

LIBERTY'S LIMITS & EDITING HUMANITY

ALEXANDRA L. FOULKES**

Any debate about the effects of Lawrence v. Texas on American society notwithstanding, the Court's opinion is a landmark in its own right. Lawrence's logic placed an indelible mark on the Constitution's central—though certainly elusive—protections of liberty. Particularly after Lawrence, substantive due process might amount to something beyond the sum of its parts. By defining liberty not merely as a collection of disconnected rights, but as a larger whole, Lawrence invites a more flexible substantive due process analysis. The foreseeable consequence of this flexible approach in fact manifested. Justice Scalia's vision of Lawrence—that the decision would lead to a flood of litigation in the lower courts—materialized, at least to some extent, with litigants advocating for the recognition of new fundamental rights. But even Justice Scalia would never have included in his parade of horrors the most recent effort to expand liberty's definition: a call for the recognition of a fundamental right to edit humanity. The argument for a fundamental right to edit humanity stems from the Court's jurisprudence on procreative, parental, and privacy rights. The flexible language in Lawrence, too, lends its support. This Article asserts that a fundamental right to edit humanity should not be recognized. While not necessarily inconsistent with precedent, the arguments for the right to engage in therapeutic germline genome editing do not flow naturally from the Court's previous holdings. Further, entitling parents to use GGE also poses insurmountable practical and policy-based obstacles. Most poignantly, the line-drawing method that has been proposed will prove intractable. And, in any case, our legislative and executive branches of government are far better positioned to handle the issues raised by germline genome editing than the courts.

INTRODUCTION.....	82
I. PROPOSED ARGUMENTS & FRAMEWORK FOR GGE AS A FUNDAMENTAL RIGHT	83
A. <i>Attempts To Establish GGE as a Fundamental Right</i>	84
1. Doctrinal Foundation: Family, Reproduction, and Parental Choices	84
2. Applying the Doctrine to GGE for Therapeutic Uses.....	86

* © 2020 Alexandra L. Foulkes.

** J.D., University of Houston Law Center. M.S. Neuroscience, University College London. Law Clerk to the Honorable Timothy D. DeGiusti, U.S. District Court for the Western District of Oklahoma.

82	<i>NORTH CAROLINA LAW REVIEW</i>	[Vol. 98]
	<i>a. The Argument for GGE in the CRISPR Context</i>	86
	<i>b. Strengthening the Argument for GGE</i>	87
	i. The Decision To Engage in GGE & Relationships	87
	ii. Conceptualizing the Parent's Harm: Wrongful Birth Claims.....	88
	iii. The (Nonexistent) Child's (Nonexistence) Harm.....	88
	iv. A Negative Right, Deeply Rooted in History	89
	<i>B. The Proposed Policy Framework for Future GGE</i>	89
II.	BEYOND LIBERTY'S REACH: A COUNTERARGUMENT TO GGE AS A FUNDAMENTAL RIGHT.....	91
	<i>A. Doctrinal Deficiencies: Glucksberg's and Lawrence's Limitations</i>	91
	1. A Right Too Broad with Roots Too Shallow	92
	<i>a. Overbroad, Subjective, and Discretionary</i>	92
	<i>b. Narrowing the Right</i>	95
	2. Substantive Due Process & Value-Forming Characteristics	97
	<i>B. Limitations from Decisions Restricting Parental Autonomy</i>	98
	1. The Parent's Interest in Self-Fulfillment.....	100
	2. The Child's Interest in the Allocation of the Decision	100
	<i>a. Existing Embryos and False Nonidentity Problems</i>	101
	<i>b. Roe and Fetal Rights</i>	101
	3. The Constitution's Stake in Diversity & Pluralism	102
III.	PRUDENTIAL CONSIDERATIONS.....	104
	<i>A. Intractable Line-Drawing and the Parents' Parallel Rights</i>	104
	<i>B. Institutional (In)competence and Science</i>	105
	CONCLUSION	106

INTRODUCTION

In his article, *Editing Humanity*, Dr. Paul Enríquez makes an important contribution to a long line of scholarship on the constitutional implications of reproductive technologies.¹ Enríquez's piece is the first to deal with the

1. See Paul Enríquez, *Editing Humanity: On the Precise Manipulation of DNA in Human Embryos*, 97 N.C. L. REV. 1147 (2019). Enríquez is not the first to look to the constitutional implications of these technologies. See, e.g., John B. Attanasio, *The Constitutionality of Regulating Human Genetic Engineering: Where Procreative Liberty and Equal Opportunity Collide*, 53 U. CHI. L. REV. 1274, 1285–91 (1986) (laying out arguments for and against a fundamental right to genetic engineering of positive traits or

development of CRISPR-Cas9 technologies in this context. Through CRISPR, previously impossible feats in genetic engineering have become imminent realities.² Chinese scientists have successfully modified the genomes of human embryos—repeatedly.³ These ventures into germline genome editing (“GGE”), coupled with ominous lessons from history and significant gaps in our understanding of the safety of CRISPR applications, have spurred protective legislation. In fact, Enríquez argues that current legislative and administrative regulations in the United States form a de facto legal ban on GGE clinical applications.⁴ And he suggests that this ban amounts to an unconstitutional intrusion on individual liberties.⁵ Enríquez argues for the existence of a fundamental right that extends to protect the parent’s decision to edit out certain genetic conditions in her offspring.

In response to Enríquez, I argue that a fundamental right to edit humanity should not be recognized. While not necessarily inconsistent with precedent, the arguments for the right to engage in therapeutic GGE don’t flow naturally from the United States Supreme Court’s previous holdings. In addition to doctrinal questions about the scope of fundamental rights, entitling parents to use GGE also poses practical and policy-based obstacles.

Part I of this Article begins with a layout of the relevant constitutional doctrine and Enríquez’s argument before further developing the argument for a fundamental right to GGE. Part II addresses the weaknesses in the argument for a fundamental right to GGE. Finally, Part III turns to policy-based arguments against recognizing the right.

I. PROPOSED ARGUMENTS AND FRAMEWORK FOR GGE AS A FUNDAMENTAL RIGHT

The Fifth and Fourteenth Amendments promise refuge from government-sanctioned deprivations of “life, liberty, or property, without due process of law.”⁶ Exactly what constitutes an invasion of liberty as protected by the Due Process Clause, however, isn’t so clear.

enhancements). But as Professor Atanasio noted, in grappling with these issues “individual genetic breakthroughs must be examined on their own merits.” *Id.* at 1342.

2. CRISPR stands for Clustered Regularly Interspaced Short Palindromic Repeats. For an explanation of the science, see Alexandra L. Foulkes et al., *Legal and Ethical Implications of CRISPR Applications in Psychiatry*, 97 N.C. L. REV. 1359, 1363–65 (2019).

3. David Cyranoski & Sara Reardon, *Chinese Scientists Genetically Modify Human Embryos*, NATURE NEWS (Apr. 22, 2015), <https://www.nature.com/news/chinese-scientists-genetically-modify-human-embryos-1.17378> [<https://perma.cc/CYG4-QC8F>].

4. See Enríquez, *supra* note 1, at 1162.

5. *Id.* at 1240.

6. U.S. CONST. amend. V (“[N]or shall any person . . . be deprived of life, liberty, or property, without due process of law”); *id.* amend. XIV, § 1 (“[N]or shall any State deprive any person of life, liberty, or property, without due process of law”).

A. *Attempts To Establish GGE as a Fundamental Right*

The precise contours of the liberty protected by the Due Process Clause are not subject to being “reduced to any formula.”⁷ The Court’s existing privacy jurisprudence, however, provides guideposts for understanding GGE as a fundamental right.

1. Doctrinal Foundation: Family, Reproduction, and Parental Choices

*Meyer v. Nebraska*⁸ and *Pierce v. Society of Sisters*⁹ are perhaps the two sturdiest guideposts, foundational to a modern understanding of substantive due process doctrine.¹⁰ The Court in these cases was concerned with protecting a parent’s authority to make basic choices about her children’s upbringing.¹¹ To be sure, the issues in both *Meyer* and *Pierce* are narrow. In *Meyer*, the Court held that a Nebraska statute prohibiting the teaching of certain languages in public schools was unconstitutional, unreasonably depriving parents of liberty without due process of law.¹² Similarly, in *Pierce*, the Court found that the state-compelled attendance of children at public schools unreasonably interfered with a parent’s interests in directing the rearing of her offspring.¹³ Despite their narrow holdings, the language in these decisions included broad statements about liberty’s substantive reach.¹⁴ The Court has subsequently declined to describe the rights that *Meyer* and *Pierce* protect as discrete, enumerable private activities.¹⁵ Rather, what these precedents establish is how certain parenting decisions fall along the continuum of moral choice and personal autonomy central to the constitutionally protected realm of liberty.¹⁶

7. *Poe v. Ullman*, 367 U.S. 497, 542 (1961) (Harlan, J., dissenting); see Andrew B. Coan, *Is There a Constitutional Right To Select the Genes of One’s Offspring?*, 63 HASTINGS L.J. 233, 238 (2011) (“[T]he scope of the constitutional right to procreative liberty and the extent of its application to genetic-selection decisions is, in a nutshell, unclear.”).

