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Repository Citation

Julia Dalzell, *The Impact of Artificial Womb Technology on Abortion Jurisprudence*, 25 Wm. & Mary J. Women & L. 327 (2019), <https://scholarship.law.wm.edu/wmjowl/vol25/iss2/4>

THE IMPACT OF ARTIFICIAL WOMB TECHNOLOGY ON ABORTION JURISPRUDENCE

JULIA DALZELL*

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INTRODUCTION

What if you could grow a baby in a jar? Well, now you can, sort of. Pediatric researchers at the Children's Hospital of Philadelphia have now created a unique womb-like device that mimics a woman's uterus—complete with prenatal fluid and a pumpless oxygenator.¹ They tested and monitored the effects of the artificial womb on fetal lambs, which “are developmentally equivalent to . . . extreme[ly] premature human infant[s].”² The lambs displayed normal breathing, swallowing, and eye function; grew wool, and had normal growth, neurological function, and organ maturation.³ This new technology is envisioned to transform the care of extremely premature infants

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1. See Emily A. Partridge et al., *A Unique Womb-Like Device Could Reduce Mortality and Disability for Extremely Premature Babies*, CHILD. HOSP. PHILA. (Apr. 25, 2017), <https://www.chop.edu/news/unique-womb-device-could-reduce-mortality-and-disability-extremely-premature-babies> [<https://perma.cc/5KUZ-QH6B>] [hereinafter Partridge et al., *Womb-Like Device*]; see also Olga Khazan, *Babies Floating in Fluid-Filled Bags*, ATLANTIC (Apr. 25, 2017), <https://www.theatlantic.com/health/archive/2017/04/preemies-floating-in-fluid-filled-bags/524181> [<https://perma.cc/9XCG-QP79>]; Emily A. Partridge et al., *An Extra-Uterine System to Physiologically Support the Extreme Premature Lamb*, NATURE COMM. (Apr. 25, 2017), <https://www.nature.com/articles/ncomms15112.pdf> [hereinafter Partridge et al., *Extra-Uterine System*].

2. Partridge et al., *Extra-Uterine System*, *supra* note 1, at 1.

3. See *id.* at 2 (demonstrating that “extreme premature fetal lambs can be consistently supported in an extracorporeal device for up to 4 [sic] weeks without apparent physiologic derangement or organ failure. These results are superior to all previous attempts at extracorporeal support of the extreme premature fetus in both duration and physiologic well-being.” (footnotes omitted)); see also Partridge et al., *Womb-Like Device*, *supra* note 1.

and prevent severe morbidity.⁴ If the test results translate into clinical care, the researchers speculate that in as little as a decade's time, extremely premature infants could continue to develop in these artificial wombs filled with amniotic fluid instead of lying in incubators—a relatively dated form of technology that does little to stimulate growth.⁵

While other researchers had previously attempted to develop an artificial womb (without much success),⁶ the researchers at the Children's Hospital addressed issues of "sterility, size adaptability and efficiencies of space and fluid volume," resulting in the creation of what they coined the "Biobag."⁷ The Biobag is a single-use, completely closed system that can be customized to closely replicate the size and shape of the human uterus.⁸ The Biobag is made from a translucent film to permit ease of monitoring and scanning.⁹ Fetuses transferred to the Biobag are delivered via Caesarean section, given a drug to prevent breathing outside air, and immediately submerged into the artificial womb.¹⁰ The delivery itself is no more hazardous than a routine premature delivery; more than sixty percent of extremely premature babies are currently delivered via Caesarean section.¹¹

Although researchers have reassured the artificial womb is to be used only as a bridge to extend gestation before eventual transfer

4. See Partridge et al., *Extra-Uterine System*, *supra* note 1, at 2 (noting that "over one-third of all infant deaths and one-half of cerebral palsy [cases are] attributed to prematurity"); see also Partridge et al., *Womb-Like Device*, *supra* note 1 (stating that "there could be a large economic impact as well, reducing the estimated \$43 billion annual medical costs of prematurity in the U.S.").

5. See Partridge et al., *Womb-Like Device*, *supra* note 1.

6. See Partridge et al., *Extra-Uterine System*, *supra* note 1, at 2 ("The primary obstacles have been progressive circulatory failure due to preload or afterload imbalance imposed on the fetal heart by oxygenator resistance and pump-supported circuits, the use of open fluid incubators resulting in contamination and fetal sepsis and problems related to umbilical vascular access resulting in vascular spasm." (footnotes omitted)).

7. *Id.* at 2.

8. For more on the science behind the "Biobag," see *id.* at 3–4 (explaining that "[t]he Biobag consists of polyethylene film that is translucent, sonolucent and flexible to permit monitoring, scanning and manipulation of the fetus as necessary. An open, sealable side was incorporated to facilitate insertion of the fetus at the time of cannulation, and various water-tight ports were designed to accommodate cannulas, temperature probes and sterile suction tubing. After cannulation, the Biobag is sealed and transferred to a mobile support platform that incorporates temperature and pressure regulation, padding and the fluid reservoirs and fluid exchange circuitry. The development of the Biobag essentially solved the problem of gross fluid contamination, and has eliminated pneumonia on lung pathology. Throughout the subsequent experiments, low-level amniotic fluid contamination was observed only in circumstances where Biobag re-entry was required. When this occurred, contamination could be cleared by increasing the fluid exchange rate and injecting antibiotics into the bag fluid on a daily basis.").

9. See *id.* at 3.

10. See Khazan, *supra* note 1.

11. *Id.*

into an incubator, it is not unreasonable to speculate that this device could transform assisted reproductive technology as we know it.¹² Artificial wombs, where a baby could be gestated from conception to birth, could be extremely beneficial for those who cannot procreate on their own. Same-sex couples, and even single fathers could benefit from the growing of a baby in an artificial womb. Multiple pregnancies that often result from fertility treatments could be reduced to single pregnancies by transferring “extra” embryos into artificial wombs. The need and use of human surrogacy, a field fraught with debate, could be eliminated.¹³ There could also be broader, positive implications for the working woman. Artificial wombs could diminish the challenges some women in the workforce face while pregnant—passing up job opportunities or tenure positions or not being offered maternity leave, among others.¹⁴ Artificial wombs could eliminate health risks associated with pregnancy and childbirth.¹⁵ Furthermore, it could eliminate hormonally induced issues such as postpartum depression.¹⁶ Arguably, an artificial womb, with a sterile and controlled environment, could create a better outcome for the child, eliminating environmental issues of alcohol, drugs, and other toxins, while decreasing birth defects and malnutrition.¹⁷

12. See Partridge et al., *Extra-Uterine System*, *supra* note 1, at 11 (stating that “[o]ur goal is not to extend the current limits of viability, but rather to offer the potential for improved outcomes for those infants who are already being routinely resuscitated and cared for in neonatal intensive care units. Finally, the implications of this technology extend beyond clinical application to extreme premature infants. Potential therapeutic applications may include treatment of fetal growth retardation related to placental insufficiency or the salvage of preterm infants threatening to deliver after fetal intervention or fetal surgery. The technology may also provide the opportunity to deliver infants affected by congenital malformations of the heart, lung and diaphragm for early correction or therapy before the institution of gas ventilation.”); see also Adam Rogers, *What if You Could Grow a Baby in a Bottle?*, WIRED (Apr. 30, 2017, 7:00 AM), <https://www.wired.com/2017/04/grow-baby-bottle> [<https://perma.cc/T9H7-FD6J>].

13. Conflict often arises in surrogacy when a gestational carrier refuses to subsequently give up the child after birth or if the carrier refuses to adhere to contractual obligations to abort under certain circumstances. See, e.g., Julia Dalzell, *The Enforcement of Selective Reduction Clauses in Surrogacy Contracts*, 27 WIDENER COMMONWEALTH L. REV. 83, 83–85 (2018).

14. It is not farfetched, however, to imagine employers in this utopian world requiring women employees to “use artificial wombs to avoid maternity leave” or insurance companies mandating their use to avoid expenses with complicated pregnancies and deliveries. See, e.g., Rob Stein, *Scientists Create Artificial Womb That Could Help Prematurely Born Babies*, NPR (Apr. 25, 2017, 11:10 AM), <https://www.npr.org/sections/health-shots/2017/04/25/525044286/scientists-create-artificial-womb-that-could-help-prematurely-born-babies> [<https://perma.cc/A8WX-THC9>].

