AMERICAN UNIVERSITY | WASHINGTON COLLEGE OF LAW

HEALTH LAW & POLICY BRIEF

VOLUME 17 • ISSUE 2 • SPRING 2023

ARTICLES

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We would like to thank our advisor, Lewis Grossman, for his support. We are also grateful to the American University Washington College of Law for providing a legal education that empowers us to champion what matters.

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2022 – 2023

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LETTER FROM THE EDITORS

Dear Reader:

On behalf of the Editorial Board and Staff, we proudly present Volume 17, Issue 2 of the *Health Law & Policy Brief.* Since its formation in 2007, the Brief has published articles on an array of topics in health law, food and drug law, and emerging health technologies. In this issue, our authors discuss facets of substance use, treatment, and regulation in the United States. Volume 17.2 features two articles: one discusses the impact of *Dobbs* on incarcerated individuals, and one discusses the need for updated human research ethics to meet the growing prevalence of space exploration.

Our first article, by Kimia Khatibi, Managing Editor of the Brief, details the extraordinary impact of *Dobbs v. Jackson Women's Health* on abortion access for incarcerated individuals. Ms. Khatibi analyzes the impacts of the holding and explains that the decision violates the substantive due process rights of such individuals because it allows states to restrict abortion care. Our second article, by Thomas Salazar, explains current human research ethics guidance and analyzes how it does or does not protect human subjects that travel to space. Mr. Salazar then recommends the formation of the Space Human Research Convention, a new treaty meant to govern space research.

We would like to thank the authors for their insight, creativity, and cooperation in producing these pieces. We would also like to thank the *Health Law & Policy Brief's* article editors and staff members who worked so diligently on this issue.

To all our readers, we hope you enjoy this issue, that the never-ending complexities of this area of law inspire your own scholarship, and that you continue to anticipate and scrutinize the inevitable challenges that our healthcare system continues to withstand.

Sincerely,

Delaney Hermenau
Editor-in-Chief

Hannah Zuckerman
Executive Editor

* * *

Dobbs in Prison: How the Dobbs Decision Will Violate the Substantive Due Process Rights of Incarcerated Individuals by Allowing States to Restrict Abortion Care

Kimia S. Khatibi

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INTRODUCTION[1]

The 2022 United States Supreme Court decision in *Dobbs v. Jackson Women's Health Organization* overturned nearly 50 years of legal precedent in the United States and is bound to impact millions of people across the country.[2] The right to abortion has been a highly contentious topic for decades and creates distinct lines within politics, religion, the law, and even casual social settings. Abortion is recognized as critical health care and a fundamental human right by organizations around the globe, yet it continues to be restricted and jeopardized within the United States both before and after the *Dobbs* decision.[3]

Access to comprehensive abortion care impacts people's emotional, financial, and physical well-being, which is why a constitutional protection to abortion is essential, especially for vulnerable populations.[4] By eliminating the constitutional protection to abortion, the United States Supreme Court placed

[1] At the outset of this article, Florida had a 15-week abortion ban. During this publication process, Florida passed a six-week abortion ban. While this article notes the most recent changes in abortion laws, this change exemplifies how the *Dobbs* decision rapidly transformed the abortion landscape in the United States. In the course of only a couple of months, certain information in this article became outdated and had to be changed, demonstrating the immense unpredictability around reproductive rights and the uncertainty that millions of individuals across the country currently face.
[2] *See* Dobbs v. Jackson Women's Health Org., 142 S. Ct. 2228, 2279 (2022); *see* Roe v. Wade, 410 U.S. 113 (1973).
[3] *Abortion*, CTR. FOR REPROD. RTS., https://reproductiverights.org/our-issues/abortion/#:~:text=to%20abortion%20care.-,Summary,seeking%20or%20accessing%20abortion%20services (last visited Nov. 15, 2022).
[4] *Research Shows Access to Legal Abortion Improves Women's Lives*, URB. INST., https://www.urban.org/urban-wire/research-shows-access-legal-abortion-improves-womens-lives (last visited Apr. 16, 2023).

certain populations at great risk of having additional fundamental rights violated. In particular, the Supreme Court's decision in *Dobbs v. Jackson Women's Health Organization* will unjustly impact individuals capable of pregnancy in state prison systems as the ambiguity and inconsistency of local laws will result in an influx of forced childbirth within this population and the violation of their substantive due process rights to privacy and bodily autonomy.[5] This article compares three state prison systems in states with different abortion regulations with the goal of identifying how these regulations will impact incarcerated individuals capable of pregnancy in a post-*Roe* era.[6]

The states analyzed in this paper are California, Florida, and Texas. Each state has a different abortion rights history, and all three states emerged with different abortion restrictions since the overturn of *Roe v. Wade*.[7] The drastic differences between these states demonstrate how inconsistencies around abortion laws will unjustly impact America's incarcerated population. Given that individuals cannot choose where they are imprisoned, their reproductive health is left to chance and the political whims of the states they are held in. By analyzing these three state prison systems, this paper will argue

[5] *See* Dobbs v. Jackson Women's Health Org., 142 S. Ct. 2228, 2279 (2022).
[6] *See id.*
[7] *See id.* at 2279.

that the *Dobbs* decision will violate certain substantive due process rights for incarcerated individuals in states that are hostile towards abortion.