8. 262 U.S. 390 (1923).

9. 268 U.S. 510 (1925).

10. See Laurence H. Tribe, *Lawrence v. Texas: The Fundamental Right That Dare Not Speak Its Name*, 117 HARV. L. REV. 1893, 1934 (2004).

11. See *Pierce v. Soc’y of Sisters*, 268 U.S. 510, 535 (1925); *Meyer v. Nebraska*, 262 U.S. 390, 399–400 (1923).

12. *Meyer*, 262 U.S. at 400.

13. See *Pierce*, 268 U.S. at 535.

14. See *id.* at 534–35; *Meyer*, 262 U.S. at 399.

15. See Tribe, *supra* note 10, at 1934–35.

16. See Joshua D. Hawley, *The Intellectual Origins of (Modern) Substantive Due Process*, 93 TEX. L. REV. 275, 277 (2014). *Meyer* and *Pierce* are Supreme Court decisions handed down during the infamous *Lochner* era. See *Griswold v. Connecticut*, 381 U.S. 479, 516 (1965) (Black, J., dissenting) (“[T]he reasoning stated in *Meyer* and *Pierce* was the same natural law due process philosophy which many later opinions repudiated.”).

The Court's later decisions in *Griswold v. Connecticut*¹⁷ and *Eisenstadt v. Baird*¹⁸ bring this point into focus. In *Griswold*, the Court invalidated a state law that barred the distribution and use of contraceptives.¹⁹ *Eisenstadt* extended the holding in *Griswold* beyond the marital relationship.²⁰ Both opinions describe the identified right as “the right of privacy”²¹ and conclude that “it is the right of the *individual* . . . to be free from unwarranted governmental intrusion into matters so fundamentally affecting a person as to the decision whether to beget a child.”²²

Griswold and *Eisenstadt* formed the background against which *Roe v. Wade*²³ was decided. In *Roe*, the Court considered the constitutionality of a Texas statute prohibiting abortion.²⁴ *Roe* revalidated the existence of a fundamental right to privacy.²⁵ It held that this right is implicated when a woman decides whether to obtain an abortion because becoming a mother may place a heavy burden on the woman.²⁶ And given that carrying an unintended or unwanted pregnancy to term might pose severe and imminent harm to the individual decisionmaker, the state's ability to restrict her decisionmaking capacity in this context should be limited.²⁷

Importantly, however, the Court in *Roe* emphasized that the woman's right is not absolute.²⁸ This understanding of *Roe*'s holding was later bolstered by *Carey v. Population Services International*,²⁹ where the Court struck down a law prohibiting the distribution of contraceptives to minors by relying on *Griswold*'s and *Eisenstadt*'s logic.³⁰ In *Carey*, the Court explained that an aspect of the liberty protected by the Fourteenth Amendment included the guarantee of certain zones of privacy, encompassing the “interest in independence in making certain kinds of important decisions.”³¹ The Court was concerned with guarding decisionmaking autonomy in personal choices “relating to marriage,

17. 381 U.S. 479 (1965).

18. 405 U.S. 438 (1972).

19. *Griswold*, 381 U.S. at 485.

20. *Eisenstadt*, 405 U.S. at 453.

21. *Id.*; *Griswold*, 381 U.S. at 485.

22. *Eisenstadt*, 405 U.S. at 453.

23. 410 U.S. 113 (1973).

24. *Id.* at 117–18.

25. *Id.* at 152.

26. *Id.* at 152–53.

27. *Id.* at 153.

28. *Id.*

29. 431 U.S. 678 (1977).

30. *Id.* at 685.

31. *Carey v. Population Serv. Int'l*, 431 U.S. 678, 684 (1977) (internal quotation marks omitted) (quoting *Whalen v. Roe*, 429 U.S. 589, 599–600 (1977)); see also *Planned Parenthood of Se. Pa. v. Casey*, 505 U.S. 833, 852–53 (1992) (stating that *Eisenstadt*, *Griswold*, and *Carey* “involve personal decisions concerning not only the meaning of procreation but also human responsibility and respect for it”).

procreation, contraception, family relationships, and child rearing and education” because the consequences of these decisions so fundamentally affect a person.³²

Finally, through Justice Kennedy’s majority opinion in *Lawrence v. Texas*,³³ the Supreme Court declared unconstitutional a Texas law criminalizing homosexual sodomy.³⁴ The focus of the inquiry in *Lawrence* was not—as it had been in *Bowers v. Hardwick*³⁵—whether the petitioners had a fundamental right to engage in homosexual sodomy.³⁶ Rather, the Court looked to how the state had chosen to apportion decisionmaking roles in the context at hand. The Court assessed the allocations’ constitutionality, looking to how, through these divisions, the state had involved itself in the petitioners’ choices on the relationships they sought to form or the people they wanted to be.³⁷

2. Applying the Doctrine to GGE for Therapeutic Uses

a. *The Argument for GGE in the CRISPR Context*

Enríquez’s argument focuses on a narrow category of applications: the use of GGE for health and therapeutic purposes.³⁸ Enríquez argues that a person’s decision whether to become a parent is likely to be affected by the knowledge that she is a carrier of a genetic mutation for a serious genetic disease.³⁹ And, certainly, the Supreme Court has noted that “[i]f the right to privacy means anything, it is the right of the individual . . . to be free from unwarranted governmental intrusion into the matters so fundamentally affecting a person as the decision whether to bear or beget a child.”⁴⁰ If the parent is left to choose between no child and a child destined to live a life of disease, likely to end in premature death, then the recognized right to procreate might be undermined.⁴¹ The congenital disease of a child may impose on his mother a “distressful life and future.”⁴² Just as *Roe* recognized, “Psychological harm may be imminent, [and the parent’s] mental and physical health may be taxed by childcare.”⁴³

32. *Carey*, 431 U.S. at 684–85 (citations omitted) (internal quotation marks omitted) (quoting *Roe*, 410 U.S. at 152–53 (1973)).

33. 539 U.S. 558 (2003).

34. *Id.* at 578.

35. 478 U.S. 186 (1986).

36. *Lawrence*, 539 U.S. at 566. In *Bowers v. Hardwick*, the Court considered the constitutionality of a Georgia sodomy law, neutral on its face, and upheld the law finding no constitutional violations. *Bowers*, 478 U.S. 186, 186, 196 (1986).

37. See Tribe, *supra* note 10, at 1931.

38. See Enríquez, *supra* note 1, at 1226.

39. *Id.*

40. *Eisenstadt v. Baird*, 405 U.S. 438, 453 (1972) (emphasis added); see also Enríquez, *supra* note 1, at 1220–21.

41. Enríquez, *supra* note 1, at 1221 (citing *Skinner v. Oklahoma*, 316 U.S. 535, 536 (1942)).

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

43. Enríquez, *supra* note 1, at 1221. (quoting *Roe*, 410 U.S. at 153).

Enríquez identifies many of the important connections. Though, it is worth considering how the argument for GGE can be strengthened before assessing whether it is sufficiently convincing.

b. Strengthening the Argument for GGE

Roe deserves more attention because, in the GGE context, like in *Roe*, the centrality of the parent's decision is key. The decision to edit out disease in her child is central to her parental autonomy and, as such, points beyond superficial connections to the discrete, property-like rights identified in *Skinner v. Oklahoma*,⁴⁴ *Eisenstadt*, and *Roe*—relics reminiscent of the *Lochner* area.⁴⁵ It's not that a new right to use GGE for therapeutic purposes should be listed after the right to procreate,⁴⁶ or the right of a pregnant woman to terminate a pregnancy,⁴⁷ in a catalogue of "unenumerated" liberties. Rather, it is arguable that the same thread that connected *Lawrence* to *Casey*, to *Roe*, to *Griswold*, and the rest reaches the decision of a parent to use GGE to remedy a child's serious genetic condition. That is, the idea that the fundamental right to privacy protects decisions impacting the parent's choice to form the relationships she wants to form or be the person she wants to be. The right at issue is the right to privacy, against government interference, to make decisions central to personal autonomy—namely the decision to edit out genetic defect in an offspring.

i. The Decision to Engage in GGE & Relationships

The relationship between a parent and child is one through which a parent develops a part of herself.⁴⁸ Unlike a marital relationship, the parent-child relationship is timeless and often becomes more life-altering than marriage.⁴⁹ Hence, the right to privacy, affording protection to the individual to marry without race- or sex-based restrictions,⁵⁰ might imply some right to enter into a parent-child relationship unencumbered by burdensome genetic conditions.⁵¹

The Court has recognized how controlling the formation of children is central to parental autonomy.⁵² It's clear that the choice to have one's children

44. 316 U.S. 535 (1942).