15. See Jennifer S. Hendricks, *Not of Woman Born: A Scientific Fantasy*, 62 CASE W. RES. L.REV. 399, 408–09 (2011).

16. See Alkistis Skalkidou et al., *Biological Aspects of Postpartum Depression*, 8 WOMEN’S HEALTH 659, 659 (2012).

17. See Hendricks, *supra* note 15, at 410–11, 413 (“[S]ocial norms might come to condemn natural gestation as animalistic.”). Artificial wombs could create a safer environment

Artificial wombs seem as if they could substantially improve the reproductive successes of many.¹⁸ Yet, many opponents believe the use and development of artificial wombs would further diminish a woman's role in our society, replacing the most unique and natural abilities of a woman with man-made machines.¹⁹ Others fear this technology might spawn the trading of babies like commodities.²⁰ These concerns of turning procreation into manufacture should be disregarded as highly unlikely—fictional at best.²¹ And others, while recognizing the technology could bring vast medical improvements, do not trust women “to resist the seductive power” of doctors and technology, and fear giving women too free a range of choice.²²

than natural pregnancy, with the exception that any mistake would be made on a “large scale.” *See id.* at 412. Opponents would argue there is this certain *je ne sais quoi* to natural pregnancy that bonds mother and child that must be cherished and prized and cannot be reproduced in any other manner. *See id.* at 441–42. *But see id.* at 443 (“Some parents might even feel more connected to a child developing in the machine than to one growing inside a partner or a paid gestational mother. Perhaps, for example, the machine would have a window; visually oriented people might feel closer because they could see the fetus.”). There is also research on gene expression changes in the placenta during pregnancy that would not happen during artificial womb gestation. *See id.* at 424–26.

18. Some go further to argue ending human pregnancy would finally “free women from reproductive ‘tyranny’, [sic] severing oppressive physical ties between women and children, thus creating equality between the sexes.” *See* Sarah Langford, *An End to Abortion? A Feminist Critique of the ‘Ectogenetic Solution’ to Abortion*, 31 *WOMEN’S STUD. INT’L F.* 263, 264 (2008).

19. *See* Christine Rosen, *Why Not Artificial Wombs?*, *NEW ATLANTIS J. TECH. & SOC’Y* 67, 72 (2003) (quoting Robyn Rowland, “[W]ill women become obsolete?”); *id.* at 74 (“[P]erhaps we shouldn’t treat the human womb like just another organ to be replicated and improved upon.”).

20. *See* Irina Aristarkhova, *Ectogenesis and Mother as Machine*, 11 *BODY & SOC’Y* 43, 53 (2005) (explaining that artificial womb technology “plac[es] [women] in *oppositional relation* to the progress of reproductive science, that is simplistically presented as just wanting to take increased control of the realm of ‘captured wombs.’ . . . [and] women and their ‘populated wombs’ as passive, brainwashed receivers of whatever ‘doctors-men-fathers’ decide to implant there.”); *see also* Hendricks, *supra* note 15, at 443 (“The practice of ectogenesis may actually encourage the parties involved to abandon the fetus. First, further commodification of reproduction might foster a consumer mentality among prospective parents.”). Hendricks’s point, however, assumes that couples use assisted reproductive technology (ART) on a whim. In actuality, the couples or individuals who turn to ART often have struggled with procreating for years. They have invested ample time and money into creating a child they have yearned for. I highly doubt the emergence of artificial wombs will create a new subclass of couples who could afford to use the technology, would prefer to use it over natural gestation, and who would decide to use it without extensive contemplation.

21. *See* ALDOUS HUXLEY, *BRAVE NEW WORLD* 1–19 (Harper & Bros. 1946) (illustrating a futuristic society in which humans are gestated outside the body); *see also* Rosen, *supra* note 19, at 71–72 (quoting Roger B. Dworkin, “[p]resumably babies would be created because someone wanted a baby. To imagine some hideous scenario of millions of babies created artificially for some specific purpose strikes me as unrealistic.”).

22. *See* M.L. Lupton, *Artificial Wombs: Medical Miracle, Legal Nightmare*, 16 *MED. & L.* 621, 627 (1997) (describing how “[a]long the way, women lost a fundamental respect for their bodies that protected the integrity of their breasts and wombs. Today, women are being drugged, suctioned, scraped, scanned, shaved, injected and cut open by the

Transferring a fetus from a woman's uterus to artificial womb, or even growing a fetus from start to finish in an artificial womb, could redefine our legal definition of "viability" and the beginning of "life." Artificial wombs might make it possible that viability, under current legal jurisprudence, would occur near the moment of conception,²³ which could gravely limit a woman's access to and choice of abortion. Furthermore, with the advent of the artificial womb, state interest in protecting potential life could eliminate the practice of abortion altogether—mandating that all babies be instead extracted and transferred to artificial wombs.

This Article will focus on the implications of the artificial womb for abortion and viability standards and how we should redefine reproductive rights and state interests to evolve along with the upcoming technology. I will argue why a woman's right to an abortion needs to be solidified and unbundled to ensure that it outweighs any state interest in outlawing abortions to opt for the "pro-life" alternative of artificial womb transfer. Although artificial wombs might take pregnancy out of the picture, this Article will explain why a woman's reproductive rights are far-reaching and extend to procreative interests beyond pregnancy. Additionally, this Article will examine how the current viability standard under *Casey* needs to be reevaluated or abandoned to advance with new technology. Likewise, state interest in "potential life" should either be clarified or unpacked for fear of being struck down as merely an interest in restricting and limiting the number of abortions for morality reasons. Finally, this Article will address why a woman's right to an abortion extends beyond termination of pregnancy and incorporates the right not to be a mother and the right not to create a child. Pregnancy, although necessary—or once necessary—to procreation, is only one part of the process. While a right to be pregnant and a right to parent or procreate often "work in tandem, one need not follow the other."²⁴ This is not to say, however, that they should never be considered in concert with each other. But for the advancement of reproductive technology and artificial wombs, it is important to flesh out the broad category of procreative rights to pass constitutional muster.

millions. The domain of women has become the domain of doctors. Women's reproductive competency is being increasingly sabotaged by their faith in technology. Having embraced surgery and technology to the extent they have, I have little faith in their ability to resist the seductive power of the ultimate holy grail viz. the artificial womb." (footnote omitted).

23. See Vernellia R. Randall & Tshaka C. Randall, *Built in Obsolescence: The Coming End to the Abortion Debate*, 4 J. HEALTH & BIOMEDICAL L. 291, 298 (2008); Jessica H. Schultz, Note, *Development of Ectogenesis: How Will Artificial Wombs Affect the Legal Status of a Fetus or Embryo?*, 84 CHI.-KENT L. REV. 877, 886 (2010).

24. Kimberly M. Mutcherson, *Procreative Pluralism*, 30 BERKELEY J. GENDER L. & JUST. 22, 38 (2015).

Artificial wombs should be embraced for the great medical advance they are. They should be added to the catalog of assisted reproductive technology options and used in any situation that maintains a woman's right to choice over her body *and* the outcome of her potential fetus. The use of this technology, however, should not be taken as a simple alternative to current abortion procedures. Instead, it calls for redefining and expanding the constitutional right of procreation.

I. ANALYSIS

Abortion jurisprudence was decided long before the possibility of artificial wombs—when termination of both pregnancy and fetus was certain.²⁵ The Court was only faced with balancing a woman's privacy right against the state interest in protecting the fetus from destruction.²⁶ This new technology adds a new interest to the mix. Because an artificial womb could allow a woman to terminate her pregnancy without terminating the fetus or embryo, a state interest in protecting potential life could be simultaneously achieved without impacting a woman's right to privacy (as her right currently stands).²⁷ However, would the state be unduly interfering when it limits her choice to only termination of pregnancy, not termination of fetus? In the context of artificial wombs, is the state interest in potential life really all that compelling?

II. ABORTION & VIABILITY

The Court has rejected all arguments that the unborn is a "person" and thus deserving of equal rights, instead opting for a point of viability at which the fetus can exist without the support of the mother's body.²⁸ Previability, a woman's interest in autonomy outweighs the state interest in potential life.²⁹ But, once viable, the state has an interest in protecting potential life and prohibiting abortion except when medically necessary for the health of the woman.³⁰ *Casey* holds a viability standard of "independent existence" to distinguish when a woman can rightfully undergo an abortion and when the state interest in protecting life outweighs that right.³¹ This does not mean the fetus must be free from medical intervention.³² *Casey* notes

25. See Randall & Randall, *supra* note 23, at 292.

26. *Id.* at 293.

27. In Part II, I will discuss how a woman's reproductive rights should be further delineated to accommodate abortions in an era of artificial womb technology.

28. *Roe v. Wade*, 410 U.S. 113, 158, 160 (1973).

29. See *id.* at 163.

30. See *id.* at 163–64.

31. *Planned Parenthood v. Casey*, 505 U.S. 833, 870 (1992).