The term "woman" is used throughout this paper when discussing legislation, studies, and case law that uses language to exclusively discuss people with female reproductive anatomy. As society progresses, we now acknowledge that not all people who identify as female can become pregnant, and not all people that can become pregnant identify as female.[8] With this in mind, the history and continuing laws and policies that are inherently misogynistic and damaging toward cis-women should not be ignored. To that end, in an effort to be inclusive, this paper uses the phrase "individuals capable of pregnancy" knowing it is limited when working with past forms of language.

This paper begins by providing background on abortion rights in a post-*Roe* era, reproductive rights in state prisons, and the substantive due process rights that will be violated due to the *Dobbs* decision.[9] This paper explores three different states' drastically different abortion laws since the overturn of *Roe* and how those laws will impact the incarcerated individuals capable of pregnancy in each state.[10] In comparing these states' laws, this paper will expose how the

[8] *The Language We Use to Talk About Pregnancy and Abortion is Changing. But Not Everyone Welcomes the Shift*, CNN, https://www.cnn.com/2022/09/04/us/abortion-pregnant-people-women-language-wellness-cec/index.html (last visited Apr. 16, 2023).
[9] *See* Roe v. Wade, 410 U.S. 113 (1973); *see also* Dobbs v. Jackson Women's Health Org., 142 S. Ct. 2228
(2022).
[10] *See* Dobbs v. Jackson Women's Health Org., 142 S. Ct. 2228 (2022).

ambiguity and uncertainty around abortion laws will leave these individuals reliant on their state for health care in a vulnerable position. The paper concludes with a discussion on how incarcerated persons located in abortion-banned states will inevitably have their substantive due process rights – those that were not overturned by the *Dobbs* decision – infringed upon by being forced to give birth.[11]

BACKGROUND

I. Reproductive Rights and Reproductive Justice in a Post-Roe Era

The Supreme Court's decision to overturn *Roe v. Wade* jeopardizes the safety, health, and well-being of millions of individuals capable of pregnancy across the country.[12] By delegating the decision whether to legalize abortion to the states, the Supreme Court ultimately created a new era where increased maternal mortality rates and worsened health care discrepancies will dominate the United States healthcare system. Individuals who live in abortion-banned states will face increased financial barriers in accessing care across state lines, and abortion-friendly states are already experiencing an overwhelming influx of individuals seeking care from all over the country.[13] By banning or heavily

[11] *See id.*
[12] *See id.*
[13] Margot Sanger-Katz, Claire Cain Miller, & Josh Katz, *Interstate Abortion Travel is Already Straining Parts of the System*, N.Y. TIMES (July 23, 2022), https://www.nytimes.com/2022/07/23/upshot/abortion-interstate-travel-appointments.html.

restricting abortion access, conservative states have trapped their residents into carrying unwanted pregnancies to term. Although anti-abortion activists and policymakers argue that individuals who seek abortion services can still leave the state to get this care, this logic does not apply to those who cannot afford the large financial burden of travel or who do not have the choice to leave their state. For incarcerated individuals in abortion-restricted states, it is now extremely likely that they will be forced to carry unwanted pregnancies to term, infringing upon their fundamental rights to privacy and bodily autonomy.[14]

The reversal of *Roe* heavily impacted the framework of reproductive justice.[15] When discussing reproductive rights, it is crucial to include considerations about social determinants of health and sexual autonomy. Reproductive justice is a framework that combines the ideas of reproductive rights and social justice. This framework focuses on three principles: (1) the right not to have a child; (2) the right to have a child; and (3) the right to parent children in safe and healthy environments.[16] This framework was developed in 1994 by Black women who recognized that the women's rights movement was not entirely inclusive of women of color and the specific needs of marginalized women across the world.[17] Therefore, reproductive

[14] *See* Griswold v. Connecticut, 381 U.S. 479 (1965); *see also* Eisenstadt v. Baird, 405 U.S. 438 (1972).
[15] *See* Dobbs v. Jackson Women's Health Org., 142 S. Ct. 2228 (2022).
[16] LORETTA J. ROSS & RICKIE SOLLINGER, REPRODUCTIVE JUSTICE: AN INTRODUCTION 9 (2017).
[17] *Reproductive Justice*, SISTER SONG, https://www.sistersong.net/reproductive-justice (last visited Feb. 20, 2023).

justice aims to advance reproductive rights as a human right by emphasizing equity in access to reproductive health care, including prioritizing access to social determinants of health like education, living wages, housing, etc.[18] The reproductive justice framework also emphasizes that safe and dignified fertility management, childbirth, and parenting are fundamental human rights.[19] When considering access to reproductive health care for individuals throughout the country, it is imperative to consider how access is impacted by different societal factors. The Supreme Court's decision in *Dobbs* will continue to have a devastating impact on the core principles of the reproductive justice framework as people no longer have the federally protected right to end an unwanted pregnancy.[20]

II. Reproductive Health in State Prison Systems

In 2020, around 1.2 million individuals were under the jurisdiction of state correctional authorities, almost 80,000 of which were female.[21] In addition to considering the sex of inmates, it is crucial to consider racial discrepancies among incarcerated and pregnant individuals and the role race plays when analyzing disparate health outcomes. Black women face higher rates of incarceration than their white counterparts due to the structural racism and institutional practices in the United States that continue to reinforce racial