45. See *supra* notes 9–16 and accompanying text.

46. *Skinner*, 316 U.S. at 536.

47. *Roe*, 410 U.S. at 153.

48. See MIRIAM GALPER COHEN, LONG-DISTANCE PARENTING 21 (1989) ("Without that connection, both parents and children fail to develop a part of themselves.").

49. Enríquez, *supra* note 1, at 1223.

50. The decision to marry is constitutionally protected, at least to some extent. See *Obergefell v. Hodges*, 135 S. Ct. 2584, 2608 (2015); *Loving v. Virginia*, 388 U.S. 1, 12 (1967).

51. See Jason C. Glahn, *I Teach You the Superman: Why Congress Cannot Constitutionally Prohibit Genetic Modification*, 25 WHITTIER L. REV. 409, 427 (2003).

52. See *Meyer v. Nebraska*, 262 U.S. 390, 399–400 (1923).

learn German is central enough to the formation of parental autonomy to deserve constitutional protection.⁵³ So is the decision to have one's child attend private school.⁵⁴ As such, the centrality of a decision to rid one's child of serious genetic disease arguably follows a fortiori. The consequences of the latter for the responsible parent are far more severe: the burden placed on a parent as a result of having a diseased child is arguably far greater than the burden of having a child who doesn't speak German. And *Roe* teaches us that the weight of this burden—the imminent psychological harms and physical tax on the parent—is instructive as to the centrality of the parent's decision.⁵⁵

ii. Conceptualizing the Parent's Harm: Wrongful Birth Claims

Wrongful birth claims, which are rare but recognized in a number of jurisdictions,⁵⁶ conceptualize a child's genetic disease as the parent's injury.⁵⁷ These claims arise when a parent sues a medical professional arguing that genetic defects, negligently undetected by the diagnostician, manifested in her child.⁵⁸ As such, the parent was deprived of the legal opportunity to terminate the pregnancy.⁵⁹ The woman can then sue for damages for pain and suffering, the cost of the child's treatment, and other related expenses.⁶⁰ These cases demonstrate that the harm springing from a genetically "defective" child accrues to the mother. It's the loss of *her* constitutionally guaranteed right to make decisions central to the formation of familial relationships.

iii. The (Nonexistent) Child's (Nonexistence) Harm

On the other hand, wrongful life claims are generally barred. Here, the child with the genetic condition sues, arguing he never should have been born.⁶¹ Most courts justify their refusal to recognize wrongful life claims by noting how

53. *Id.*

54. *See Pierce v. Soc'y of Sisters*, 268 U.S. 510, 535 (1925).

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

56. *See* Mark Strasser, *Wrongful Life, Wrongful Birth, Wrongful Death, and the Right To Refuse Treatment: Can Reasonable Jurisdictions Recognize All But One*, 64 MO. L. REV. 29, 30 (1999).

57. Mara C. Bottis, *Wrongful Birth and Wrongful Life Actions*, 11 EUR. J. HEALTH L. 55, 55 (2004).

58. *See* Strasser, *supra* note 56, at 30.

59. *See, e.g., Plowman v. Fort Madison Cmty. Hosp.*, 896 N.W.2d 393, 396 (Iowa 2017) (recognizing that a mother and father had cognizable cause of action for child's wrongful birth).

60. *Id.* at 399–403 (noting that "a majority of states recognize wrongful-birth claims [and] [a]t least twenty-three states recognize the claim by judicial decision," and describing the compensable injury to the parent); *see Wuth v. Lab. Corp. of Am.*, 359 P.3d 841, 853 (Wash. Ct. App. 2015); *see also Kassama v. Magat*, 792 A.2d 1102, 1115 (Md. 2002) ("[T]he parents of the child could sue the doctor for the expense of raising the unplanned child during her minority, reduced by the value of the benefits conferred to them by having the child." (citing *Jones v. Malinowski*, 473 A.2d 429, 435 (Md. 1984))).

61. It seems all but two jurisdictions, New Jersey and Washington, have rejected these claims. *See Geler v. Akawie*, 818 A.2d 402, 403 (N.J. Super. Ct. App. Div. 2003); *Harbeson v. Parke-Davis, Inc.*, 656 P.2d 483, 486 (Wash. 1983).

impossible it is to conceptualize the claimant's harm: "The infant plaintiff would have us measure the difference between his life with defects against the utter void of nonexistence, but it is impossible to make such a determination."⁶² Implicitly, a majority of courts have recognized that the "Nonidentity Problem" limits wrongful life claims.⁶³

The Nonidentity Problem posits that it's wrong to say that a child has been harmed by being brought into existence, so long as that child has been given a life worth living.⁶⁴ A life not worth living is a life so devoid of anything good, and so filled with suffering, that the individual would be better off never to have existed at all.⁶⁵ The Nonidentity Problem reinforces the conceptualization of the harm generated by the birth of a genetically defective child as the parent's harm alone.

iv. A Negative Right, Deeply Rooted in History

To recognize a fundamental right to GGE, one need not rely on "abstract concepts of personal autonomy,"⁶⁶ at least no more abstract than those concepts already deemed worthy of protection by the Court. If we accept what has been laid out above, it follows that there already exists a concrete right to privacy deeply rooted in our nation's history that extends to cover the decision to edit a child's genome.

The right can be conceptualized as a right against unwanted intrusion as opposed to a positive claim to access.⁶⁷ The claim is in the negative: to keep the government from usurping a parent's decisionmaking authority on matters so central to the development of the parent-child relationship, and hence to the development of the parent's self. In the context of relationships, to act privately is not to act in isolation. Rather it is to act autonomously, free from government interference.⁶⁸

B. *The Proposed Policy Framework for Future GGE*

Enríquez's constitutional claim for a fundamental right to engage in selective uses of GGE is a narrow one. Enríquez proposes a legal- and science-based normative framework, in an attempt to draw clean lines that distinguish

62. *Gleitman v. Cosgrove*, 227 A.2d 689, 692 (N.J. 1967).

63. I. Glenn Cohen, *Beyond Best Interests*, 96 MINN. L. REV. 1187, 1213 (2012) [hereinafter Cohen, *Best Interests*].

64. *Id.* at 1208.

65. *Id.*

66. *Washington v. Glucksberg*, 521 U.S. 702, 703 (1997) (noting that when recognizing a right deeply rooted in our nation's history the Court will not rely on "abstract concepts of personal autonomy").

67. Tandice Ossareh, Note, *Would You Like Blue Eyes with That? A Fundamental Right to Genetic Modification of Embryos*, 117 COLUM. L. REV. 729, 757 (2017).

68. *Id.* at 758.

between permissible and impermissible GGE applications.⁶⁹ He identifies four distinct purposes for which parents might want to use GGE: (1) health and therapeutic uses to remedy disease; (2) prophylactic purposes, only some of which may be therapeutic in nature; (3) cosmetic or enhancement purposes; and (4) modification of special traits for which the law affords certain protections.⁷⁰

Enríquez claims editing in the first category is a fundamental right.⁷¹ Category 1 interventions, according to Enríquez, target only monogenic diseases—generally life-long and debilitating conditions for which the science is well understood.⁷² Conversely, Enríquez asserts that uses that fall into the fourth category are constitutionally prohibited, as they create a likelihood of discrimination against specific groups. Enríquez acknowledges that Category 4 interventions are unlikely to be real clinical possibilities soon.⁷³

Enríquez recognizes that distinguishing between the first and second categories poses a challenge. As he acknowledges, prophylactic interventions, or Category 2 uses, share a lot of characteristics with Category 1 interventions, and the precise point at which disease or disability begins is hard to define.⁷⁴ Enríquez's argument seeks to avoid this line-drawing problem by limiting Category 1—and thus constitutional protections—to mostly monogenic diseases and not polygenic conditions.⁷⁵ Enríquez chooses to draw the line between Category 1 and Category 2 at monogenic and polygenic because CRISPR's most attractive therapeutic targets at this time are monogenic conditions.⁷⁶

But drawing the line at monogenic/polygenic, however, seems irrelevant to the fundamental rights analysis. The distinction may certainly be key to an analysis of the government's interest in regulating GGE, as Enríquez indicates. The government's interest in regulating GGE might shift over time as science understands more clearly how to apply GGE to polygenic conditions. But if there is a fundamental right to use GGE on one's children to remedy disease, it seems arbitrary for the *existence of the right* to turn on how well experts understand the science of certain conditions today. It is the decision to engage in GGE to remedy disease—independent of the disease's genetic profile—that leads to consequences so fundamentally affecting a person that government interference shouldn't be tolerated. This is so even if the definition of disease might change over time. There is precedent in *Roe* showing how using technology as a benchmark might turn out to be a bad idea: "The *Roe*

69. Enríquez, *supra* note 1, at 1219.

70. *Id.*

71. *Id.* at 1219–20.