32. The Court defines viability generally as the time a fetus was "potentially able to

that medical advancements may alter viability, but nonetheless upholds viability as a critical deciding point.³³ Medical advancements like the artificial womb will affect the balance and primacy of the state and the woman's interests. Because an artificial womb would essentially enable an embryo or a fetus to exist independently of the woman as soon as transplanted, the current viability standard of "independent existence" needs to be redefined or abandoned.³⁴

Where to redraw the line for viability is unclear. Some scholars suggest replacing the current standard with a set number of weeks in gestation—a bright-line time test³⁵ resembling the now-abandoned *Roe* "trimester framework."³⁶ Medical professionals often disagree on viability because the determination is case-specific and dependent on multiple factors.³⁷ Greater clarity could be reached with a rule focused on developmental milestones or age and dates; however, not all fetuses develop and grow at the same rate.³⁸ Some advocate for a redefinition to represent the point the fetus can sustain itself *without* any assistive technologies.³⁹ Alluring, but in reality, the only fetuses likely to survive on their own without any assistance are those born healthy at nine months.⁴⁰ Others suggest viability should represent a stage of "advanced fetal development," not just fetal independence.⁴¹ We could avoid any necessary changes by simply treating the artificial womb as an extension of the woman's uterus, subject to the

live outside the mother's womb, albeit with artificial aid." *Roe*, 410 U.S. at 160 (footnote omitted); see also *City of Akron v. Akron Ctr. for Reprod. Health, Inc.*, 462 U.S. 416, 458 (1983) (O'Connor, J., dissenting) ("As medical science becomes better able to provide for the separate existence of the fetus, the point of viability is moved further back toward conception."); Marion Abecassis, *Artificial Wombs: "The Third Era of Human Reproduction" and the Likely Impact on French and U.S. Law*, 27 HASTINGS WOMEN'S L.J. 3, 11 (2016) ("[J]udges have long acknowledged that . . . viability standard[s] largely depend[] on . . . medical advances existing at the time of the litigation in question.").

33. See *Casey*, 505 U.S. at 860.

34. See Abecassis, *supra* note 32, at 15–16 ("[A]ttributing the personhood to embryos from the moment of conception would be very problematic for the sake of embryonic research, embryonic selection, or abortion. In addition, it would be absurd and extremely procedurally burdensome to consider each one of the thousand of frozen embryos."); Schultz, *supra* note 23, at 885.

35. See, e.g., Schultz, *supra* note 23, at 903; Hyun Jee Son, Note, *Artificial Wombs, Frozen Embryos, and Abortion: Reconciling Viability's Doctrinal Ambiguity*, 14 UCLA WOMEN'S L.J. 213, 223–24 (2005).

36. Erwin Chemerinsky & Michele Goodwin, *Abortion: A Woman's Private Choice*, 95 TEX. L. REV. 1189, 1211 (2017) ("Dividing a woman's pregnancy into three segments, each of three months, seemed arbitrary and based on little except nine being divisible by three.").

37. See Randy Beck, Gonzales, Casey, and the Viability Rule, 103 NW. U. L. REV. 249, 271 (2009).

38. See *id.*

39. See Jee Son, *supra* note 35, at 222.

40. See *id.* at 223.

41. See *id.* at 222 (emphasis added).

same governing laws.⁴² But this essentially denies same-sex couples and males, the paradigmatic examples for whom artificial wombs could benefit, the right to use this technology in a way by which they could still exercise their procreative rights.⁴³ Another suggestion continually noted is using “one standard for in utero fetuses and an entirely different standard for ex utero [fetuses].”⁴⁴ These standards seem problematic and could raise possible fairness and equal protection issues—a couple unable to naturally reproduce being subject to different standards and penalized for using assisted reproductive technology. Similarly, legal protections could categorize and “distinguish between ‘pre-implantation’ embryos (fertilized eggs, frozen embryos) and ‘post-implantation’ embryos (embryos successfully attached to a womb), which could be further separated between ‘intracorporeal’ and ‘ectogenetic’ embryos.”⁴⁵ Subcategories with differing legal statuses sound appealing, but increasingly complex situations where embryos or fetuses “jump” from one subclass to another could muddy the waters.

Post-*Casey* legal decisions do no better at drawing definitive viability criterion. *Gonzales* further blurred the viability line when upholding a ban on “intact D&E [Dilation and Evacuation]” procedures *without* regard to the stage of fetal development.⁴⁶ The *Gonzales* Court has been criticized for its inconsistency:

The Court’s conclusion that Congress can legitimately protect the pre-viable fetus from a brutal death through the intact D&E procedure raises the question why a legislature may not protect the same fetus from other brutal abortion techniques. . . . If a legislature may view the *pre-viable* fetus as a being that warrants protection against the intact D&E procedure, it should be able to protect the same fetus against the standard D&E. The dignity of the not-quite-viable fetus does not change depending on the method by which it will be aborted.⁴⁷

Arguably, the Court has yet to adequately explain why the viability demarcation is drawn at the ability for a fetus to survive outside the womb, and continuing abortion jurisprudence gives little guidance or clarification. With few persuasive alternatives, a lack of principled

42. See Abecassis, *supra* note 32, at 20.

43. See *id.* at 20–21.

44. Schultz, *supra* note 23, at 903.

45. Abecassis, *supra* note 32, at 16.

46. Beck, *supra* note 37, at 278–79. Justice Kennedy explained, “[t]he Act does apply both previability and postviability because, by common understanding and scientific terminology, a fetus is a living organism while within the womb, whether or not it is viable outside the womb.” *Gonzales v. Carhart*, 550 U.S. 124, 147 (2007).

47. Beck, *supra* note 37, at 278–79 (emphasis added).

rationale by the Court, and the inevitable intricacies brought about with new reproductive technology of artificial wombs, we should abandon the viability standard altogether as an “illegitimate and arbitrary line, inappropriate for judicial imposition.”⁴⁸

In abandoning a viability point, a decision of when to terminate should be left to the mother. Absent health concerns, she is most likely terminating a fetus before she believes her fetus is a “life.”⁴⁹ When life begins is not always grounded in science, but instead, moral, philosophical, or religious views.⁵⁰ Women will have differing views and thus should not be held to a singular standard. A state should not be able to protect an intrinsic value of life, when in doing so, they are upholding or forbidding matters essentially of religious or personal beliefs. Abortion should be wholly regarded as a private choice. With government interference, a woman is possibly forced to act in defiance of her own beliefs. For example,

[I]t would be intolerable for a state to require an abortion to prevent the birth of a deformed child. No one doubts, I think, that th[e] requirement would be unconstitutional. But the reason why—because it denies a pregnant woman’s right to decide for herself what the sanctity of life requires her to do about her own pregnancy—applies with exactly equal force in the other direction. A state just as seriously insults the dignity of a pregnant woman when it forces her to the opposite choice, and the fact that the choice is approved by a majority is no better justification in the one case than in the other.⁵¹

Accepting there is a point at which the government has an interest in protecting life as an intrinsic interest *detached* from any one being still presupposes that, at some point before birth, a fetus is a “life” deserving of some sort of moral significance. Drawing any line with respect to viability seems to fly in the face of “not resolv[ing] the difficult question of when life begins.”⁵² Viability is “compelling” because it is presumably the point at which a fetus can survive outside the mother’s womb.⁵³ The fetus becomes a “life” of sorts, or at

48. *Id.* at 252.

49. *Cf.* Chemerinsky & Goodwin, *supra* note 36, at 1229–30 (“The best approach to the abortion issue is for the Court to declare that the decision whether to have an abortion is a private judgment which the state *may not* encourage, discourage, or prohibit.”).

50. *See id.* at 1228 (“The choice of conception as the point at which human life begins, which underlies state laws prohibiting abortion, thus was based not on consensus or science, but religious views.” (footnote omitted)).

51. Ronald Dworkin, *Unenumerated Rights: Whether and How Roe Should be Overruled*, 59 U. CHI. L. REV. 381, 418 (1992).

52. *Roe v. Wade*, 410 U.S. 113, 159 (1973).

53. Chemerinsky and Goodwin make a good point when describing pregnancy itself as uncertain and so to pick a certain point as “viable” is nothing more than arbitrary. *See*

least something resembling life, that we deem worthy of protection at this viability point. And at this point we attribute moral dignity to the fetus similar to that of any other life form. The Court declared that it refused to resolve the question of personhood or when life begins, yet it seems to be doing exactly that when choosing a point of viability where potential life becomes a protected interest.⁵⁴

Disallowing states and the Court to determine a point of viability, a point at which they are inherently defining “life,” would properly leave this private choice in the woman’s hands.⁵⁵ However, because currently a woman’s “right [to an abortion] is not unqualified,”⁵⁶ once we abandon the viability standard the Court needs to balance and reconsider under what circumstances a state’s interest becomes dominant, if any.