[18] Ross, *supra* note 16, at 9.
[19] Ross, *supra* note 16, at 10.
[20] *See* Dobbs v. Jackson Women's Health Org., 142 S. Ct. 2228, 2279 (2022).
[21] E. Ann Carson, *Prisoners in 2020-Statistical. Tables*, U.S. DEP'T OF JUST. (2021), https://bjs.ojp.gov/content/pub/pdf/p20st.pdf.

inequities.[22] In 2008, the National Institute of Justice reported that 1 in every 100 Black women aged 35-39 is incarcerated while, for the same age group, 1 in every 355 white women is incarcerated.[23] In addition to having a detrimental impact on individuals capable of pregnancy in prison, the *Dobbs* decision will disproportionately hurt Black individuals and other people of color.[24]

Although individuals entering prison may arrive pregnant, others may become pregnant as a result of rape, an unfortunate but ubiquitous reality within America's federal and state prison systems.[25] In 2003, President Bush signed the Prison Rape Elimination Act into law, which sought to help eliminate sexual abuse in correctional facilities throughout the country.[26] Despite these efforts, sexual violence is still very prevalent in both federal and state prison systems.[27] Recently, the United States Department of Justice, Office of Justice Programs, Bureau of Justice Statistics found that nearly 20,000 allegations of sexual victimization in prisons were reported in 2018, 2.5 times the rate reported in 2012.[28] Additionally, increases in non-consensual

[22] *Mass Incarceration, Stress, and Infant Mortality*, CTR. FOR AM. PROGRESS (June 5, 2018), https://www.americanprogress.org/article/mass-incarceration-stress-black-infant-mortality/.
[23] *U.S. Incarceration Rates by Race and Sex*, NAT'L INST. OF JUST. (2008).
[24] *The Disproportionate Harm of Abortion Bans: Spotlight on Dobbs v. Jackson Women's Health*, CTR. FOR REPROD. RTS, https://reproductiverights.org/supreme-court-case-mississippi-abortion-ban-disproportionate-harm/ (last visited Apr. 16, 2023).
[25] *See* Prison Rape Elimination Act of 2003, 34 U.S.C. § 30301 (1) (2003).
[26] *Id.*
[27] Laura M. Maruschak & Emily D. Buehler, *Survey of Sexual Victimization in Adult Correctional Facilities, 2012- 2018-Statistical. Tables*, U.S. DEP'T OF JUST. (2021), https://bjs.ojp.gov/sites/g/files/xyckuh236/files/media/document/ssvacf1218st.pdf.
[28] *Id.*

sexual acts in federal and state prison systems were reported.[29]

Given the vulnerability of inmates capable of pregnancy and the high rates of sexual assault in the country's prison systems, standards have been set for pregnancy-related health care in prisons by multiple national organizations. The American College of Obstetricians and Gynecologists ("ACOG") recognizes and supports efforts to improve health care for incarcerated pregnant, postpartum, and nonpregnant people.[30] ACOG published a list of recommendations for correctional facilities to follow, which includes providing sexual and reproductive health care services for individuals in accordance with the same guidelines as those who are not incarcerated.[31] Incarcerated individuals deserve adequate and comprehensive reproductive health care like all people. However, given the high rates of sexual assault within correctional facilities, it seems even more pressing that individuals within this vulnerable population receive the care they need. The statistically high rates of sexual assault among this population exemplify why access to reproductive health care is imperative to ensure that these individuals can make the choices that are

[29] *See id.* at 3 ("Sexual victimization involves nonconsensual sexual acts or abusive contact with a victim without their consent or with a victim who cannot consent."); ("Nonconsensual sexual acts are the most serious types of sexual victimizations [that involve contact with reproductive organs.]"); (explaining the difference between sexual victimization and nonconsensual sexual contact).
[30] *Reproductive Health Care for Incarcerated Pregnant, Postpartum, and Nonpregnant Individuals*, AM. COLL. OF OBSTETRICIANS AND GYNECOLOGISTS (July 2021), https://www.acog.org/clinical/clinical-guidance/committee-opinion/articles/2021/07/reproductive-health-care-for-incarcerated-pregnant-postpartum-and-nonpregnant-individuals.
[31] *Id.*

best for their mental and physical health.[32] While ACOG advocates widely for access to abortion services for individuals who are incarcerated, its recommendation is less likely to be implemented following the *Dobbs* decision.[33]

In addition to ACOG, the National Commission on Correctional Health Care (NCCHC) and the American Public Health Association have standards for correctional health care for incarcerated individuals.[34] In 2018, the NCCHC published *Standards for Health Services in Prisons* and incorporated access to abortion care to emphasize the autonomy that pregnant inmates have over their pregnancies.[35] Although these standards are published and meant to be followed by federal and state prison systems, many state prison facilities ignored these guidelines for years, even before *Dobbs*.[36] Inequality in reproductive health care across state prison systems has existed for decades, and reproductive health