72. *Id.*

73. *Id.* at 1235.

74. *Id.* at 1226.

75. *See id.* at 1220.

76. *Id.* at 1220 n.398. Monogenic conditions involve or control a single gene. Polygenic conditions involve more than one gene. *Id.* at 1220 nn.396–97.

framework, then, is clearly on a collision course with itself. 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.⁷⁷

I argue that the framework for deciding when a government's interest might be strong enough to survive strict scrutiny cannot be relevant to the analysis of whether the right exists in the first place. Below, I'll show that the available jurisprudence does not support finding a fundamental right in this context, at all.

II. BEYOND LIBERTY'S REACH: A COUNTERARGUMENT TO GGE AS A FUNDAMENTAL RIGHT

The argument for GGE relies on an expansive reading of the Court's jurisprudence.⁷⁸ The Court's opinion in *Lawrence* certainly left open the possibility of conceptualizing liberty as the regression line that explains all of the data points plotted by the Court in *Meyer*, *Pierce*, *Roe*, and the rest. But *Lawrence* drew no such line. The Court in *Lawrence* recognized no new fundamental right, nor did the Court explicitly recognize that the decisions at issue in *Lawrence* fell within the protected privacy sphere.⁷⁹

Such a broad understanding of the Constitution's guarantees is in tension with the Court's own statements warning that its line of substantive due process cases won't justify a "sweeping conclusion that any and all important, intimate, and personal decisions are so protected."⁸⁰ To understand which decisions fit the modern substantive due process trend, there must be some limiting principle beyond the fact that the decision at issue is of the same kind as those involved in earlier fundamental rights cases. This section will turn first to *Glucksberg* and then to *Lawrence* in search of possible limitations. I will then consider competing interests implicated in the Court's decisions on parental autonomy as a limiting principle, suggesting that a right to use GGE for therapeutic purposes likely falls outside of liberty's substantive reach.

A. *Doctrinal Deficiencies: Glucksberg's and Lawrence's Limitations*

Certainly, the argument in Part II above has identified the necessary prerequisite that fundamental decisions be intimate, personal, and of central importance. And the argument for GGE shows that the necessary prerequisite

77. *Akron v. Akron Ctr. for Reprod. Health, Inc.*, 462 U.S. 416, 458 (1983) (O'Connor, J., dissenting); see also *Planned Parenthood of Se. Pa. v. Casey*, 505 U.S. 833 (1992) (abrogating *Roe's* trimester system based on the viability of the child).

78. See *Ossareh*, *supra* note 67, at 730.

79. See *Lawrence v. Texas*, 539 U.S. 558, 572 (2003). The Court decided the case by stating that Texas failed to meet the requirements of rational basis scrutiny. *Id.*

80. *Washington v. Glucksberg*, 521 U.S. 702, 727 (1997).

has been met. But the argument fails to account for the likelihood that this condition, while necessary, is not sufficient.

1. A Right Too Broad with Roots Too Shallow

Perhaps the relevant limiting principle can be found in *Washington v. Glucksberg*, where the Court unanimously identified two constraints for recognizing fundamental rights.⁸¹ To avoid having to recognize the broadly framed “right to die,” which might have been easily transmuted into a right encompassing a slew of choices about how and when to end one’s life,⁸² *Glucksberg* required that: (1) the right asserted be deeply rooted in the nation’s history and that (2) it be carefully defined.⁸³ This was so despite the fact that the issue in *Glucksberg* shared underlying commonalities with the Court’s substantive due process precedent in *Roe* and the rest. The decision, after all, involved control over one’s own bodily integrity.⁸⁴ In other words, *Glucksberg* recognized that although the choice at issue was, in one sense, of the same kind as those that the Court had recognized as fundamental, that alone was not enough to guarantee constitutional protection.

a. Overbroad, Subjective, and Discretionary

The argument for recognizing therapeutic GGE as a fundamental right claims that there is a deeply rooted history for the right to privacy to make decisions central to personal autonomy, and that the decision to edit out genetic defects in an offspring is then encompassed by that right to privacy.⁸⁵ *Glucksberg*’s first prong is thereby met by virtue of the fact that the deep historical roots that existed to support *Meyer* then grew deeper as the Court decided *Pierce*, *Griswold*, *Roe*, and *Casey*. But framing the right broadly as the right to privacy (against government interference) to make decisions central to personal autonomy, namely the decision to edit out genetic defects in an offspring, leads to intractable line drawing.

The right to use GGE is primarily rooted in the burden that’s placed on the parent by virtue of giving birth to a “diseased” child or by having to risk conceiving a “diseased” child.⁸⁶ The weight of this burden, as *Roe* instructs, is what makes the decision to use GGE central to parental autonomy. That weight might be subjective, as it appears to be conceptualized in *Roe*: this particular

81. *Id.* at 719.

82. *Id.* at 709.

83. *See id.* at 720–21. I’ll refer to these two limitations as *Glucksberg*’s first and second prongs respectively.

84. Steven G. Calabresi, *Substantive Due Process After Gonzales v. Carhart*, 106 MICH. L. REV. 1517, 1528 (2008).

85. *See supra* notes 38–47 and accompanying text.

86. I’m using scare quotes here to emphasize that the term “diseased,” like the term “normal,” is loaded. Cohen, *Best Interests*, *supra* note 63, at 1226.

woman, in her individual circumstances, might be so physically burdened by becoming a mother that the weight of the burden becomes intolerable.⁸⁷ If so, whether a condition is monogenic or polygenic—or, for that matter, whether the GGE is targeted at treatment or enhancement—would be irrelevant. The question becomes whether having a particular child would place such a burden on the mother so as to make the GGE decision central and thereby so fundamentally important as to warrant staving off government interference.⁸⁸ The line drawn at genetic disease in the argument above becomes unworkable.

For example, let's imagine a mother with achondroplasia who wants her child to share in her experience.⁸⁹ Her partner also has achondroplasia, and so, without intervention, their chances of having a child without achondroplasia are 25%.⁹⁰ For her, that's too risky. The mother's house, vehicle, and workplace have been modified to accommodate her different capacities. And living with achondroplasia has shaped a significant part of her identity. To her, having a child without achondroplasia would be physically and emotionally burdensome. She feels ill-equipped to raise a person without achondroplasia. The mother can't bear the thought of never having a child with achondroplasia with whom to share her experience. Ultimately, without having raised such a child, she'll fail to develop a part of herself. According to the argument for GGE above, this mother's access to the technology should be constitutionally protected, even though society will view her child with achondroplasia as "diseased."⁹¹

What if the burden is a more objective one, as Enríquez proposes, limiting the use of GGE for conditions society considers to be genetic diseases at the time of intervention? Then, there's an overbreadth problem, both because at one point in time society may view a condition as a disability and later come to see that same expression as diversity, and also because at any given point in time it may be hard to determine exactly what conditions society considers burdensome. This ambiguity all derives from the fact that the line between diversity and disability simply is not clear.⁹²

We can begin our discussion on society's inability to cleanly differentiate between disability and disease with Fragile X syndrome. Fragile X syndrome,

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

88. See *supra* notes 66–68 and accompanying text; see also Elyse W. Gant, Note, *Assessing the Constitutionality of Reproductive Technologies Regulation: A Bioethical Approach*, 61 HASTINGS L.J. 997, 1009 (2010).

89. This illustration isn't much of a hypothetical. See ANDREW SOLOMON, FAR FROM THE TREE: PARENTS, CHILDREN, AND THE SEARCH FOR IDENTITY 149 (2012). People with achondroplasia are also known as "little people." *Frequently Asked Questions*, LITTLE PEOPLE AM., <https://www.lpaonline.org/faq-#Gene> [<https://perma.cc/Q23A-VTPX>].

90. The genetics and inheritance patterns of achondroplasia are relatively well understood. *Learning About Achondroplasia*, NAT'L. HUM. GENOME RES. INST. <https://www.genome.gov/19517823/learning-about-achondroplasia/> [<https://perma.cc/GFA8-QGSB>].