III. STATE INTEREST

Where certain fundamental rights are involved, the Court has held that regulation limiting these rights may be justified only by a “*compelling* state interest.”⁵⁷ In the context of abortions, a state currently has a compelling state interest only when the fetus is viable.⁵⁸ If we abandon the current viability standard, does a state still have a compelling interest in “potential life,” or something else? Even

Chemerinsky & Goodwin, *supra* note 36, at 1229 (stating that “pregnancy is more precisely described as bounded in uncertainty. For example, statistically, roughly 10%–20% of known pregnancies will spontaneously terminate, resulting in miscarriages. Moreover, two-thirds ‘of all human embryos fail to develop successfully,’ and terminate before women even know they are pregnant. Even in the most controlled, hormone-rich circumstances, such as in vitro fertilization—over 65% of the embryos end in demise. . . . In other words, there is not a probable chance that but for an abortion there will be a baby resulting from conception.”).

54. *See id.* at 1211.

55. Some scholars promote focusing on the “social life of the child” and not when life begins as the central aspect of “choice.” Amy Borovoy, *Beyond Choice: A New Framework for Abortion?*, DISSENTMAG. (2011), <https://www.dissentmagazine.org/article/beyond-choice-a-new-framework-for-abortion> [<https://perma.cc/9QKA-KMMA>]. Amy Borovoy advocates for the ethical focus to be on the mother’s welfare and the future child’s environment, which will impact society as a whole. *See id.* It is not a revelation that unwanted children born into impoverished families often get stuck in vicious poverty cycles; any Economics 101 class will affirm this fact. However, Borovoy defends this as a driving factor of whether or not to abort:

[T]he logic is that child rearing and a mother’s health (both physical and emotional) are central to producing a good society, and that children respond to the resources and care they receive. This notion of abortion as a social necessity differs from the notion of abortion as a “right” and deemphasizes the dividing lines between “life” and “choice.”

Id.

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

57. *Id.* at 155 (emphasis added) (quoting *Kramer v. Union Free Sch. Dist.*, 395 U.S. 621, 627 (1969)).

58. *See id.* at 163.

when a fetus is viable, the state cannot ban an abortion a doctor deems medically necessary to preserve the life or health of the woman.⁵⁹ The superiority of a woman's health interest reiterates that the state interest in potential life is not absolute. At what point, then, does any state interest outweigh a woman's right—or does it?

Embryos in laboratories or frozen in cryobanks are routinely destroyed, abandoned, or forgotten and forever kept frozen.⁶⁰ The state does not seize, distribute, or prevent their destruction.⁶¹ The state seems to have no interest in this form of “potential life,” yet we entertain the idea that states would have an interest when the conversation shifts to abortion and artificial wombs. It seems outlandish to propose that a state would have an actual or realistic interest in housing and funding millions of parentless fetuses. “Under state-mandated womb-emptying, the state would bear the responsibility of dealing with the resultant children.”⁶² This assumes the state has the resources to fund and support not only the use and monitoring of the artificial wombs themselves, but also the resulting children who would need to be sheltered and fed by state organizations. A state-mandated use of artificial wombs in lieu of current abortion procedures would require the state to fund the embryonic transfer to artificial womb and make the technology readily available to women. If a woman could have afforded a traditional abortion procedure, but now cannot afford the pricey alternative of transfer to artificial womb, she would be left without any option to terminate her pregnancy. Therefore, the state would be required to fund these procedures in order to avoid obstructing a woman's right to terminate pregnancy.⁶³

In order for the state to mandate this “womb-emptying” and gather all unwanted fetuses, they would have to prove the fetus was “abandoned” bodily material.⁶⁴ Courts have been reluctant to allow individuals to assert property interests over body materials said to have been abandoned.⁶⁵ Conversion claims to excised spleen cells,

59. See *id.* at 163–64.

60. See Tamar Lewin, *Industry's Growth Leads to Leftover Embryos, and Painful Choices*, N.Y. TIMES (June 17, 2015), <https://www.nytimes.com/2015/06/18/us/embryos-egg-donors-difficult-issues.html> [<https://perma.cc/J9A4-FLZW>].

61. See *id.*

62. 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, 901 (1978) (footnote omitted).

63. See *id.* at 918–20.

64. See I. Glenn Cohen, *The Right Not to be a Genetic Parent?*, 81 S. CAL. L. REV. 1115, 1146 (2008).

65. See, e.g., *Wash. Univ. v. Catalona*, 490 F.3d 667, 673–74 (8th Cir. 2007); *Greenberg v. Miami Children's Hosp. Research Inst., Inc.*, 264 F. Supp. 2d 1064, 1074 (S.D. Fla. 2003); *Moore v. Regents of the Univ. of Cal.*, 793 P.2d 479, 488–89 (Cal. 1990); *Phillips v. Irons*, No. 1-03-2992, 2005 WL 4694579, at *6 (Ill. App. Ct. Feb. 22, 2005); Cohen, *supra* note 64, at 1146–47.

tissue donation, and sperm from semen have all been struck down.⁶⁶ States might then have no issue claiming unwanted fetuses or embryos are therefore abandoned and up for grabs.⁶⁷ However, there could be a distinction between left behind and unwanted bodily material that no one expects a third party could or would make use of, and unwanted bodily material one intends to destroy precisely so that no one can make use of it. A pregnant woman seeking an abortion might wish to destroy the embryo or fetus precisely so the state cannot force abandonment for its transfer to artificial womb. Possibly one is not truly discarding material, rather affirmatively acting to destroy material.⁶⁸ Furthermore, there seems to be a distinction between bodily materials such as saliva and blood when compared to genetic fetal material. DNA and embryonic material are categorically more powerful than discarded blood cells or organ tissue.⁶⁹ There is a widely accepted notion that an individual is inexplicably connected to their DNA and genetic material—a natural affinity.⁷⁰ Even if a property interest claim to these materials fails, this presumed connection could justify that without explicit consent or intention, the materials cannot be abandoned.

The fact that states currently do not regulate embryos or pre-embryos in the research, cryobank, or assisted reproductive medicine arena, makes it seem as if our fear that states will forcibly seize unwanted embryos to grow them in artificial wombs stems from an intuition that states care less about protecting potential life and instead are largely just distraught by the idea of abortion.⁷¹ Arguably, the state is masking its true interest—protecting society from what the state deems to be an immoral or irrational choice—behind a façade of protecting potential life. Unable to completely ban abortions, states instead can make the process so arduous that women might feel punished to an extent. States imposing undue burdens, or any burdens, on women seeking abortions exemplifies how their interests stem

66. See, e.g., *Wash. Univ.*, 490 F.3d at 673; *Greenberg*, 264 F. Supp. 2d at 1074; *Moore*, 793 P.2d at 488–89; *Phillips*, 2005 WL 4694579, at *6.

67. See *Cohen*, *supra* note 64, at 1146–47.

68. *But see Phillips*, 2005 WL 4694579, at *6 (disregarding a conversion claim because the court held one cannot steal bodily material that has been discarded).

69. See Suresh Viswanath, *An Analysis of Genetic Affinity as an Actionable Head of Damages—ACB v Thomson Medical Pte Ltd*, 8 SING. L. REV. (June 20, 2017), <https://www.singaporelawreview.com/juris-illuminae-entries/2017/an-analysis-of-genetic-affinity-as-an-actionable-head-of-damages-acb-v-thomson-medical-pte-ltd> [<https://perma.cc/B38X-9CG5>].