[32] Maruschak & Buehler, *supra* note 27.
[33] *See Reproductive Health Care for Incarcerated Pregnant, Postpartum, and Nonpregnant Individuals, supra* note 30.
[34] *State Standards for Pregnancy-Related Health Care and Abortion For Women in Prison*, ACLU, https://www.aclu.org/state-standards-pregnancy-related-health-care-and-abortion-women-prison-0#hd1 (last visited Nov. 1, 2022).
[35] *Standards for Health Services in Prisons*, NAT'L COMM'N ON CORR. HEALTH CARE (2018), https://www.prisonpolicy.org/scans/NCCHC_standards_2018_pregnancy.pdf.
[36] *See* Vimal Patel, *Inmate Who Was Pregnant Settles Suit Over Stop at Starbucks en Route to a Hospital*, N.Y. TIMES (Aug. 28, 2022), https://www.nytimes.com/2022/08/28/us/sandra-quinones-orange-county-settlement.html#:~:text=the%20main%20story-,Inmate%20Who%20Was%20Pregnant%20Settles%20Suit%20Over%20Stop%20at%20Starbucks,help%20after%20her%20water%20broke; *see* Stoetling v. Cnty. of Orange, No. SACV20665JVSKESX, 2020 WL 7065826, at *1 (C.D. Cal. Sept. 23, 2020); *see* Rafael Olmeda, *Sheriff Fires Two Jail Administrators After Inmate Gave Birth in Cell*, S. Fla. Sun Sentinel (Oct. 15, 2020), https://www.sun-sentinel.com/local/broward/fl-ne-broward-inmate-birth-20201015-52kdeuirgrc53dpbbnwnkmynwy-story.html.

experts know that financial and physical barriers are directly correlated with substandard reproductive health care for incarcerated populations in certain states and areas.[37] However, the recent Supreme Court decision in *Dobbs* enshrined this inequity, completely removing access to abortion for individuals imprisoned in any of the 13 states that banned abortion.[38]

III. Substantive Due Process and Reproductive Rights

Substantive due process is a constitutional principle that protects fundamental rights that may not be explicitly written in the United States Constitution.[39] This principle uses the Fifth and Fourteenth Amendments of the Constitution to protect people's fundamental rights by preventing governments from encroaching on those rights.[40] The Fifth Amendment applies to federal action by preventing the government from depriving anyone of "life, liberty, or property without due process of law."[41] The Fourteenth Amendment applies to state action in the same way.[42]

The principle of substantive due process was originally defined during

[37] *What Research Tells Us About Abortion Access for Incarcerated People*, URB. INST. https://www.urban.org/urban-wire/what-research-tells-us-about-abortion-access-incarcerated-people (last visited Apr. 16, 2023).
[38] *Tracking the States Where Abortion is Now Banned*, N.Y. TIMES (Apr. 17, 2023), https://www.nytimes.com/interactive/2022/us/abortion-laws-roe-v-wade.html.
[39] *Substantive Due Process*, CORNELL L. SCH., https://www.law.cornell.edu/wex/substantive_due_process (last visited Oct. 26, 2022).
[40] *Id.*
[41] U.S. CONST. amend. V.
[42] U.S. CONST. amend. XIV; *see also Substantive Due Process, supra* note 39.

the Lochner Era when the Court determined that certain economic rights, such as freedom to contract, were fundamental.[43] Later, in *United States v. Carolene Products Co.,* the Supreme Court used the fourth footnote to state that it would place higher levels of scrutiny on rights rather than economic activity.[44] This shifted the Court out of the Lochner Era and into a period of United States history that determined fundamental rights not explicitly listed in the Bill of Rights. When determining whether something is a fundamental right, courts use a test developed in *Washington v. Glucksberg*.[45] In this case, the Court determined that for something to classify as a fundamental right, it must (1) be deeply rooted in the nation's history and tradition, and (2) have a careful description of the asserted fundamental liberty interest.[46]

Although many fundamental rights were established before *Glucksberg*, the two-part test established in that case created a streamlined format for the Supreme Court to use when determining if something is a fundamental right. Up until recently, the Supreme Court's determinations of such rights included the fundamental right to pre-viability abortion.[47] Although this right was recently overturned, the right to privacy is still secured through good case law

[43] *See* Lochner v. New York, 198 U.S. 45 (1905).
[44] United States v. Carolene Prods. Co., 304 U.S. 144, 152 n.4 (1938).
[45] Washington v. Glucksberg, 521 U.S. 702 (1997).
[46] *Id.* at 703.
[47] Roe v. Wade, 410 U.S. 113 (1973).

and incorporates the right to bodily autonomy.[48] The *Dobbs* decision was meant to only reverse the fundamental right to abortion; however, it inherently violates the fundamental rights to privacy and bodily autonomy of individuals capable of pregnancy in federal and state prison systems by forcing them to give childbirth when they do not have access to abortion care.[49]

I. DISCUSSION

I. *How Dobbs Will Impact Pregnant Individuals in State Prison Systems*

In handing states the power to regulate abortion, the Supreme Court created a public health crisis of forced childbirth for individuals who are in prisons in states where abortion is banned or restricted. Now that abortion is not federally protected, there are bound to be even larger discrepancies in the quality of reproductive health care that incarcerated individuals capable of pregnancy receive. To prove this inequality among states, this paper draws on a comparative study between three states that vastly differ in their abortion laws: California, Florida, and Texas.

