail protection of advanced fetal development and not fetal independence from the mother's womb.

III. DAVIS V. DAVIS APPROACH TO THE DISPOSITION OF CRYOPRESERVED EMBRYOS

The next way to resolve the ambiguity found in *Casey* is by adopting the *Davis* v. *Davis* inclusion of the right not to become a parent into the woman's liberty interest. In delineating why this approach is the best doctrinal resolution to the ambiguity, I first explore the *Davis* v. *Davis* legal analysis and holding.

A. *Davis v. Davis and the Right Not to Be a Parent*

Davis v. *Davis* is a Tennessee Supreme Court decision decided the same year as *Casey*.[52] *Davis* held the Fourteenth Amendment's right of procreative autonomy is binary in nature and includes both a parent's right to procreate and the opposite right against genetic procreation.[53] *Davis* concerned a dispute over the disposition of cryopreserved embryos created by now-divorced Mary Sue and Junior Davis. When married, Mary Sue tried unsuccessfully to give birth through unassisted means.[54] After their continued inability to conceive, the couple explored alternative methods and chose *in vitro* fertilization.[55]

In vitro fertilization proved to be physically and mentally onerous for Mary Sue, subjecting her to a series of painful treatments in order to extract her eggs.[56] After many failed attempts, eventually nine embryos[57] resulted from the union of Mary Sue's eggs and Junior's sperm. Some of the embryos were immediately transferred unsuccessfully to Mary Sue's womb.[58] The remaining embryos were cryopreserved so that Mary Sue could attempt im-

52. Both decisions were made in 1992.

53. *Davis*, 842 S.W.2d at 501.

54. *Id.* at 591.

55. *Id.*

56. *Id.* at 591.

57. There was much discussion in the case about whether to call the embryos "zygotes," "preembryos" or "embryos." The *Davis* court decided upon calling the embryos "preembryos," noting that the distinction between embryos and preembryos is that a preembryo is the stage of establishing the embryo itself. The "embryo," on the other hand, refers to the "first cellular differentiation. . .[in relation] to physiologic interaction with the mother." *Id.* at 594 (citing the Journal of American Fertility Society, Volume 53, number 6, June 1990 at 31S-32S.). For the purposes of this article, I will refer to them as "embryos."

58. *Id.* at 592.

plantation at a later date. The strain of childlessness, however, proved too much for the couple, and they divorced before the remaining embryos could be transferred.[59]

A suit was filed to resolve the dispute over the embryos. First, Mary Sue fought for the right to transfer the remaining embryos to her womb. She thought it would be her last chance at genetic motherhood and she did not want to repeat the painful procedures again.[60] But upon remarriage, she changed her mind and wanted to have the embryos donated to a childless couple.[61] Junior, on the other hand, maintained throughout the length of trial that he wanted to have the embryos destroyed.[62] He continued to stand by his position, even though it was determined that he would not have to contact or support the resultant possible child or children.[63] He stated he did not want to bring children into this world where he would not be able to guarantee both parents' care and support.[64]

Ruling in favor of Junior, the Court held that "the right of procreational autonomy is composed of two rights of equal significance—the right to procreate and the right to avoid procreation."[65] The affirmative right to procreate was established in the Supreme Court case *Skinner v. Oklahoma*[66] which held that "one of the basic civil rights of man"[67] is the right to procreate, and that "[m]arriage and procreation are fundamental to the very existence and survival of the race."[68] Furthermore, the negative right not to procreate was seen by the *Davis* Court as embodied in the principle of procreative autonomy espoused in the "sexual freedom"[69] cases.[70] In support, *Davis* cited *Eisenstadt v. Baird*[71]