70. *Id.*

71. Furthermore, in order for artificial womb technology to come to use, there will have to be vast experimentation, including the use of human embryos and fetuses. See *Hendricks*, *supra* note 15, at 433 (“A government that had condoned the experiments necessary to create reliable artificial wombs would be hard-pressed to justify using that technology to compel motherhood.”).

from a desire to limit the decision-making capacity of women because of some outdated paternalistic stereotype or, more convincingly, from the belief that the decision to terminate pregnancy is presumptively wrong—not from their claimed interest in protecting potential life.⁷²

Although the Court in *Casey* declared it was simply balancing state interest with a woman's autonomy,⁷³ its rhetoric seems to provide states with quite a bit of power to structure and debase a woman's decision-making process. The Court "[e]mphasiz[ed] . . . [all] abortion decision[s] should be 'thoughtful,' 'informed,' 'deliberate,' and made [only] after a 'period of reflection.'"⁷⁴ This language was reiterated in *Gonzales v. Carhart*.⁷⁵ Justice Kennedy, writing for the majority, asserted, "it seems unexception[al] to conclude some women come to regret their choice to abort the infant life they once created and sustained. . . . The State has an interest in ensuring so grave a choice is well informed."⁷⁶ The Court seems to view a woman's choice in terms of a woman's inevitable regret—regret that a state can "protect" against. Judgments about abortion might arise from inherent moral judgments about a woman's sexual conduct rather than the moral status of the fetus. As one scholar noted, "[f]or example, many abortion bans provide exceptions for cases of rape. The fetus produced by . . . rape is no less alive than any other, suggesting that the real concern may be the woman's culpability for voluntary sex."⁷⁷ The image of a pregnant woman throughout Court jurisprudence is but "a 'caricature' who is 'capable of the responsibility of motherhood, but not of the full moral responsibility demanded by . . . procreative choices.[]'"⁷⁸ Therefore, it appears the state holds an "interest" in protecting women from their own decisions—or at least the decisions with which it disagrees.⁷⁹

Arguably, the state does have an interest in protecting what it might view to be borderline infanticide. Most everyone would agree

72. See *Planned Parenthood v. Casey*, 505 U.S. 833, 937–38 (1992) (Blackmun, J., dissenting).

73. See *id.* at 851.

74. Jody Lyneé Madeira, *Woman Scorned?: Resurrecting Infertile Women's Decision-Making Autonomy*, 71 MD. L. REV. 339, 356 (2012) (citing *Casey*, 505 U.S. at 872, 885 (plurality opinion)).

75. See 550 U.S. 124, 159–60 (2007).

76. *Id.* at 159.

77. Hendricks, *supra* note 15, at 336 (footnote omitted).

78. Madeira, *supra* note 74, at 361 (quoting Elizabeth Reilly, *The "Jurisprudence of Doubt": How the Premises of the Supreme Court's Abortion Jurisprudence Undermine Procreative Liberty*, 14 J.L. & POL. 757, 790–91 (1998)).

79. For example, the government denies funding for abortion. Because the government is willing to fund more expensive medical procedures associated with childbirth, they are not denying funds due to lack of resources; they are displaying their moral disapproval of abortion.

that aborting an eight- or nine-month-old fetus on the verge of birth, notwithstanding threatening medical concerns, would be morally repugnant. The state has a strong interest in deterring such conduct. However, absent extraordinary circumstances, most abortions are not performed this late.⁸⁰ Most women decide fairly early on whether to terminate their pregnancy.⁸¹ Contrary to some jurisprudence and much literature, women are not feeble-minded creatures that need protecting from their own irrational decisions. They are perfectly capable of weighing the pros and cons of motherhood, the advice and information provided to them by health care professionals, and their likely emotional reaction or possibility of regret.⁸² Because pregnancy is a fairly unpleasant and uncomfortable condition, with side effects including nausea, weight gain, vomiting, etc., women who do not wish to bear a child will have a strong incentive to cease pregnancy as soon as possible. Furthermore, there is much research supporting mother-child bonding in utero.⁸³ The further into the pregnancy a woman is, the more likely she has formed an emotional bond with the fetus, and thus the less likely she is to choose an abortion.⁸⁴

For these reasons, concerns that women will be so indecisive as to postpone an abortion procedure until it nearly mirrors infanticide are somewhat ill-founded. We might view this state interest in preventing murderous-like conduct as detached from any one being and really a more generalized interest in protecting the sanctity of any and all potential life, no matter how remote. However, in the context of abortion, a standard so broad would fail to overcome a woman's free exercise of choice. Additionally, the state interest cannot logically extend quite that far, seeing how the government cannot forbid the use of contraceptives. There seems to be a difference between

80. See Susan Dudley, *Women Who Have Abortions*, NAT'L ABORTION FED'N (2003), https://5aa1b2xfmfh2e2mk03kk8rsx-wpengine.netdna-ssl.com/wp-content/uploads/women_who_have_abortions.pdf.

81. See *id.*

82. See Madeira, *supra* note 74, at 396 (arguing that “[t]hese decisions may even be ones that the decision makers themselves will come to regret. But this inevitability is inherent in the nature of human decision making and individual autonomy; imperfect humans will not always make perfect choices. A suboptimal decision is not necessarily an incompetent decision, and democratic ideals compel extreme caution before we foreclose citizens’ ability to make certain choices for themselves. . . . [I]t is unnecessary (and impossible) to prove that women always make rational reproductive decisions; instead, we must ensure that they have the autonomy to make those decisions, and that we accurately conceptualize autonomy so as to guarantee and maximize this freedom of choice.”).

83. See Carol Sorgen, *Bonding with Baby Before Birth*, WEBMD (2003), <https://www.webmd.com/baby/features/bonding-with-baby-before-birth#1> [<https://perma.cc/4DZ5-6JTS>].

84. See *id.*; see also Dudley, *supra* note 80 (stating that “[m]ost abortions (88%) are obtained in the first trimester of pregnancy”).

this month's egg, and this month's fertilized egg.⁸⁵ Any potential life is then not the correct analysis.

Still, the scope of the state interest vocalized in *Roe* and *Casey* is left vast; boundaries are unclear and motives concealed “under the guise of protecting . . . potential life.”⁸⁶ *Roe* does little to explore whether the state interest in protecting potential life is actually permissible, and *Casey*, relying on precedent, fails to inquire further. Starting with *Casey*, post-*Roe* decisions have moved away from strict scrutiny and instead examined state interest under a test of quasi-intermediate scrutiny with an undue burden standard.⁸⁷ Under intermediate scrutiny, the state action must be substantially related to an important government interest.⁸⁸ The burden of proof rests with the government.⁸⁹ However, courts faced with abortion regulations have left the interest of “potential life” generally unchallenged,⁹⁰ and instead focused on whether regulation places an obstacle in the path of a woman, an undue burden.⁹¹ We have seemed to accept the interest in protecting potential life as “important” without question or further definition—stripping the state from the duty of proving its interest. Courts presume regulation to be legitimate as long as the government has thrown in some potential-life language and does not go too far as to totally prohibit abortions.⁹² “While the court is required to show some deference to the legislatures’ proffered purpose, it need not accept it if it is a ‘mere “sham.””⁹³ In no other context do we allow moral sentiments to take reign over fundamental rights.⁹⁴

85. See Cohen, *supra* note 64, at 1129 (“An attempt to justify assigning personhood to preembryos based on the fact that preembryos are *potential* persons that have an interest in becoming actual persons also faces significant obstacles. It implies that sperm and egg are also potential persons that have interests, something that seems implausible.”).

86. Thornburgh v. Am. Coll. of Obstetricians & Gynecologists, 476 U.S. 747, 759 (1986).

87. I call this quasi-intermediate scrutiny because the *Casey* opinion really does not articulate a level of scrutiny. It makes no statement that the goal of the law must be compelling or important or necessary or substantially related to legitimate goals. Instead, *Casey* mixes scrutiny together with undue burden to create general confusion. See generally Planned Parenthood v. Casey, 505 U.S. 883 (1992). See also Chemerinsky & Goodwin, *supra* note 36, at 1219.

88. See Clark v. City of Shawnee, 228 F. Supp. 3d 1210, 1228 (D. Kan. 2017) (citing U.S. v. Reese, 627 F.3d 792, 802 (N.D. Ill. 2010)).

89. See *id.*

90. See *Casey*, 505 U.S. at 870 (plurality opinion).

91. See *id.* at 874 (plurality opinion).

92. See *id.* at 992 (Scalia, J., concurring in part and dissenting in part) (emphasis added) (“[T]he joint opinion permits the State to pursue [its] interest [in potential life] . . . so long as it is not *too* successful.”).

93. Jenny K. Jarrard, Note, *The Failed Purpose Prong: Women’s Right to Choose in Theory, Not in Fact, Under the Undue Burden Standard*, 18 LEWIS & CLARK L. REV. 469, 484 (2014) (citation omitted) (quoting Edwards v. Aguillard, 482 U.S. 578, 586–87 (1987)).