Incarcerated individuals do not generally choose which state they are confined in, thereby making it possible that individuals capable of pregnancy will be forced to live in a state that is hostile towards abortion. Therefore, the

[48] *See* Griswold v. Connecticut, 381 U.S. 479, 485 (1965); Eisenstadt v. Baird, 405 U.S. 438, 453 (1972) (holding that the Constitution confers a right to privacy for individuals against state restrictions on contraception).
[49] *See* Dobbs v. Jackson Women's Health Org., 142 S. Ct. 2228, 2279 (2022).

reversal of *Roe v. Wade* presents a particular challenge for this population of isolated individuals as they cannot choose to cross state lines to receive the reproductive health care they need.[50] As such, incarcerated individuals capable of pregnancy, particularly Black individuals who face higher rates of incarceration due to systemic racism, will likely endure some of the worst impacts of the *Dobbs* decision. To that end, individuals will have no choice but to potentially endure unwanted pregnancies and forced childbirth depending on where they are imprisoned. Although not all state prisons followed national reproductive health care guidelines during the *Roe* era, the *Dobbs* decision essentially ensured that the fundamental rights of privacy and bodily autonomy will be jeopardized for incarcerated individuals capable of pregnancy and left them without a clear form of remedy.[51]

1. *A. California: Abortion Up Until Fetal Viability*

California is historically recognized as a liberal state that protected the right to abortion even before the Supreme Court's involvement. In 1969, four years before *Roe v. Wade* was decided, the state's supreme court specifically recognized the right of procreative choice in *People v. Belous*.[52] In addition, an amendment was added to the state's constitution the year after *Roe* was decided

[50] *See id.*
[51] *See id.*
[52] *See* People v. Belous, 458 P.2d 194, 199 (Cal. 1969) (holding that the fundamental right of a woman to choose whether to bear children follows the Supreme Court's repeated acknowledgment of a right to privacy or liberty).

that identified the right to abortion as protected under the state's privacy provision.[53] Furthermore, the Supreme Court's recent decision in *Dobbs* motivated California to take additional steps to protect the right to abortion for its residents.

In November 2022, California residents voted affirmatively to amend the state's constitution to specifically protect the fundamental right to both abortion and contraceptives.[54] Currently, abortion is legally accessible in California until "viability," which is typically around 23-26 weeks of pregnancy.[55] Additionally, Governor Newson recently took steps to protect abortion in the state following the *Dobbs* decision. For example, he signed a bill in 2022 prohibiting law enforcement from working with "out-of-state entities" on issues of lawful abortions or arresting someone who helped another obtain a lawful abortion in the state, thereby marketing the state as a haven for out-of-state abortion seekers.[56] Other measures work to expand access to birth control and contraceptives and include legislation to expand abortion-related health care training.[57] The governor also allocated more than $200 million to help pay for

[53] CAL. CONST. art. I, § 1 (added 1974).
[54] *California Voters Guarantee Abortion Rights in State Constitution*, POLITICO (Nov. 9, 2022), https://www.politico.com/news/2022/11/09/california-abortion-rights-state-constitution-00065820.
[55] *See After Roe Fell: Abortion Laws by State,* CTR. FOR REPROD. RTS, https://reproductiverights.org/maps/state/california/ (last visited Apr. 3, 2023); Ariana Eunjung Cha and Rachel Roubein, *Fetal Viability is at the Center of Mississippi Abortion Case. Here's Why.*, WASH. POST (Dec. 1, 2021), https://www.washingtonpost.com/health/2021/12/01/what-is-viability/.
[56] A.B. 1242, 2021-2022 Leg. Sess. (Cal. 2022).
[57] S.B. 523, 2021-2022 Leg. Sess. (Cal. 2022); S.B. 1375, 2021-22 Leg. Sess. (Cal. 2022).

transportation costs related to abortion services, cover uninsured patients, and support the facilities providing this care.[58] California has also taken additional privacy measures to protect medical records and patient data from being shared in out-of-state inquiries or investigations.[59]

California's progressive policies are also present in the state's prison and jail systems. The California Penal Code states that individuals who are capable of pregnancy "shall be offered a pregnancy test upon intake or by request within seventy-two hours of arrival at the jail."[60] The pregnancy test is voluntary and those who wish not to receive one must sign an "Informed Refusal of Pregnancy Test" form to indicate that they were given the option when entering the jail.[61] The state statute also describes that incarcerated individuals with positive pregnancy tests shall be offered "comprehensive and unbiased" counseling that informs them of their abortion, adoption, or prenatal care options.[62] In addition, the statute states that the jail should not have any non-medical discretion over a pregnant individual's eligibility for an abortion and that those who choose to have abortions shall be offered the service.[63]

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[58] *New Protections for People Who Need Abortion Care and Birth Control*, OFF. OF GOVERNOR GAVIN NEWSOM, https://www.gov.ca.gov/2022/09/27/new-protections-for-people-who-need-abortion-care-and-birth-control/ (last visited Apr. 16, 2023).
[59] A.B. 2091, 2021-2022 Leg. Sess. (Cal. 2022).
[60] CAL. PENAL CODE § 4023.8 (a) (2020).
[61] *Id.*
[62] *Id.* § 4023.8 (b).
[63] *See id.* § 4023.8 (c).

California's state laws make it clear that the right to abortion does not differ for those in or out of its jail and prison systems.