59. *Id.*
60. *Id.* at 589.
61. *Id.* at 590.
62. *Id.*
63. *Id.*
64. *Id.* at 604.
65. *Id.* at 601.
66. Skinner v. Oklahoma, 316 U.S. 535 (1942).
67. *Davis*, 842 S.W.2d at 600 (quoting *Skinner*, 316 U.S. at 541).
68. *Id.*
69. David B. Cruz, *"The Sexual Freedom Cases"? Contraception, Abortion, Abstinence, and the Constitution*, 35 HARV. C.R.-C.L. L. REV. 299, 299 (2000) (noting Richard Posner first used the term "sexual freedom cases" and identifying Griswold v. Connecticut, 381 U.S. 479 (1965) as the first in "a series of Supreme Court decisions invalidating anti contraception and anti abortion laws").
70. The Tennessee Supreme Court notes that "the extent to which procreational autonomy is protected by the United States Constitution is no longer entirely clear" after *Webster*. *Davis*, 842 S.W.2d at 601. "The *Webster* opinion lends even less gui-

which stated, "If the right of privacy means anything, it is the right of the *individual*, married or single, to be free from unwarranted governmental intrusion into matters so fundamentally affecting a person as the decision whether to bear or beget a child."[72] (emphasis in original).

The *Davis* Court balanced the interests of both the genetic mother and father in their respective choices for embryonic disposition. In examining the genetic father's claim over the embryos, the court contrasted this suit with abortion cases that implicated a woman's bodily integrity.[73] As a result, the *Davis* Court reasoned that "[n]one of the concerns about a woman's bodily integrity that have previously precluded men from controlling abortion decisions is applicable here."[74] As the embryos are located outside of the woman's body, it was proper to evaluate the father's rights over the embryos alongside the mother's.[75]

Davis favored the rights of the genetic parent who wishes against genetic parentage.[76] While maintaining the facts of each case must be weighed independently, so as not to assert an "automatic veto,"[77] *Davis* held that "[o]rdinarily, the party wishing to avoid procreation should prevail, assuming that the other party has a reasonable possibility of achieving parenthood by means other than use of the preembryos in question."[78] The alternative possibility in achieving parenthood was interpreted broadly. *Davis* noted adoption is considered a reasonable means of achieving

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dance to those seeking the bounds of constitutional protection of other aspects of procreational autonomy." *Id.* However, the court states that whatever the "ultimate constitutional boundaries," "[f]or the purposes of this litigation it is sufficient to note that . . . the right of procreational autonomy is composed of two rights of equal significance." *Id.*

71. Eisenstadt v. Baird, 405 U.S. 438 (1972).

72. *Davis*, 842 S.W.2d at 600 (quoting *Eisenstadt*, 405 U.S. at 453 (emphasis in original)).

73. *Id.* at 601.

74. *Id.* The court discusses the disparate level of pain and trauma that the woman must endure through the IVF process compared to that of the man's contribution. However, the court dismisses this difference ultimately and chooses to focus on general right of procreative autonomy.

75. *Id.*

76. *Id.*

77. *Id.* ("[T]he rule does not contemplate the creation of an automatic veto." However, Junior Davis' wish against genetic parentage was honored.) *See also* Tracy S. Pachman, *Disputes over Frozen Embyros & the 'Right Not to be a Parent,* 12 COLUM. J. GENDER & L. 128, 128 (2003) (noting *Davis* mandates "disputes over preembryos should generally be resolved in favor of the party who wishes to avoid parenthood").

78. *Davis*, 842 S.W.2d at 604.

parenthood.[79] In light of the great likelihood that an infertile couple would explore all means of achieving parenthood, including adoption, *Davis* effectively held that the right of a genetic parent wishing to avoid procreation prevails.

The right of the genetic parent wishing to avoid procreation becomes more important in this context because of the special mental trauma placed upon this parent. *Davis* stated:

> We are not unmindful of the fact that the trauma (including both emotional stress and physical discomfort) to which women are subjected in the IVF process is more severe than is the impact of the procedure on men . . . Their experience, however, must be viewed in light of the joys of parenthood that is desired or the relative anguish of a lifetime of unwanted parenthood.[80]

The mental burden of unwanted parenthood, even though the parent would not have to support or contact the child, is one that should be avoided according to *Davis*.