94. The Court has articulated it declines to do so in the context of abortion as well. I beg to differ. See *Casey*, 505 U.S. at 850 (“Some of us as individuals find abortion offensive to our most basic principles of morality, but that cannot control our decision.”); *Roe v. Wade*,

Courts review the purpose of legislation in other contexts, such as free speech or exercise restrictions, in an attempt to weed out discriminatory intent or any improperly motivated purpose.⁹⁵ In the context of abortion, the Court glosses over purpose and intent without much depth, holding the interest in protecting potential life acceptable under *stare decisis*.⁹⁶

But what exactly comprises a state's interest in "potential life" is then left unclear. The term is thrown around without much consideration of what it encompasses. Professor Dov Fox has unraveled the term and revealed its use to cover four separate interests: (1) "*prenatal welfare* interest," or the preservation of unborn life; (2) "*postnatal welfare* interests," the protection from harmful conduct before birth; (3) "*social values* interests," the promotion of respect for the unborn; and (4) "*social effects* interests," the prevention of tangible harms to society at large.⁹⁷ Using this framework, we can determine whether the state has a prenatal welfare interest, or a lesser interest such as a social value interest. Likely, the protection of potential life is really only a social value interest. Social value interests do not rise to the "compelling" level that would enable a restriction of rights.⁹⁸ Instead, social value interests attempt to regulate morality or cultural ideals.⁹⁹ Courts have accepted concern for respecting the unborn, protecting society from "further coarsen[ing]," and upholding the perception of the "process [in] which life is brought into the world."¹⁰⁰ This presumption, that prenatal life is inherently morally valuable at any stage, is problematic because it essentially recognizes when "life" begins. Both attempted and realized abortion restrictions throughout history further demonstrate how the debate stems from social values and moral beliefs about abortion in general—not prenatal or postnatal welfare interests.¹⁰¹ Government spending is

410 U.S. 113, 116 (1973) ("Our task, of course, is to resolve the issue by constitutional measurement, free of emotion and predilection."). *But see* *Gonzales v. Carhart*, 550 U.S. 124, 156–57 (2007) (discussing an interest in protecting society against moral coarsening).

95. *See, e.g.*, *U.S. v. Windsor*, 133 S. Ct. 2675, 2707 (2013) (explaining that the Court may strike down an otherwise constitutional law for bad motive).

96. *See* Jarrard, *supra* note 93, at 478, 515 ("The courts . . . have tended to treat abortion as if it exists in a legal vacuum. The analysis is infused with emotion.").

97. Dov Fox, *The State's Interest in Potential Life*, *J.L. MED. & ETHICS* 345, 346 (2015).

98. *See id.*

99. *See id.* at 349.

100. *Gonzales v. Carhart*, 550 U.S. 124, 157, 160 (2007) (citations omitted).

101. *See generally id.* (upholding prohibitions on intact D&E procedures, convinced they were morally repugnant); *Planned Parenthood v. Casey*, 505 U.S. 833, 837–38 (1992) (upholding informed consent, 24-hour waiting periods, mandatory ultrasound viewing, but invalidating spousal notifications); *City of Akron v. Akron Ctr. for Reprod. Health, Inc.*, 462 U.S. 416 (1983) (invalidating a requirement that D&E abortions be performed in hospitals because the procedure was safe, accessible, and easily administered in clinics);

another example of how a state's moral compass steers the wheel of legislation. Childbirth is much more costly than abortion, yet the government freely funds one but not the other.¹⁰² The government is not conserving resources or acting frugally when refusing to fund abortion; rather, it is using its power of the purse to discourage abortions.¹⁰³ Some scholars have even noted there was no backlash against abortion rights "until 1980 when the Reagan presidential campaign made a concerted effort to gain the support of fundamentalist Christians,"¹⁰⁴ pointing to religion as a driving factor behind state interests.¹⁰⁵ Upholding interests that rest purely on morality, social constructs, or religion, arguably all impermissible purposes to deny fundamental rights, blatantly disregards any test of intermediate scrutiny.

Courts should restore strict scrutiny in order to properly balance and resolve each side's rights in abortion. Currently, the protection of potential life is so deep-seated that once stated, it outweighs any individual right or liberty in the balancing test. No further questions are asked of the state and no real balancing is done. Most regulations passed by states purporting to further an interest in life have been widely upheld under the review of undue burden—including laws on fetal pain, biased counseling, unnecessary waiting periods, and ultrasound viewing.¹⁰⁶

Planned Parenthood v. Ashcroft, 462 U.S. 476 (1983) (upholding a state law requiring a minor to obtain either parental consent or judicial approval of her choice to abort); H.L. v. Matheson, 450 U.S. 398 (1981) (upholding state law requiring parents to be notified whenever possible); Planned Parenthood v. Danforth, 428 U.S. 52 (1976) (invalidating requirements of parental consent for minors and spousal consent for wives); Doe v. Bolton, 410 U.S. 179 (1973) (invalidating an abortion statute that required abortions to be performed in hospitals and set up special procedures for hospital approval of abortions).

102. See Harris v. McRae, 448 U.S. 297, 297 (1980) (holding the government has no affirmative obligation to pay for abortions, even if it does pay for childbirth); Maher v. Roe, 432 U.S. 464, 464 (1977).

103. Tax dollars also go towards "Crisis Pregnancy Centers," or CPCs, highly biased pro-life centers that provide inaccurate medical information and employ coercive tactics to convince women not to get an abortion. See Jenavieve Hatch, *Shady Crisis Pregnancy Center Audited, Responds in Shady Way*, HUFFINGTON POST (Mar. 17, 2017, 5:01 PM), https://www.huffingtonpost.com/entry/shady-crisis-pregnancy-center-audited-responds-by-suing-auditor_us_58cbfba2e4b0be71dcf443e4 [https://perma.cc/Z57A-XSYR]; Jennifer Ludden, *States Fund Pregnancy Centers That Discourage Abortion*, NPR (Mar. 9, 2015, 4:32 PM), <https://www.npr.org/sections/health-shots/2015/03/09/391877614/states-fund-pregnancy-centers-that-discourage-abortion> [https://perma.cc/CA4S-A3Z3].

104. Chemerinsky & Goodwin, *supra* note 36, at 1210 (citing LINDA GREENHOUSE & REVA B. SIEGEL, *BEFORE ROE V. WADE: VOICES THAT SHAPED THE ABORTION DEBATE BEFORE THE SUPREME COURT'S RULING* 259–62 (Linda Greenhouse & Reva B. Siegel eds., 2010)).

105. Cf. David Masci, *American Religious Groups Vary Widely in Their Views of Abortion*, PEW RES. CTR. (Jan. 22, 2018), <http://www.pewresearch.org/fact-tank/2018/01/22/american-religious-groups-vary-widely-in-their-views-of-abortion> [https://perma.cc/Z3JC-TVUJ]; *Public Opinion on Abortion*, PEW RES. CTR. (July 7, 2017), <http://www.pewforum.org/fact-sheet/public-opinion-on-abortion> [https://perma.cc/KL93-BCA3].

106. See Elyse Whitney Grant, *Assessing the Constitutionality of Reproductive Technologies Regulation: A Bioethical Approach*, 61 HASTINGS L.J. 997, 1000, 1010 (2009).

The undue burden standard does little to actually protect or balance the interests of the woman. It instead allows the state to burden just enough before wholly tipping the scale.¹⁰⁷ Rather than testing the legitimacy of state regulations, the court blindly accepts and *then* proceeds to search for any remaining semblance of a woman's autonomy right. If found, the state regulation is upheld. Even under a strict scrutiny balancing test, once potential life is plugged into the equation, it is likely to do no better a job at protecting a woman's right than past ineffective balancing tests.¹⁰⁸ In applying strict scrutiny, the Court should strike down any interest articulated in the blanket and formulaic words: "potential life," thereby forcing the state to devise a more narrowly tailored, delineated, and persuasive interest—not enshrouded in moral or theological beliefs. Courts could remedy the perversion in current jurisprudence by invalidating the undue burden standard and denying a boundless interest of "potential life" in a balancing test under strict scrutiny.¹⁰⁹

Additionally, this newly defined state interest would have to be weighty enough to prevail over a woman's interest in bodily integrity. The state, in mandating womb emptying for transfer to artificial womb, would be forcing the woman to undergo a medical procedure. Abortion itself is a medical procedure. Assuming, for example, both procedures were exactly the same, no one being riskier to the health of the woman than the other, the state might be able to mandate that the woman empty her womb. Yet, absent any monumental scientific advancements, the current procedure for extracting the fetus would be a Caesarean section—far more risky than an abortion.¹¹⁰ Furthermore, as to be later discussed, even if the state could prevail over a woman's bodily integrity, with both procedures identical, a woman's right not to create a child of her own genetic affinity would triumph.

Rather than rubber-stamping "potential life" as a generalized excuse for governmental legislation, judges and lawmakers should better consider what type of interest is actually at play to more precisely

107. See *id.* at 1001 ("The 'balancing' prong has allowed the Court to pay lip service to the fundamental right at issue, while simultaneously giving effect to the moral concerns implicit in abortion regulation.").

108. See Khiara M. Bridges, "Life" in the Balance: *Judicial Review of Abortion Regulations*, 46 U.C. DAVIS L. REV. 1285, 1337 (2013).