Although the state's penal code provides provisions to protect incarcerated individuals capable of pregnancy, there are repeated instances of jail staff failing to provide comprehensive maternal and reproductive health care.[64] In 2016, a woman lost her pregnancy due to negligent treatment and denial of medical care while under the custody of an Orange County, California jail.[65] She pushed her call button in her cell for two hours after her water broke, but jail employees failed to respond.[66] When county employees were transporting her to the hospital, they stopped at a Starbucks on the way despite her active labor, which resulted in the loss of her pregnancy.[67] She filed a civil suit and settled with the county for their negligence in taking care of her as mandated by state law.[68] In 2018, a pregnant incarcerated individual located in an Orange County, California jail sued the county for damages after jail employees failed to provide adequate health care while she was in labor.[69] Due

[64] *See Stoetling v. Cnty. of Orange*, No. SACV20665JVSKESX, 2020 WL 7065826, at *1 (C.D. Cal. Sept. 23, 2020); *see* Vimal Patel, *Inmate Who Was Pregnant Settles Suit Over Stop at Starbucks en Route to a Hospital*, N.Y. TIMES (Aug. 28, 2022), https://www.nytimes.com/2022/08/28/us/sandra-quinones-orange-county-settlement.html.
[65] Vimal Patel, *Inmate Who Was Pregnant Settles Suit Over Stop at Starbucks en Route to a Hospital*, N.Y. TIMES (Aug. 28, 2022), https://www.nytimes.com/2022/08/28/us/sandra-quinones-orange-county-settlement.html.
[66] *Id.*
[67] *See id.*
[68] *Id.*
[69] Stoetling v. Cnty. of Orange, No. SACV20665JVSKESX, 2020 WL 7065826, at *1 (C.D. Cal. Sept. 23, 2020).

to the inadequate health care she received during labor and childbirth, her baby died while they were both in jail custody.[70] The negligence of the jail staff in both this and the 2016 case demonstrates the risk of harm that pregnant individuals face when they are completely reliant on a state correctional facility for their health care, even in states with progressive abortion laws.[71]

As comprehensive as California state laws may seem in addressing the maternal and reproductive health care of its incarcerated population, the common nature and environment among correctional facilities make supporting reproductive rights and reproductive justice challenging. While state and federal laws once worked in tandem to mitigate these issues, the Supreme Court's recent *Dobbs* decision added another layer of challenges as more individuals will be subject to forced births in these neglected environments.[72] With the inevitable increase in childbirth resulting from reduced abortion access, higher maternal and infant mortality rates are bound to follow.[73] The reproductive justice framework emphasizes the right to have

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[70] *See id.*
[71] *See Stoetling v. Cnty. of Orange*, No. SACV20665JVSKESX, 2020 WL 7065826, at *1 (C.D. Cal. Sept. 23, 2020); *see* Vimal Patel, *Inmate Who Was Pregnant Settles Suit Over Stop at Starbucks en Route to a Hospital*, N.Y. TIMES (Aug. 28, 2022), https://www.nytimes.com/2022/08/28/us/sandra-quinones-orange-county-settlement.html.
[72] *Compare Dobbs v. Jackson Women's Health Org.*, 142 S. Ct. 2228 (2022) (holding there is no fundamental right to an abortion)*, with* CAL. CONST. art. I, § 1.1 (state Constitution amended in Dec. 2022 to add § 1.1, affirming the right to have an abortion).
[73] *The U.S. Maternal Health Divide: The Limited Maternal Health Services and Worse Outcomes of States Proposing New Abortion Restrictions*, THE COMMONWEALTH FUND (Dec. 14, 2022), https://www.commonwealthfund.org/publications/issue-briefs/2022/dec/us-maternal-health-

children as well as to not have children; since incarcerated individuals are almost entirely reliant on their correctional facility for their health care, it is up to the states to ensure that this framework is incorporated into their approach to caring for pregnant individuals.[74] While California protects the right to abortion for its residents at the state level, including individuals in its correctional facilities, it still may not be enough to counter the damaging effects of the removal of the federal abortion protection. California previously had the full power of the federal government protecting the fundamental right to abortion, but now the *Dobbs* decision has placed the state, and all the incarcerated individuals in it, in a complex situation. California will have to prioritize the reproductive justice framework for all of its residents while also assisting the influx of pregnant individuals coming to the state seeking abortion care.[75]Although high maternal mortality rates are common throughout the United States, the clear distinguishing factor that sets California apart from other states is its clear and explicit laws and regulations related to abortion and reproductive health care. By clearly providing for the right to abortion in its

divide-limited-services-worse-outcomes#:~:text=In%20addition%2C%20for%20every%20major,Hispanic%20people%20(Exhibit%205).

[74] Ross, *supra* note 16, at 65.

[75] Brad Sears et al., *People Traveling to California and Los Angeles for Abortion Care if Roe v. Wade is Overturned*, UCLA SCH. OF L. (June 2022), https://law.ucla.edu/sites/default/files/PDFs/Center_on_Reproductive_Health/California_Abortion_Estimates.pdf.

penal code and protecting the right to abortion via the state's constitution, California provides legal remedies for incarcerated individuals whose rights have been violated.[76] This explicit protection is crucial, especially at a time when abortion laws continue to be intentionally ambiguous and inconsistent throughout the country.

California stands out as a haven in a post-*Roe* world for individuals who can travel into the state for abortion services. However, incarcerated individuals located in other states do not have this privilege. To that end, it is difficult to imagine how other states with more abortion restrictions and less clarity on the issue are treating pregnant individuals in their correctional facilities.

2. *B. Florida: Six-Week Abortion Ban*

Abortion rights in Florida demonstrate the unique circumstances of abortion access in a post-*Roe* United States. In 2017, the Florida Supreme Court decided *Gainesville Woman Care LLC v. Florida* and held that the state's constitutional right to privacy "encompasses a woman's right to choose to end her pregnancy."[77] Although the right to abortion is protected within the state, there are still restrictions that prevent comprehensive access to abortion services. A few months before the *Dobbs* decision, Florida Governor Ron

[76] *See* CAL. PENAL CODE § 4023.8 (a) (2020); *see* CAL. CONST. art. I, § 1.1 (right to abortion added Dec. 2022).
[77] Gainesville Woman Care, LLC v. State, 210 So. 3d 1243, 1254 (Fla. 2017).