Davis further considered a third party's interest over the disposition of the embryos—that of the state. *Davis* found that a state could have an interest in protecting potential life of the unborn.[81] However, due to the embryos' early stage of development, the "state's interest in potential human life is insufficient to justify an infringement on the gamete-providers' procreational autonomy."[82] Although the cryopreserved embryos were independent from Mary Sue's womb and could potentially be implanted, the embryos at their early stage of development were not a compelling potential life that warranted the state protection. *Davis* noted that, "the state's interest is marked by each successive developmental stage such that, toward the end of a pregnancy, this interest is so compelling that abortion is almost strictly forbidden."[83] The state's interest in protecting potential life is profound when there is advanced fetal development, not at the early stages of development. Therefore, the right of a genetic parent in avoiding procreation was held paramount, and the embryos were subsequently destroyed by order of Junior.

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79. *Id.* (noting Mary Sue "could still achieve the child-rearing aspects of parenthood through adoption. The fact that she and Junior Davis pursued adoption indicates that, at least at one time, she was willing to forego genetic parenthood and would have been satisfied by the child-rearing aspects of parenthood alone").

80. *Id.* at 601.

81. *Id.* at 602.

82. *Id.*

83. *Id.*

B. *The Proposed Standard*

The hypothetical embryonic extraction legislation introduced earlier in this comment is now revisited. Under the current *Casey* standard, the constitutional outcome of embryonic extraction legislation is unclear. The embryonic extraction legislation might be held constitutionally sound. As a result, a woman would be forced to extract her embryo into an artificial womb if she wanted an abortion. In *Roe*, the concern over the special mental and physical burdens placed upon a woman made to continue her pregnancy and care for an unwanted child lead to finding for a woman's right to terminate her pregnancy.[84] Embryonic extraction would not force a woman to sacrifice her body in order to gestate the embryo and she would not have to care for an unwanted child if we assume that the state will provide for the child.

Compare this outcome to the holding of *Davis*. In *Davis*, the cryopreserved embryos were ordered destroyed even though Junior would not have to contact or care for the potential child born. Rather, Junior's right not to be subjected to the mental anguish of forced parenthood prevailed. In both the embryonic extraction legislation and *Davis* scenarios, both embryos are roughly at the same stage of development. Both embryos are independent from the genetic mother's womb. However, the embryo which originated from within the woman's body (the ectogenesis scenario) would gestate in an artificial womb instead of being destroyed. The embryo which originated outside the mother's body (the *Davis in vitro* fertilization scenario) is destroyed in accordance with the parent's wishes to avoid parenthood. This distinction is an artificial one and should be resolved through the Supreme Court's adoption of the proposed redefinition.

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84. *Roe* included the following commentary on the burdens of caring for an unwanted child:

> Maternity, or additional offspring, may force upon the woman a distressful life and future. Psychological harm may be imminent. Mental and physical health may be taxed by child care. There is also the distress for all concerned, associated with the unwanted child, and there is the problem of bringing a child into a family already unable, psychologically and otherwise, to care for it. In other cases, as in this one, the additional difficulties and continuing stigma of unwed motherhood may be involved.

Roe, 410 U.S. at 152. Furthermore, *Roe* notes that even if the infant would be given up for an adoption, there is still mental strain placed upon the woman. *Id.*

The proposed redefinition includes the *Davis* reasoning in *Casey's* abortion jurisprudential standard. *Davis'* articulation for the right not to become a parent should be included under the woman's liberty interest. *Davis* respected the mental anguish to which a person would be subjected for a lifetime if he or she would be made to become a genetic parent. This is why a parent who wishes to avoid procreation is given precedence over a parent who desires to become a genetic parent. Logically, when a woman chooses an abortion, thereby terminating her pregnancy, she is exercising her desire to avoid genetic parenthood. Therefore, the Supreme Court should recognize the woman's right to avoid procreation in their definition of a woman's liberty interest in terminating her pregnancy.

Furthermore, the first principle in support of *Casey's* viability standard should be clarified to represent the state's interest in advanced fetal development, not independence from the womb. *Davis* stated that early embryonic development, regardless of its independence from the womb does not warrant state intervention to protect its interest. Rather, later fetal development makes the state's interest more salient.[85] The embryos in *Davis* were simply too undeveloped to warrant the state's interest.[86] A reformulated *Casey* viability standard would represent a stage of advanced fetal development and embody the point in time when a woman has had sufficient time to act upon her choice to abort.