109. See *id.*

110. See Chemerinsky & Goodwin, *supra* note 36, at 1218 (citing WORLD HEALTH ORG., UNSAFE ABORTION: GLOBAL AND REGIONAL ESTIMATES OF THE INCIDENCE OF UNSAFE ABORTION AND ASSOCIATED MORTALITY IN 2008 14 (6th ed. 2011), http://apps.who.int/iris/bitstream/handle/10665/44529/978924150118_eng.pdf;jsessionid=8BEE544879F0175B18AEE9F20CF6C27C?sequence=1) ("According to the World Health Organization, a legal abortion is as safe as a penicillin shot.").

settle reproductive conflicts.¹¹¹ Without an abandonment of the viability standard and a redefinition of state interests that follow, artificial wombs would allow fetal independence to occur at or near conception, having the practical effect of banning abortion and extinguishing any liberty interest a woman holds in terminating her pregnancy.¹¹²

IV. UNBUNDLING A WOMAN'S RIGHTS

In the context of abortion, “pro-life” proponents argue that from the moment of conception, a fetus deserves the same inalienable “right to life” as any other human. “Pro-choice” advocates argue for an unfettered right to an abortion protected by the Constitutional right to privacy. Current legal and political discussion is clouded by the misconception that the right to have an abortion is comprised of one right: the right to terminate a fetus.¹¹³ Instead, a woman’s right to an abortion should be unbundled to reveal more than one single right. Not only should a woman have the right to terminate her pregnancy, but also a right to ensure the fetus does not survive by any other apparatus—the right not to have a biological child of her own genetics out there roaming the streets.¹¹⁴ “Terminating a pregnancy is but a means to an end. The end is preventing motherhood.”¹¹⁵ Women who choose an abortion do not simply have the procedure to avoid being pregnant; they have the procedure to avoid motherhood and to avoid any attributed feelings of motherhood or emotional turmoil that accompanies giving a child of your own genetic makeup up for adoption and forever knowing it is “out there somewhere.”¹¹⁶ It is likely this right is implicitly buried within current abortion jurisprudence; otherwise, forced adoptions would have ended abortion

111. See Fox, *supra* note 97, at 345, 349.

112. See Jee Son, *supra* note 35, at 219. But would this analysis change if a fetus’s health and safety “ha[d] been seriously altered by [the woman’s] conduct during pregnancy Could the court enjoin the [woman] to place the fetus in [an artificial womb for] . . . the best interest of the child?” Abecassis, *supra* note 32, at 23.

113. See Randall & Randall, *supra* note 23, at 292.

114. *Id.* But see Langford, *supra* note 18, at 265 (quoting PETER SINGER & DEANE WELLS, *THE REPRODUCTION REVOLUTION: NEW WAYS OF MAKING BABIES* 135–36 (Oxford Univ. Press 1984)) (“We do not allow a mother to kill her newborn baby because she does not wish either to keep it or to hand it over for adoption . . . it is difficult to see why we should give this right to a woman in respect of a foetus [sic] she is carrying, if her desire to be rid of the foetus [sic] can be fully satisfied without threatening the life of the foetus [sic].”).

115. Langford, *supra* note 18, at 265.

116. See Randall & Randall, *supra* note 23, at 292 (quoting Laurence H. Tribe, *The Supreme Court, 1972 Term—Foreword: Toward a Model of Roles in the Due Process of Life and Law*, 87 HARV. L. REV. 1, 27 (1973)) (“Once the fetus can be severed from the [womb] by a process which enables it to survive, leaving the abortion decision to private choice would confer not only a right to remove an unwanted fetus from one’s body but also an entirely separate right to ensure its death.” (footnote omitted)).

procedures in all but the extremely rare case in which a woman's health was jeopardized previability. Under current abortion jurisprudence, the Supreme Court does not further define or delineate a woman's right to an abortion.¹¹⁷ Nor does it need to. Today's abortion methods invariably involve the termination of pregnancy and the termination of fetal life.

But, with the advent of artificial wombs, it is not unimaginable that "pro-life" advocates will suggest artificial wombs as a solution to abortion, where we can simply remove the unwanted fetus and transfer it to an artificial womb for it to be later adopted. States, having an interest in "protecting life," might see this as no issue (beyond the huge economic and social impact of housing millions of unwanted or orphaned fetuses). This is not a viable solution.¹¹⁸ If artificial wombs were used as an alternative to abortion, women could face the possibility of losing their right to control their parenting preferences. They would instead be faced with the "catch-22" of raising a child unprepared or underfinanced, or terminating their pregnancy but bringing a genetically related child into existence.¹¹⁹

V. RIGHT NOT TO BE A MOTHER

Most would assume that women do not want to be mothers because it is "just not the right time," or they just cannot afford the child *now*. "Everyone agrees, in theory, that if a woman wants to have a child, but fears she cannot afford to care for it, alleviating her poverty would be preferable to merely pointing her to an abortion clinic."¹²⁰ This view champions women's equality to avoid the dilemma of abortions at all. But, the need for an abortion and the need for abortion *rights* are two separate discussions.¹²¹ Implicitly tucking women away into this neatly constructed and ingrained gender stereotype fails to recognize that women are deserving of equal rights under

117. A woman also has the right to refuse medical treatment. See *Cruzan v. Dir., Mo. Dep't of Health*, 497 U.S. 261, 277 (1990). Transferring a fetus from womb to artificial womb, however, would require a Caesarean section to ensure the fetus was not harmed or disfigured in extraction. C-sections are *far* more invasive and pose many more risks to a woman's health than current abortion techniques. See WORLDHEALTHORG., UNSAFE ABORTION: GLOBAL AND REGIONAL ESTIMATES OF THE INCIDENCE OF UNSAFE ABORTION AND ASSOCIATED MORTALITY IN 2008 14 (6th ed. 2011) (abortion); Alexandra Sifferlin, *Why U.S. Women Still Die During Childbirth*, TIME (Sept. 27, 2016), <http://time.com/4508369/why-u-s-women-still-die-during-childbirth> [<https://perma.cc/DK6R-ZADR>] (C-sections). Because of this, it seems highly unlikely that women will be subjected to the riskier medical procedure and denied the right to refuse treatment.

118. Pun intended.

119. See Langford, *supra* note 18, at 267.

120. Hendricks, *supra* note 15, at 356 (footnote omitted).

121. See *id.* at 358.

the law. Whether she *needs* to have an abortion¹²² should not be the inquiry. Rather, the focus should turn on whether she *wants* to have an abortion.

Some have defined this ancillary right as a “negative right to reproduc[e]”—“the freedom either to have children or to avoid having them.”¹²³ The right to parent as distinct from the right to pregnancy is no new concept. Surrogates carry an intended couple’s child as an altruistic act or because they thoroughly enjoy the experience of pregnancy. These women have a procreative interest in pregnancy, but have no desire to *parent* the child they are carrying—most of the time.¹²⁴ Likewise, parents who adopt have the desire to parent, yet might find it unnecessary to propagate their own genes. So, too, for the purposes of artificial wombs should the right not to be a parent be distinct from the right not to gestate. The *Roe* opinion holds a woman’s due process right of privacy is “broad enough to encompass a woman’s decision whether or not to terminate her pregnancy.”¹²⁵ Although the Court does not specify what that right entails, it clearly lists the detriments from denying that choice:

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.¹²⁶

The concurrence continues in explaining that “the interests of a woman in giving of her physical and emotional self during pregnancy and the interests that will be affected throughout her life by the birth and raising of a child are of a far greater degree of significance and personal intimacy” than other protected privacy cases.¹²⁷ This rhetoric implies that within a woman’s right to terminate pregnancy lies the right not to be a mother. The Court continually reiterates the considerations a woman must make when choosing whether

122. I use the word “need” to mean what someone might think to be the financial or socially responsible behavior, not health needs.

123. Mutcherson, *supra* note 24, at 44 (quoting JOHN ROBERTSON, CHILDREN OF CHOICE: FREEDOM AND THE NEW REPRODUCTIVE TECHNOLOGIES 22 (1994)).

124. *See, e.g.*, Johnson v. Calvert, 851 P.2d 776, 783 (Cal. 1993); *In re Baby M*, 537 A.2d 1227, 1234 (N.J. 1988).

125. *Roe v. Wade*, 410 U.S. 113, 153 (1973).

126. *Id.* at 153.

127. *Id.* at 170 (Stewart, J., concurring).

to exercise her right to an abortion, some centering on the burdens of imposed motherhood.¹²⁸

Although the Court appears to have implicitly held there is a right not to be mother, because previous abortion procedures effectively ended a fetus's life, the Court was not faced with answering whether, within the context of abortion, a woman has a right not to create a child or have her genetic makeup dispersed in fetal or embryonic form.