91. *Id.*

92. See Foulkes et al., *supra* note 2, at 1396.

which is a monogenic condition likely to be a target of CRISPR intervention in the near future,⁹³ is thought to be the most commonly inherited form of intellectual disability.⁹⁴ Fragile X causes developmental abnormalities in the brain that are thought to lead to severe autism-like symptoms.⁹⁵ But those diagnosed with Fragile X may go on to form meaningful relationships and live fruitful lives.⁹⁶ And some have claimed that neurodiversity, or the idea that certain “cognitive impairments” are a part of the normal spectrum of diversity, should extend to include autism-like symptoms.⁹⁷

Though we may not understand the genetic architecture of sexuality well enough to make it a target of CRISPR intervention today,⁹⁸ sexuality nevertheless serves as a poignant reminder of how the line between disease and disability is fluid. Its history serves as a cautionary tale for how unregulated uses of GGE might not be a good idea, even if they are limited to what—in this moment in time—society considers therapeutic uses. I acknowledge that Enríquez proposes that this category should be protected.⁹⁹ But my point is that not too long ago, a parent would have considered a homosexual child to be “diseased.” It was not until 1992 that the World Health Organization stopped classifying homosexuality as a disease.¹⁰⁰ And to date, the American Psychiatric Association categorizes gender dysphoria as a disease, the treatment of which—in some cases—comes to requires serious medical intervention.¹⁰¹ Gender dysphoria and homosexuality are both linked disproportionately to premature death.¹⁰²

93. *Id.* at 1376.

94. X. Shawn Liu et al., *Rescue of Fragile X Syndrome Neurons by DNA Methylation Editing of the FMR1 Gene*, 172 CELL 979, 979 (2018).

95. Dejan B. Budimirovic, *Fragile X Syndrome and Autism Spectrum Disorder: The Similarities and Differences Between FXS and ASD*, NAT'L FRAGILE X FOUND., (Dec. 18, 2014) <https://fragilex.org/support-and-resources/fragile-x-syndrome-and-autism-spectrum-disorder-similarities-and-differences/> [<https://perma.cc/9YPJ-QDEJ>].

96. See *Real Stories from People Living with Fragile X Syndrome*, CDC (May 30, 2019), <https://www.cdc.gov/ncbddd/fxs/stories.html> [<https://perma.cc/2BKS-BNNV>].

97. See SOLOMON, *supra* note 89, at 275.

98. See generally A. Ganna et al., *Large-Scale GWAS Reveals Insight into the Genetic Architecture of Same-Sex Sexual Behavior*, 365 SCI. *eat*7693 (Sept. 4, 2019) (explaining how two studies have “indicated that same-sex sexual behavior has a genetic component”).

99. Enríquez, *supra* note 1, at 1235.

100. Neel Burton, *When Homosexuality Stopped Being a Mental Disorder*, PSYCHOL. TODAY (Sept. 18, 2015), <https://www.psychologytoday.com/us/blog/hide-and-peek/201509/when-homosexuality-stopped-being-mental-disorder> [<https://perma.cc/N9XG-KQFA>].

101. Ranna Parekh, *What Is Gender Dysphoria?*, AM. PSYCHIATRIC ASS'N (Feb. 2016), <https://www.psychiatry.org/patients-families/gender-dysphoria/what-is-gender-dysphoria> [<https://perma.cc/HWC3-D69X>].

102. See Geoffrey L. Ream, *What's Unique About Lesbian, Gay, Bisexual, and Transgender (LGBT) Youth and Young Adult Suicides? Findings from the National Violent Death Reporting System*, 64 J. ADOLESCENT HEALTH 602, 602 (2019). I am mindful of the fact that, statistics aside, suggesting that

Another interesting example is that of the Belgian town of Geel, which has been embracing strangers with severe mental illness for over 700 years.¹⁰³ In Geel, those with psychiatric disorders are not treated or medicated; they are called guests or boarders, as opposed to patients.¹⁰⁴ The eccentric behaviors of the guests are incorporated into society without fear or emotion.¹⁰⁵ The Geel case study suggests that the label of “disease” is largely a social construct.¹⁰⁶ In Geel, boarders become a part of society and life, such that any distinction between the boarders and nonboarders has blurred.¹⁰⁷ Ultimately, Fragile X, Geel, and homosexuality are a few examples among many.¹⁰⁸ The attitudes of society shift over time as data is gathered and synthesized, and it is possible that what society considers a disease today may not be classified as such in the future.

b. Narrowing the Right

As Enríquez notes, the line-drawing problem could arguably be solved by more carefully defining the right, as *Glucksberg*'s second prong requires. After all, conditions such as Tay-Sachs and Lesch-Nyhan syndrome are unlikely ever to be considered a part of the normal spectrum of diversity. At approximately six months of age, infants diagnosed with Lesch-Nyhan syndrome begin deteriorating neurologically and physiologically. These infants display severe mental deficiencies and compulsive self-mutilation behaviors. Often, these babies must have their elbows placed in splints, their hands wrapped in gauze, and have all of their teeth extracted.¹⁰⁹ There is, as of now, no cure for Lesch-Nyhan syndrome, but the condition's genetics are well understood.¹¹⁰ Instead of

the LGBT population is more susceptible to suicide may be offensive to some. See DALE CARPENTER, FLAGRANT CONDUCT: THE STORY OF *LAWRENCE V. TEXAS* 34 (2012).

103. Angus Chen, *For Centuries a Small Town Has Embraced Strangers with Mental Illness*, NPR (July 1, 2016), <https://www.npr.org/sections/health-shots/2016/07/01/484083305/for-centuries-a-small-town-has-embraced-strangers-with-mental-illness> [<https://perma.cc/5Q9U-ZRRM>].

104. *Id.*

105. *Id.*

106. Instead of viewing a boarder as an ill person—as an “other”—she is part of the spectrum of “mental differences” that exist within humanity. *Id.*

107. *Id.*

108. Among these is Fragile X Syndrome, a likely target for CRISPR soon. See Foulkes et al., *supra* note 2, at 1377; see also Jamie Berke, *How Do Deaf People View Themselves?*, VERY WELL HEALTH (Aug. 29, 2018), <https://www.verywellhealth.com/deaf-culture-deaf-disabled-both-1048590> [<https://perma.cc/ER33-AFL4>] (hashing out the debate as to whether deafness is or is not a disability). ADHD is also on this list. See, e.g., Chuck Ruby, *ADHD Is Not a Disorder*, INT'L SOC'Y ETHICAL PSYCHOL. & PSYCHIATRY (Feb. 9, 2016), <http://psychintegrity.org/1377-2/> [<https://perma.cc/538Z-AE2T>] (“‘ADHD’ is not a condition or disorder. It is a descriptive label given to people who are not interested enough in a particular topic or an authority figure as they should be.”).

109. I. Glenn Cohen, *Regulating Reproduction: The Problem with Best Interests*, 96 MINN. L. REV. 423, 473 (2011) [Cohen, *Regulating Reproduction*].

110. *Lesch-Nyhan Syndrome*, NIH: GENETICS HOME REFERENCE (Feb. 3, 2013), <https://ghr.nlm.nih.gov/condition/lesch-nyhan-syndrome.pdf> [<https://perma.cc/2PE7-TTUZ>].

defining the right as Enríquez has in his argument—at monogenic conditions to avoid the line-drawing problem—the line might be placed at conditions involving cognitive deficiencies so that the child would be born with an Intelligence Quotient (IQ) of no more than X or a life expectancy of no more than Y . This definition avoids the problem the *Roe* framework struggled with, which is that as the technology improved the lines drawn in *Roe* became unworkable.¹¹¹ Monogenic conditions will never become polygenic, though science may one day be able to target polygenic conditions using CRISPR. And so, as in *Roe*, the lines Enríquez draws making access to CRISPR therapies targeting monogenic conditions fundamental, but excluding polygenic conditions because the science is not well understood, become unworkable. Using IQ or life expectancy as a benchmark, however, poses no such problem.¹¹²

Because moving to define the right more carefully resolves the intractability problem, it is possible that the Court might reject the broad definition of the right to GGE for not being adequately careful.¹¹³ This rejection, considering *Glucksberg*'s first prong, seems reasonable given the fact that leaving open-ended the definition of burden, subject to change depending on societal context, is antithetical to providing a “careful description of the asserted right.”¹¹⁴ If we move to more clearly define the right, then we have solved the *Glucksberg* prong two problem while creating a *Glucksberg* prong one problem. That is, there is no tradition deeply rooted in history for editing out genes that cause a child to be born with an IQ of no more than X or a life expectancy of no more than Y . And it makes little sense for the Court to accept one definition of the right for the first prong, while analyzing *Glucksberg*'s second prong using a different definition of the right.¹¹⁵

Children diagnosed with Tay-Sachs don't fare much better. Cohen, *Regulating Reproduction*, *supra* note 109, at 473.