C. *Proposed Standard Applied to Hypothetical Embryonic Extraction Legislation — Finding the Ambiguity Resolved*

If the proposed standard is applied to the hypothetical embryonic extraction legislation, a clear outcome can be found. The embryonic extraction legislation would be unconstitutional because it infringes upon the woman's liberty interest not to become a genetic parent. Furthermore, the line of demarcation where the state's interest in potential life overrides the mother's, is at advanced fetal development—not fetal independence. This new definition of viability includes respect for the time needed by a woman to make a thoughtful decision and for life repre-

85. *Davis,* 842 S.W.2d at 602.

86. *Id.* (noting "the potential life embodied by these four-to-eight-cell preembryos (which may or may not be able to achieve implantation in a uterine wall and which, if implanted, may or may not begin to develop into fetuses, subject to possible miscarriage) is at best slight").

sented by advanced fetal development. The redefined point of viability then would not occur at conception, but sufficiently late into a woman's pregnancy. Therefore, as the embryonic extraction legislation would pose an undue burden on a woman's right to choose, the legislation would not pass constitutional muster.

The right not to be forced into genetic parentage vis a vis a cryopreserved embryo dispute should be applied to the abortion standard. The cryopreserved embryo dispute clearly illustrates how advancing technology forces current legal doctrines to collapse. In finding for a father's right not to become a genetic parent in *Davis*, the court found two rights of equal significance—the right to procreate and the right against. Again, the court paid careful attention to the special psychological trauma placed upon a parent who is forced into the role despite her/his wishes. This trauma is found despite the fact that the functional role of caretaker for the child is not imposed upon the genetic parent. The idea of being forced into becoming a genetic parent is the genesis of the trauma which a state should not be able to inflict upon a person. This is clearly analogous to the reasoning in *Roe* and *Casey* which emphasized the physical burdens and emotional consequences of pregnancy should not be forced upon an unwilling mother.

Davis further considered a third party's interest over the disposition of the embryos—that of the state. Although a state could have an interest in protecting potential life of the unborn,[87] when the embryos is in an early stage of development, the state's interest is not strong enough to overcome the individual's right to procreational autonomy. *Davis*, again stresses the morally significant state of advanced fetal development as the correct compass by which courts should base their standard. If independence from the mother's womb is the true moral state with which courts are most concerned, then in the frozen embryo case, the opposite result would have occurred in *Davis*. It is advanced fetal development and not the independence of the fetus from the mother's womb which is the significant state driving the Supreme Court's abortion standard.

IV. CONCLUSION

Casey attempted to clarify the ambiguities of the *Roe* decision. But the current articulation of the abortion standard is still

87. *Id.*

problematic. This is made especially clear when *Casey's* doctrinal contradictions are shown in light of advancing fetal technologies. *Casey's* own ambiguity can be found in its current formulation of viability.

Casey defined viability to represent first, the idea that fetal independence warrants state protection and second, that the standard encapsulates an amount of time deemed sufficient for a woman to have made a thoughtful decision whether or not to abort.

Under current medical knowledge of fetal independence, the two principles conveniently coincide at around the same time in pregnancy—roughly around twenty-four to twenty-eight weeks into a woman's pregnancy. However, when ectogenesis becomes a reality, these two principles will diverge. Fetal independence could occur at or near conception and the woman's fair decision-making-time would collapse. This is the ambiguity in current abortion jurisprudence which must be addressed by the Supreme Court.

If fetal independence remains the center of viability theory, then the outcome under embryonic extraction legislation will contradict the plausible legal analysis and holding of the *Davis* v. *Davis* decision governing the disposition of cryopreserved embryos. In order to avoid this result and to reconcile the existing ambiguity in *Casey*, the Supreme Court should include the reasoning of *Davis* in the abortion jurisprudential standard. The Court should clarify the first principle of viability theory to mean advanced fetal development, not fetal independence. Furthermore, the Court should adopt the right not to be a parent in the conception of the woman's liberty interest. The adoption of these clarifying measures strengthens the doctrinal bases for the abortion standard and makes it less vulnerable to the fluctuations of advancing medical technology. But most importantly, it gives respect to both the state's interest in protecting life and the woman's right to choose.