DeSantis signed a bill that banned abortion after 15 weeks. However, this soon changed to a six-week ban less than a year after the *Dobbs* decision.[78] The current six-week ban only allows for abortion if the pregnancy is a result of rape, incest, or human trafficking and if the pregnant individual can provide evidence of a restraining order, medical record, or police report.[79] Additionally, this exception only applies up to 15 weeks of pregnancy.[80] Notably, the state's penal code fails to mention abortion in the context of the state's prison systems.[81] The compounding effect of this six-week ban and the lack of explicit protections regarding abortion for incarcerated individuals in the state will undoubtedly have detrimental impacts on the individuals forced to carry their pregnancies to term.

Although Florida now has a six-week abortion ban, the future of abortion access in the state was initially unclear after *Dobbs* as abortion providers challenged the 15-week ban as violating the state's constitution.[82] A state trial court initially issued an injunction against the 15-week ban, but this did not stand after the First District Court of Appeals in Florida stayed the action and

[78]H.B. 5, 2023 Leg. Sess. (Fla. 2022); S.B. 300, 2023 Leg. Sess. (Fla. 2023).
[79] S.B. 300, 2023 Leg. Sess. (Fla. 2023).
[80] *Id.*
[81] *Florida Criminal Punishment Code*, FLA. DEP'T OF CORR. & OFF. OF THE STATE CT. ADM'R (2019), http://www.dc.state.fl.us/pub/sen_cpcm/cpc_manual.pdf.
[82] *Florida Abortion Providers File a Notice of Appeal With the Florida Supreme Court*, ACLU OF FLA. (Aug. 10, 2022), https://www.aclu.org/press-releases/floridas-15-week-abortion-ban-heads-state-supreme-court.

rejected the legal challenge.[83] The First District Court of Appeals held that the plaintiffs, a group of abortion providers, could not use the harm the abortion ban was allegedly causing their patients as a reason to block the ban.[84] This reasoning conflicted directly with how the Florida Supreme Court handled challenges to previous abortion laws and tried to ensure that abortion would be restricted for residents in the state.[85] The Florida Supreme Court is currently overseeing the challenge to the 15-week ban; the state will enforce the 15-week ban while the Court is weighing the challenge, and the six-week ban will not go into effect until the Court decides the case.[86]Although the six-week ban is contingent on the Florida Supreme Court's holding regarding the 15-week ban, the odds are not favorable for the pro-choice plaintiffs considering Governor Ron DeSantis appointed four of the Court's seven justices.[87] If the six-week ban goes into effect, it is likely that it will function as a near-total abortion ban — especially for the state's imprisoned population.

Incarcerated individuals are disproportionately burdened by abortion bans as their access to abortion services and other reproductive health care is completely controlled by the state. Additionally, without consistent and

[83] *Id.*
[84] ACLU, *supra* note 82.
[85] *See* ACLU, *supra* note 82; Gainesville Woman Care, LLC v. State, 210 So. 3d 1243, 1254 (Fla. 2017).
[86] Arek Sarkissian, *DeSantis Signs Florida's 6 Week Abortion Ban Into Law*, POLITICO. (Apr. 13, 2023), https://www.politico.com/news/2023/04/13/florida-6-week-abortion-ban-bill-00091965.
[87] *Id.*

autonomous access to a medical provider, incarcerated individuals will have a difficult time proving they are pregnant as a result of rape, incest, or human trafficking.[88] Furthermore, the six-week ban makes it difficult for anyone in the state to receive an abortion as many individuals capable of pregnancy do not know that they are pregnant within six weeks.[89]

Since it is now up to the states to regulate abortion, Florida is able to restrict access to abortion for its residents while still following the state constitution and providing access until six weeks of pregnancy. Consequently, there is bound to be a disproportionately negative impact on the state's incarcerated population. Some individuals either go into prison pregnant or can become pregnant while incarcerated due to the high rates of sexual assault that occur in correctional facilities.[90] A 2011-12 report by the United States Department of Justice, Office of Justice Programs, Bureau of Justice Statistics identified twelve prisons in the United States as "high-rate facilities based on

[88] *See* Amanda Rabies, *Roe's End Could Mean More Pregnant Women Behind Bars. Are Florida Prisons Prepared?*, ORLANDO SENTINEL (July 2, 2022), https://www.orlandosentinel.com/news/breaking-news/os-ne-roe-pregnant-women-behind-bars-orlando-20220702-6v2duqnfg5dobdyfc7avmbzu24-story.html.
[89] *See* Jessica Ravitz, *Reasons a Woman May Not Know She's Pregnant at Six Weeks*, CNN (May 9, 2019), https://www.cnn.com/2019/05/09/health/pregnancy-at-six-weeks/index.html (explaining that many individuals capable of pregnancy have irregular periods and may not think to see a health care provider after missing a period).