111. See *supra* note 77 and accompanying text.

112. Concededly, it may be that one day the life expectancy of children with Tay-Sachs may exceed Y . But this is not a problem because then Tay-Sachs falls outside of the right, though the right remains unchanged. Based on this standard, all children who had Tay-Sachs edited out of their genome would have had a life expectancy of less than Y at the time of birth. There may still be some misgivings here, as the edited child's life expectancy may have increased past Y during his lifetime. Because we are talking about germline genome editing here, Tay-Sachs will have also been edited out of that child's future children, who more likely would have had a life expectancy greater than Y . Those children, however, would have otherwise never existed, so long as Y stays under reproductive age. In any case, it's not a perfect line—and there are more problems with it than those I've raised here—but it is a better one.

113. See Ossareh, *supra* note 67, at 757.

114. *Washington v. Glucksberg*, 521 U.S. 702, 721 (1997); see also *Pointer v. Texas*, 380 U.S. 400, 414 (1965) (Goldberg, J., concurring) (noting anything that would require the Court “to make the extremely subjective and excessively discretionary determination . . . is sufficiently repugnant to the notion of due process”).

115. This is, after all, exactly what the Court refused to do in *Glucksberg*. 521 U.S. at 702.

2. Substantive Due Process and Value-Forming Characteristics

Let's assume, as some have suggested, that the Court's opinion in *Lawrence* invites a more expansive fundamental rights analysis and that this more flexible analysis allows us to bypass the *Glucksberg* problem outlined above. In other words, that *Lawrence* spells the death of narrowly defined substantive due process rights.¹¹⁶ This conclusion is speculative,¹¹⁷ given that *Lawrence* does not ultimately recognize a fundamental right, makes use of the language in *Glucksberg*, and concludes by submitting the Texas statute to rational basis review.¹¹⁸ Further, the Court in *Gonzales v. Carhart*¹¹⁹—a substantive due process case decided after *Lawrence* and with a majority opinion also authored by Justice Kennedy—adhered to the standards articulated in *Glucksberg* without mention of *Lawrence*.¹²⁰ Even assuming the conclusion that *Lawrence* spells the end of narrowly defined rights is true, however, *Lawrence* itself then imposes a different limitation.

As clarified by *Lawrence*, the concerns that underscore the Court's decisions on the right to privacy revolve around shielding value-transmitting and value-forming relationships from the state's control.¹²¹ And it is these concerns that are important for determining if a decision fits within a previously recognized, broadly defined right.¹²² That is, the level of generality that should be used in a constitutional analysis depends on whether the abstraction is representative of the actual tradition, as determined by whether the same concerns as those underlying the Court's prior holdings are present. Should those concerns not be the same, it's more likely that the abstraction is nothing more than a mere concoction presented for purposes of litigation.¹²³

Unlike having a German-speaking child or having one's children attend private schools, raising a disease-free child lacks the same traditional link to value formation. Certainly, a mother might need her child to speak German so

116. See Nancy Pham, Note, *Choice v. Chance, The Constitutional Case for Regulating Human Germline Genetic Modification*, 34 HASTINGS CONST. L. Q. 133, 139–40 (2006) (“Some argue that *Lawrence* signals the death of the narrow approach to defining rights.”).

117. And taken to its logical extreme, it is also contrary to precedent. *Collins v. City of Harker Heights*, 503 U.S. 115, 125 (1992) (“The doctrine of judicial self-restraint requires us to exercise the utmost care whenever we are asked to break new ground in this field.”).

118. See *Lawrence v. Texas*, 539 U.S. at 558, 578 (2003).

119. 550 U.S. 124 (2007).

120. Calabresi, *supra* note 84, at 1518 (“I think the overwhelming majority of future substantive due process cases are going to be decided, as *Gonzales* was, with citation to *Glucksberg* and without reference to *Lawrence*.”). In *Gonzales v. Carhart*, the Court upheld the Partial-Birth Abortion Ban Act of 2003. 550 U.S. at 124.

121. See Tribe, *supra* note 10, at 189. And if *Lawrence* spells the death of narrowly defined constitutional rights, then the Court's cases from *Meyer* to *Lawrence* have to be understood as part of a single tradition, speaking to one broad fundamental right.

122. LAURENCE H. TRIBE & MICHAEL C. DORF, ON READING THE CONSTITUTION 110 (1991).

123. See *id.* at 111 (“[T]he test should be whether the asserted level of generality provides an appropriate description of already-protected rights without reference to the newly-asserted rights.”).

that she can communicate with him and pass down cultural values and traditions. This may be the only way for her to fulfill a part of her development as a person. Through the relationship with her German-speaking child, she will—by virtue of the shared language—now be able to transmit her values and share in his experience. Likewise, a mother might want her child to attend private religious school because the child will pick up on certain values. These values are important to her as an individual and contribute to the formation of the value-transmitting parent-child relationship so central to the parent's development. But, at least traditionally, there doesn't exist a role for a disease-free condition to contribute to the preservation of the value-transmitting relationship between parent and child.

To the contrary, it has been suggested that engaging in GGE helps to deface the parent-child relationship. And as such, by recognizing constitutional protections for the decision to engage in GGE, the Court would not only fail to protect the value-forming and value-transmitting parent-child relationship but instead contribute to corrupting the ideal of parenthood.¹²⁴ The use of these technologies makes procreation more akin to manufacturing, where the "manufacturer stands above [the product]," resulting in a process which is "profoundly dehumanizing, no matter how good the product."¹²⁵ If by finding that the right to privacy encompasses the right of a parent to use GGE technologies the Court would arguably be sanctioning the disfiguring of a relationship it had previously been concerned with protecting, we can assume the abstraction of the right to privacy in this case would not be representative of actual traditions.

B. *Limitations from Decisions Restricting Parental Autonomy*

To be sure, the Court could take a broader view of the intrinsic concerns in *Lawrence*. Arguably, if the concerns underlying *Lawrence* were about keeping the state from interfering with value-forming and value-transmitting relationships, then the state should be kept out of all central decisions involving parental autonomy. Because generally, no matter what decisions the parent is making for her child, the relationship itself is a value-forming and value-transmitting one by definition. The actual values being transmitted are, to all intents and purposes, irrelevant. Even so, the Court—any limitations imposed

124. See Cohen, *Best Interest supra* note 63, at 1270 ("[Genetic modification] disfigures the relation between parent and child . . .") (quoting MICHAEL J. SANDEL, *THE CASE AGAINST PERFECTION* 46 (2007)).

125. *Id.* at 1265 (quoting Leon R. Kass, *The Wisdom of Repugnance*, in *THE ETHICS OF HUMAN CLONING* 3, 39 (1998)).

by *Lawrence* and *Glucksberg* aside—has explicitly recognized that a parent's constitutionally protected interests are not so expansive.¹²⁶

The Court has previously struck down a parent's authority over her minor child's abortion decisions,¹²⁷ instructing that the familial relationship between parent and child is not beyond the state's regulatory reach.¹²⁸ Again, in *Parham v. J.R.*,¹²⁹ despite siding with the parents, the Court noted that in certain circumstances a parent is not free to have "absolute and unreviewable discretion" to make medical decisions for her child.¹³⁰ In *Prince v. Massachusetts*,¹³¹ the Court affirmed the conviction of a child's legal guardian for violating a child labor law, holding that the state has broad authority over children's activities and may lawfully restrict the parent's control.¹³² As these cases illustrate, in decisions involving parental autonomy following *Meyer* and *Pierce*, the Court has not always been absolutely deferential to the parent. To determine when *Meyer* and *Pierce*—two load-bearing pillars of modern substantive due process—do support a claim for parental autonomy, the Court looks to how the allocation of decisionmaking power in the context at hand serves the parent, the child, and values central to the Constitution.¹³³

Indeed, it makes sense to rest the recognition of the right in parental autonomy cases on how the allocation of decisionmaking power affects those involved: although protections afforded to parental autonomy have deep roots in tradition, they are nonetheless unusual constitutional protections. They involve protecting one person's control over another person—the parent's control over the child.¹³⁴ Even if the reasons for shielding parental autonomy from government interference are characterized as parent-centric, we can't negate the fact that the parental decisions implicate control over a third party in the name of autonomy. Because of this idiosyncrasy,¹³⁵ when the Court grants constitutional protection to a parent's decisions involving her child, special attention is paid to three distinct interests typically served by protecting parental autonomy: (1) the parent's interest in achieving fulfillment through

126. *Roe v. Wade*, 410 U.S. 113, 152–53 (1973) (“[T]he right has *some extension* to activities relating to marriage, . . . procreation, . . . contraception, . . . family relationships . . . , and child rearing and education.” (emphasis added)).

127. *City of Akron v. Akron Ctr. for Reprod. Health, Inc.*, 462 U.S. 416, 426 (1983).

128. See *Attanasio*, *supra* note 1, at 1295.

129. 442 U.S. 584 (1979).

130. *Id.* at 604.

131. 321 U.S. 158 (1944).

132. *Id.* at 166–67, 168, 170.