VI. RIGHT NOT TO CREATE A CHILD

There seems to be a common misconception that women have abortions for relatively trivial and selfish reasons.¹²⁹ For most women, abortion is not just refusal to care for a child, but a decision not to *create* a child.¹³⁰ Therefore, procreative rights must also encompass the right not to propagate using your own genetic material. An individual arguably has a tangible interest in controlling the use of her own genes. Forced procreation would cause emotional harm and burdens in knowing a child with whom you share a genetic tie exists somewhere in the great unknown.

There might be moral, familial, or social pressure to raise a child you have borne. Closed adoptions developed initially out of a desire to protect the parties from public scrutiny or the stigmatization of adoption.¹³¹ Over time, reasons for anonymity evolved to protect interests in finality and protect against exploitation. Similarly, anonymous sperm and egg donors have an expectation of privacy—the promise of confidentiality was most likely the driving factor for their donation. Reports suggest donation decreases substantially when the promise of anonymity is removed—even when legal protections

128. See *Planned Parenthood v. Casey*, 505 U.S. 833, 928 (1992) (Blackmun, J., dissenting) (citations omitted) (stating that “[b]ecause motherhood has a dramatic impact on a woman’s educational prospects, employment opportunities, and self-determination, restrictive abortion laws deprive her of basic control over her life. For these reasons, ‘the decision whether or not to beget or bear a child’ lies at ‘the very heart of this cluster of constitutionally protected choices.’”).

129. See Madeira, *supra* note 74, at 357 (citations omitted) (quoting Representative Dick Armey who stated that providing abortion services would “‘condone the self-indulgent conduct of the body of a woman who has already demonstrated’ that she was ‘damned careless with it in the first place.’”).

130. No evidence suggests that “having an abortion is any more dangerous to a woman’s long-term mental health than delivering and parenting a child that she did not intend to have.” *Gonzales v. Carhart*, 550 U.S. 127, 183 (2007) (Ginsburg, J., dissenting) (quoting Susan A. Cohen, *Abortion and Mental Health: Myths and Realities*, 9 GUTTMACHER POL’Y REV. 8, 8 (2006)).

131. See Rosemary Cabellero, *Open Records Adoption: Finding the Missing Piece*, 30 S. Ill. U. L.J. 291, 292 (2006).

against parenthood remain.¹³² Men who donate sperm are not told when or if their sperm is used. They have no knowledge if their donation created fifty kids or zero kids. However, if the donor had knowledge a child was in fact created, he might tend to view his role as something beyond a donor.¹³³ Glenn Cohen defines this harm as “attributional parenthood,” “a harm that comes from the social assignment of the status of parent to [a] provider of genetic material that persists notwithstanding the fact that the legal system has declared him or her a nonparent.”¹³⁴ The resulting child might seek out their genetic parent, regardless of promises of anonymity.¹³⁵ Whether the child ultimately contacts the genetic parent or not, the parent might be fraught with guilt or responsibility that she owes some sort of relationship to the child, even though the law frees her of any type of obligation.¹³⁶

Cohen discusses three categories of people who might attribute parenthood to an individual albeit the law holding otherwise: “those outside the relationship, the resulting child, and the individual himself.”¹³⁷ Those outside the parent-child relationship, such as strangers, onlookers, or even grandparents and relatives, are arguably of lesser concern than the child and the “parent.” How society defines parenthood is only important to the extent that it actually influences or shapes how the individual perceives their own relationship. The resulting child is a strong testament of “attributional parenthood.”¹³⁸ Children created by anonymous sperm or egg donation often go to great lengths to discover their genetic ties.¹³⁹ Even if they are not looking for a “parent,” they might be curious to find understanding or a sense of belonging to shape what they believe to be their identity. They embark on this journey of self-discovery unbeknownst to their genetic parent, sidestepping protections of anonymity. Whether the child is successful in their pursuits is irrelevant; arguably, the individual, the “parent,” is harmed merely by the looming possibility.

132. See Cohen, *supra* note 64, at 1145.

133. Studies show donors do not want to learn basic information about the sex or birth date of a resulting child or even whether a child was born. See Ellen Waldman, *The Parent Trap: Uncovering the Myth of “Coerced Parenthood” in Frozen Embryo Disputes*, 53 AM. U. L. REV. 1021, 1049–50 (2004).

134. Cohen, *supra* note 64, at 1125.

135. THE DONOR SIBLING REGISTRY, *Success Stories*, <https://www.donorsiblingregistry.com/success-stories> [<https://perma.cc/3Y54-5SC2>].

136. See Cohen, *supra* note 64, at 1135–36.

137. See *id.* at 1136 (footnote omitted).

138. See *id.* at 1119.

139. THE DONOR SIBLING REGISTRY, *Our History And Mission*, <https://www.donorsiblingregistry.com/about-dsr/history-and-mission> [<https://perma.cc/7NXL-4BNJ>].

The emotional distress an individual might suffer from attributional parenthood is far from trivial.¹⁴⁰ Social constructions of parenthood often shape self-attributions of parenthood, causing the individual to feel some sort of moral obligation or burden. It might be hard for an individual to deny their genetic child a meeting when that child wants nothing more than to see that “he has your eyes.” An individual might feel they owe the child something, an intangible indebtedness.

The importance of genetic affinity has been recognized elsewhere. In a recent Singapore case, *ACB v Thomson Medical*, a court awarded damages for the loss of genetic affinity when a couple using in vitro fertilization (IVF) did not receive a child of genetic relation.¹⁴¹ The court recognized couples undergoing IVF treatments do so with a conscious desire to create a child of their own genetic makeup.¹⁴² Denying them “the ordinary human experience [of parenthood]” constituted a profound loss in the eyes of the court.¹⁴³ If a couple can recover for the loss of genetic affinity, it follows that an individual should be also compensated when they are looking to avoid that genetic affinity and it is instead imposed. A woman wishing to terminate her fetus, and not have it transferred to artificial womb, is acting with the intention of avoiding genetic affinity. To inflict this procreative linkage would not be simple negligence like a sperm mix-up mishap, but an outright act in defiance of her overt intentions.

Even if the woman is not legally obligated to parent a resulting child, when she opposes transfer and implantation of her embryo or fetus into an artificial womb, she is harmed and suffers attributional parenthood when, despite her wishes, a fetus is transferred and successfully gestated to term. A recognized legal and compensable right not to create a child would remedy this situation.

CONCLUSION

With the potential of substantially improving the reproductive successes of many, the scientific advance of artificial womb technology is exciting. However, if artificial wombs are used as an alternative to abortion, women could face the possibility of losing their procreative rights. Current abortion jurisprudence therefore needs to evolve with the new technology. Courts should abandon the viability standard and require states to redefine their interests. Without an abandonment

140. See Cohen, *supra* note 64, at 1142–44.

141. See Viswanath, *supra* note 69.

142. See *id.*

143. See *id.*

of the viability standard and a redefinition of state interests that follow, artificial wombs would allow fetal independence to occur at or near conception, having the practical effect of banning abortion and extinguishing any liberty interest a woman holds in ending embryonic life. Disallowing states and the Court to determine a point of viability, a point at which they are inherently defining “life,” would properly leave this private choice in the woman’s hands. In abandoning the viability standard, the Court would be faced with balancing and reconsidering under what circumstances a state’s interest dominates.

Courts must require states to articulate their interest in banning abortion in a more detailed and coherent manner. Rather than rubber-stamping “potential life” as a generalized excuse for governmental legislation, judges and lawmakers should better decipher what type of interest is actually at play and whether there is an improperly motivated purpose. States should not be able to ban or burden a woman’s right to an abortion when its justification for such ban largely stems from feelings of morality. Courts could remedy the current deficiencies in abortion jurisprudence by denying the boundless interest of “potential life,” invalidating the undue burden standard, and applying a balancing test under traditional strict scrutiny.

Finally, a woman’s procreative rights must be unbundled to encompass more than just the right to terminate pregnancy. Because previous abortion procedures effectively ended a fetus’s life, the Court was not faced with answering whether, within the context of abortion, a woman had a right not to create a child or have her genetic material dispersed. Forced procreation would cause emotional harm and burdens in knowing a child with whom you share a genetic tie exists somewhere in the great unknown. The advent of artificial wombs would force us to recognize these tangible harms, like attributional parenthood, produced by denying women procreative rights beyond pregnancy.

Artificial wombs should be embraced as a great medical advancement that has added to the catalog of assisted reproductive technology options. The use of this technology should not be taken as a simple alternative to current abortion procedures. Instead, artificial wombs should be used in any situation that maintains a woman’s right to choice over her body and the outcome of her potential fetus. With this new technology on the horizon, there is a need to reconsider current abortion jurisprudence and redefine or expand the constitutional right of procreation.