133. *Developments in the Law—The Constitution and the Family*, 93 HARV. L. REV. 1156, 1353 (1980).

134. *Id.* at 1352–53.

135. See Andrew J. Kleinfeld, *The Balance of Power Among Infants, Their Parents and the State* (pt. 2), 4 FAM. L.Q. 409, 410–11 (1970); see also *Developments in the Law*, *supra* note 133, at 1353 (“If the scope of . . . a constitutional right is to be defined in a coherent fashion, special attention must be paid to the interests it serves.”).

childrearing; (2) the child's interest in having the decisionmaker be the one best suited to the task; and (3) the Constitution's interest in diversity and pluralism.¹³⁶ To determine the degree of protection that should be afforded to a certain parental right,¹³⁷ a determination must be made about the extent to which each of these interests is served.¹³⁸

1. The Parent's Interest in Self-Fulfillment

The argument for GGE above lays out the significance of the parent's interest in self-fulfillment under the circumstances.¹³⁹ In any case, the interests of the parent will always pull in favor of parental autonomy. Though the degree of control being afforded to the parent in this case is drastic—at issue is the (likely) irreversible manipulation of her child's genetic code, the essence of his being.¹⁴⁰ So the correlating degree of constitutional protection required will necessarily turn on how the interests of others involved are implicated.¹⁴¹

2. The Child's Interest in the Allocation of the Decision

A child has an interest in having the best-situated decisionmaker call the shots.¹⁴² At least for a subset of children in the GGE context, the Nonidentity Problem will always align the child's interests with those of the parent. The Nonidentity Problem tells us that no matter how strongly, *ex ante*, the child's interest in having the best decisionmaker available to him militates against unrestricted parental autonomy, the edited child's alternative—*ex post*, once he is in a position to assert his interests—is to never have existed at all. Where the GGE intervention was a necessary condition for the child's existence, and where the child is not destined to live a life not worth living, the child's interest will always favor the parent as the best-suited decisionmaker.¹⁴³ As it turns out, however, the effects of the Nonidentity Problem are more nuanced and affect only a subset of relevant scenarios.

136. See *Developments in the Law*, *supra* note 133, at 1353.

137. See Kleinfeld, *supra* note 135, at 412.

138. *Developments in the Law*, *supra* note 133, at 1354.

139. See *supra* Section III.A.2.b (outlining how a parent-child relationship is central to a parent's development of self). *But see supra* Section II.A.2 (arguing that a disease-free child does not contribute to a parent's development of self as traditionally understood).

140. See I. Glenn Cohen, *What (If Anything) Is Wrong with Human Enhancement: What (If Anything) Is Right with It?*, 49 TULSA L. REV. 645, 647 (2014).

141. *Developments in the Law*, *supra* note 133, at 1354.

142. *Id.* at 1353.

143. See *supra* Section III.A.2.b.i (exploring the how the parent's interests will always favor staving off government intervention).

a. Existing Embryos and False Nonidentity Problems

A true Nonidentity Problem arises only when the edited child would otherwise not have existed.¹⁴⁴ In a majority of scenarios, however, the Nonidentity Problem isn't decisive when it comes to the child's interest. Where the edited embryo would have been conceived in any case, a true Nonidentity Problem does not arise. In this scenario, the parent is informed that, without GGE intervention, her already conceived child will suffer from condition *Q*. Although *Q* may be a serious medical condition, *Q* is nonetheless compatible with life. But GGE could prevent condition *Q* from developing in the parent's embryo.¹⁴⁵ Under a traditional understanding of the Nonidentity Problem, whether or not GGE intervention takes place, the identity of the child with condition *Q* remains constant.¹⁴⁶ The same is true if the child has not been conceived, but the availability of GGE interventions would have in no way influenced the parent's decision to conceive. For purposes of the Nonidentity Problem's framework, the child's identity is the same pre- and post-intervention. And so, the child asserting his rights ex post is the same child whose interests, ex ante, opposed unrestricted parental autonomy. The child's counterfactual here is to exist as himself with condition *Q*. The Nonidentity Problem, therefore, isn't an obstacle to considering how parental autonomy serves at least some children's interests in having the best-situated decisionmaker make the GGE decision.

b. Roe and Fetal Rights

But any maneuvering past the Nonidentity Problem drives the argument directly into the fetal rights obstacle embedded in *Roe*. The Supreme Court has explicitly rejected the proposition that an embryo should be considered human—a person under the Constitution—at conception.¹⁴⁷ There is no dispute that the Court in *Roe* rhetorically denied fetal rights under the Fourteenth Amendment.¹⁴⁸ The embryo to be edited exists at an even earlier developmental stage than the fetus in *Roe*. Although, unlike the fetus at issue in *Roe*—which will exist no more after the abortion is performed—the embryo at issue here will develop into a person as defined by the Fourteenth Amendment. And that

144. In this case, this is a very narrow category encompassing children that would have never been conceived or would have been aborted but for the parent's choice to use GGE.

145. Eduardo Rivera-López, *Individual Procreative Responsibility and the Non-Identity Problem*, 90 PAC. PHIL. Q. 336, 338 (2009) (citing Derek Parfit, *Future Generations: Further Problems*, 11 PHIL. & PUB. AFF. 113, 113–72 (1981)).

146. *Id.* The same can be said of children who would have been aborted but for the availability of GGE intervention.

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

148. See Attanasio, *supra* note 1, at 1294 n.107 (citing *Roe*, 410 U.S. at 158–59).

person will have to move about the world with the GGE decision having “a real and lasting effect on his life.”¹⁴⁹

It is important to remember that in the context of parental autonomy decisions, the Court is concerned with a narrow interest: the child’s interest in having the best-situated decisionmaker making decisions.¹⁵⁰ The issue is not that, to curtail parental autonomy, the fetus’s liberty interests must outweigh those of the parent. Rather, the parent’s liberty interests have usually been protected only where the protection would serve to further the child’s interest in having a most capable decisionmaker advocate for him. The dicta in *Roe* must be overcome to the extent that it would prohibit the Court from considering the interests of the future child at all.

Here, there is strong indication that the child’s interests would support limiting parental autonomy.¹⁵¹ The parent’s particular familiarity with her child has little relevance in a medical context.¹⁵² Medical expertise will better situate a decisionmaker than the special relationship between parent and child.¹⁵³ By virtue of being born a genetically engineered human, the child will also be irreversibly branded as an “other,” potentially compromising that child’s essential human dignity.¹⁵⁴ The parent, however, in making the GGE decision is likely avoiding branding herself as an “other,” the parent of a “diseased” child. As such, there exists an inherent conflict between parent and child in the GGE decision. At best, the parent, having no medical expertise, is no better situated than the state to make the GGE choice. At worst, the parent is a conflicted decision-maker, unlikely to further the interests of her child. Therefore, in the category of cases where the Nonidentity Problem is not at issue, the child’s interests do not favor unrestricted parental autonomy.

3. The Constitution’s Stake in Diversity and Pluralism

One final consideration is that where the Court has thwarted government intrusion into decisions central to parental autonomy, the parent’s autonomy has clearly helped to further the Constitution’s interest in safeguarding diversity and pluralism.¹⁵⁵ Unrestricted parental autonomy, by splintering

149. *Id.* at 1294 n.108 (citing Patricia A. King, *The Judicial Status of the Fetus: A Proposal for Legal Protection of the Unborn*, 77 MICH. L. REV. 1647, 1672–73 (1979)).

150. *Developments in the Law*, *supra* note 133, at 1354.

151. *Id.* at 1355 (explaining that in the context of medical treatment “the interest of the child typically does not favor parental control”).

152. *Id.*

153. *Id.*

154. See Attanasio, *supra* note 1, at 1296 (“Any possibility of living as a non-Genos person is lost: daily existence may be punctuated by jealousy, ridicule, and exclusion. Essential human dignity may also be compromised by the realization that one is the product of genetic fabrication.”).

155. See *Pierce v. Soc’y of Sisters*, 268 U.S. 510, 535 (1925); *Meyer v. Nebraska*, 262 U.S. 390, 401–02 (1923); *Developments in the Law*, *supra* note 133, at 1353; Michael G. Starr, Note, *The Mental Hospitalization of Children and the Limits of Parental Authority*, 88 YALE L.J. 186, 195 (1978).

childrearing decisions, helps prevent state-imposed orthodoxy, which the Constitution disfavors.¹⁵⁶ In the medical context, scholars have noted that where the child's interests do not favor unrestrained parental control, neither does the societal interest in diversity and pluralism.¹⁵⁷ Government regulations of GGE technologies are unlike state-imposed restrictions on teaching foreign languages in that the former arguably prevents the standardization of children while the latter sanctions state-imposed orthodoxy.

CRISPR's scientific underpinnings are antithetical to an interest in diversity. Through the Human Genome Project, scientists developed for their use the equivalent of a standardized reference text.¹⁵⁸ Following the mapping of the human genetic terrain, genome sequencing was then used to identify defective genes and correct genetic mistakes.¹⁵⁹ This view of genetic differences as a textual error—deviations as a marker of a “genetic other”—reinforces a negative construction of disabilities and undervalues genetic diversity.¹⁶⁰ The reference text developed through the Human Genome Project, after all, is anything but diverse: it was derived from samples of a few men of European origin.¹⁶¹ One of the most poignant critiques of research in genomics, moreover, is that the sample population from which data is collected to conduct clinical trials and Genome-Wide Association Studies lacks diversity.¹⁶² In short, the data being collected comes mostly from white, non-Hispanic participants, and new technologies and treatments are developed based on this unrepresentative sample.¹⁶³ Any corrections made through GGE to edit out genetic abnormalities would therefore, in effect, be standardizing to a nondiverse mean.

By using CRISPR to eliminate deviations from the unrepresentative reference text based on unrepresentative data, GGE is—at least to some extent—targeting diversity as genetic disease. Of course, genetic diversity is not exactly what comes to mind with mention of a pluralist society's interest in diversity. But if we simply consider that some diversity of thought comes from diversity of experience, and that diversity of experience ultimately stems, at least in part, from biological diversity, genetic diversity and diversity of thought

156. Starr, *supra* note 155, at 195.

157. *Developments in the Law*, *supra* note 133, at 1356.

158. James C. Wilson, *(Re)Writing the Genetic Body-Text: Disability, Textuality, and the Human Genome Project*, CULTURAL CRITIQUE, Winter 2002, at 23, 26.

159. *Id.* at 25.

160. *Id.*

161. *Id.* at 26.

162. See Winnie W.S. Mak et al., *Gender and Ethnic Diversity in NIMH-Funded Clinical Trials: Review of a Decade of Published Research*, 34 ADMIN. & POL'Y MENTAL HEALTH & MENTAL HEALTH SERVS. RES. 497, 497 (2007).

163. See Roseann E. Peterson et al., *Genome-Wide Association Studies in Ancestrally Diverse Populations: Opportunities, Methods, Pitfalls, and Recommendations*, 179 CELL, 589, 598 (2019); see also Clara C. Hildebrand & Jonathan M. Marron, *Justice in CRISPR/Cas9 Research and Clinical Applications*, 20 AM. MED. ASS'N J. ETHICS 826, 826–27 (2018).

are inextricably linked. Certainly, there may be cases, as illustrated by the achondroplasia vignette above, where a parent would be applying GGE to select for diversity. In this context, it is enough to show that the Constitution's interest in diversity and pluralism is not clearly served by allocating the decisionmaking to the parent alone. The diversity-based CRISPR critiques are enough to introduce some uncertainty.

At minimum, the interests of the Constitution in diversity and pluralism are conceivably at risk of being disserved in the context of GGE.¹⁶⁴ Additionally, for at least a subset of circumstances, the child's relevant interests are in no way served. As it has in cases past, this balance of interests should dissuade the Court from extending an unusual constitutional protection, a protection which affords one person control over another, to the GGE context.

Limitations derived from *Glucksberg*, *Lawrence*, and other precedents counsel against recognizing a fundamental right to therapeutic GGE. Independently, prudential concerns offer more reasons for doing the same.

III. PRUDENTIAL CONSIDERATIONS

More than any other justiciability doctrine, the judiciary's self-imposed restraint requiring judicially manageable standards explicitly recognizes the gap between constitutional guarantees and judicially enforceable rights.¹⁶⁵

A. *Intractable Line-Drawing and the Parents' Parallel Rights*

So far, both the argument and the counterargument for GGE have discussed the right of a parent in the singular. But any one embryo would necessarily have two (maybe even three) parents.¹⁶⁶ If a mother has a fundamental right to edit out a certain genetic profile in her embryo, it seems necessary to recognize a parallel right in the embryo's other genetic parent(s) to keep the embryo's genetic makeup intact, or vice versa.¹⁶⁷ The parents' rights would come to a point of intersection. And at their intersection, at minimum, the rights of all parents are no longer judicially manageable.¹⁶⁸ Professor Laurence Tribe has addressed this issue in the context of embryo destruction, concluding there is no principled way for the Court to choose between the rights

164. See *supra* notes 106–11 and accompanying text.

165. Richard H. Fallon, Jr., *Judicially Manageable Standards and Constitutional Meaning*, 119 HARV. L. REV. 125, 1276 (2006).

166. J. Ravindra Fernando, Note, *Three's Company: A Constitutional Analysis of Prohibiting Access to Three-Parent In Vitro Fertilization*, 29 NOTRE DAME J.L. ETHICS & PUB. POL'Y 523–524 (2015).

167. See Tribe, *supra* note 10, 182 n.135.

168. *Id.* In every internally consistent logical system, a proposition *P* whose truth would imply both *X* and non-*X* cannot be true. See James Aspnes, *Notes on Mathematical Logic*, YALE: ASPNES PINEWIKI (Dec. 13, 2010), <http://www.cs.yale.edu/homes/aspnes/pinewiki/MathematicalLogic.html> [<https://perma.cc/59YE-NPJ5>].

of two similarly-situated parents.¹⁶⁹ In other words, the Court would have a hard time fashioning a reliable standard for determining which parent's constitutional rights should be protected at the expense of the other, similarly situated parents'.

B. *Institutional (In)competence & Science*

The Court's lack of expertise and expressed hesitance in involving itself in issues of science and technology are worth emphasizing. As Enríquez himself aptly points out, there is no available framework, as of now, for satisfactorily addressing questions of science in law.¹⁷⁰ The Court recognizes the challenges that complex scientific principles pose to legal scholars. Take for example the oral arguments for the *Myriad Genetics* case. *Myriad* involved complex questions about genetics and molecular biology.¹⁷¹ The Justices were exceedingly confused¹⁷² on important points. Beyond not understanding the science, Justice Scalia candidly admitted that he did not believe in facts that have been readily accepted by the scientific community for decades.¹⁷³ And, in a frighteningly relevant context, there's precedent for the Court making misguided decisions where the underpinning science at issue was not well understood by the Justices: *Buck v. Bell*.¹⁷⁴ During the time *Buck* was decided, the eugenics movement, seeking to eradicate the feeble-minded and other genetically inferior people from the American population, had gained huge momentum in the United States.¹⁷⁵ Among eugenics supporters was Oliver Wendell Holmes.¹⁷⁶ Justice Holmes, writing for the majority, concluded by upholding a sterilization statute with the unfortunate remark: "[t]hree generations of imbeciles are enough."¹⁷⁷ *Buck v. Bell* has never been overruled.¹⁷⁸

As a matter of policy, the Court should refrain from basing decisions on scientific issues the institution isn't competent to handle.

169. See Tribe, *supra* note 10, 182 n.135.

170. Paul Enríquez, *Genome Editing and the Jurisprudence of Scientific Empiricism*, 19 VAND. J. ENT. & TECH. L. 603, 603, 610–11 (2017).

171. Ass'n for Molecular Pathology v. Myriad Genetics, Inc., 569 U.S. 576, 576 (2013).

172. See generally Oral Argument, *Myriad Genetics, Inc.*, 569 U.S. 576 (No. 12-398), http://www.supremecourt.gov/oral_arguments/argument_transcripts/12-398-amc7.pdf [<https://perma.cc/LNQ2-A7JJ>] (showcasing the Justices' struggle to understand the science behind the patents for DNA sequences).

173. See Enríquez, *supra* note 170, at 609 (quoting Justice Scalia in *Myriad*).

174. 274 U.S. 200 (1927).

175. See generally ADAM COHEN, *IMBECILES: THE SUPREME COURT, AMERICAN EUGENICS, AND THE STERILIZATION OF CARRIE BUCK 25* (2016) [hereinafter COHEN, *IMBECILES*].

176. *Id.* at 241–43.

177. *Buck*, 274 U.S. at 207.

178. See COHEN, *IMBECILES supra* note 175, at 12.

CONCLUSION

GGE applications are no longer improbable hypotheticals. Genetically modified humans are, after all, now among us.¹⁷⁹ When the decision to recognize a fundamental right to access GGE technology reaches the Supreme Court, the Court should adhere to its precedent in a delicate area, where “[g]uideposts for responsible decisionmaking . . . are scarce and open-ended [And t]he doctrine of judicial self-restraint requires [the Court] to exercise the utmost care whenever [it is] asked to break new ground.”¹⁸⁰ As such, the Court should refuse to recognize a fundamental right to GGE for health and therapeutic uses.

179. See Cyranoski & Reardon, *supra* note 3.

180. *Collins v. City of Harker Heights*, 503 U.S. 115, 125 (1992).