[90] Maruschak & Buehler, *supra* note 27.

reports of staff sexual misconduct."[91] These are facilities where sexual misconduct was 1.5 times the average among all jail facilities.[92] One of the four female prisons in this category, Broward Correctional Institution, is in Florida. Out of the 154 respondents that participated in the survey from Broward, 7.3% reported staff sexual misconduct.[93] As in all cases of sexual assault, the real number is likely higher as this crime is severely underreported both in and outside the prison system.[94]

Whether individuals come into prison already pregnant or become pregnant because of sexual misconduct in their facilities, abortion access is vital and has been severely jeopardized with the overturn of *Roe v. Wade*. Unlike California's penal code which explicitly lists a requirement that individuals capable of pregnancy be given a pregnancy test upon their entry into the prison, Florida does not have a similar requirement.[95] This leaves the individuals entering the state's prisons and jails without an opportunity to discover if they need abortion care or any care related to their pregnancy. Florida's six-week abortion ban will undoubtedly create barriers to abortion care access for

[91] Allen J. Beck et al., *Sexual Victimization in Prisons and Jails Reported by Inmates, 2011-12*, U.S. DEP'T OF JUST. 1, 13 (May 2013), https://bjs.ojp.gov/library/publications/sexual-victimization-prisons-and-jails-reported-inmates-2011-12-update.
[92] *Id.*
[93] *Id.*
[94] *Statistics About Sexual Violence*, NAT'L SEXUAL VIOLENCE RES. CTR., https://www.nsvrc.org/sites/default/files/publications_nsvrc_factsheet_media-packet_statistics-about-sexual-violence_0.pdf (last visited Feb. 20, 2023).
[95] CAL. PENAL CODE § 4023.8 (a) (2020).

someone outside of prison and make it even more difficult for individuals whose access to reproductive health care is severely restricted and dependent on the state and correctional officers around them.

Without the ability to travel or access reproductive health care freely, incarcerated individuals find themselves in a vulnerable position that the *Dobbs* decision further exacerbated. States' ability to govern abortion access allowed Florida to further restrict abortion access and place incarcerated individuals in a tragic position where they will be forced to carry unwanted pregnancies and give birth in an environment that does not provide adequate reproductive health care. Even prior to *Dobbs*, poor birthing conditions were prevalent throughout Florida prisons. In 2020, two jail administrators working in Broward County, Florida were fired after a pregnant prisoner alleged that the staff ignored her screams for help while she was in labor and failed to take her to the hospital, resulting in her giving birth in her jail cell.[96] Other accounts from pregnant incarcerated persons in Florida correctional facilities suggest that the individuals are treated with a low standard of reproductive health care and do not have frequent interactions with obstetricians.[97] With the overturning of *Roe*, poor treatment of pregnant individuals is bound to increase as individuals past

[96] Rafael Olmeda, *Sheriff Fires Two Jail Administrators After Inmate Gave Birth in Cell*, S. FLA. SUN SENTINEL (Oct. 15, 2020), https://www.sun-sentinel.com/local/broward/fl-ne-broward-inmate-birth-20201015-52kdeuirgrc53dpbbnwnkmynwy-story.html
[97] *See* Rabies, *supra* note 88.

six or fifteen weeks of pregnancy will be forced to give birth in potentially neglectful environments, placing both their mental and physical health in great jeopardy.[98]

Florida's six-week ban will intensely restrict abortion access for the state's residents including incarcerated individuals and contribute to the growing rates of reproductive oppression and failure to comply with the reproductive justice framework. If individuals in state prisons are forced to carry unwanted pregnancies to term and give birth because they are unable to access abortion services after six or fifteen weeks of pregnancy, the core principles of the reproductive justice framework will be thoroughly disregarded. The right to not have children and the right to have children in safe and healthy environments will both be detrimentally impacted if correctional facilities do not prioritize the reproductive health care of inmates.

By eliminating the fundamental right to abortion, the Supreme Court left legal remedies for violations of abortion access up to the states, which severely limits the avenues to judicial relief for those denied abortion care. If abortion is no longer a fundamental right, the route to seek judicial relief now hinges on whether a state allows legal abortions. In Florida, if the six-week ban takes effect, the law has an explicit proof requirement and imprisoned individuals who

[98] *Incarceration Harms Moms & Babies*, NAT'L P'SHIP FOR WOMEN AND FAM. (June 2021), https://www.nationalpartnership.org/our-work/health/moms-and-babies/incarceration-harms-moms-and-babies.html.

want an abortion before 15 weeks will have to prove that their pregnancy is a result of rape, incest, or human trafficking.[99] This means that the avenue to judicial relief for this vulnerable population is severely damaged by the *Dobbs* decision and will leave incarcerated individuals who are pregnant potentially without any remedy.

3. C. Texas: A Total Abortion Ban

The current state of abortion laws in Texas exemplifies the devastating degradation of reproductive rights in the United States immediately established following the *Dobbs* decision. Even during the *Roe* era, Texas continuously implemented restrictive reproductive rights policies to limit access to abortion services for anyone seeking this care in the state. In 2003, Texas passed the "Women's Right to Know Act," which requires health care providers to give patients a booklet with misleading information about abortions and promotes abortion alternatives.[100] In 2011, the state passed a mandatory sonogram law that required physicians to provide patients with a sonogram at least 24 hours before the abortion procedure, along with an audible fetal heartbeat if one is present.[101] Actions like this are indicative of the state's clear desire to restrict abortion access and coerce pregnant individuals to rethink their decisions when

[99] S.B. 300, 2023 Leg. Sess. (Fla. 2023).
[100] *A Recent History of Restrictive Abortion Laws in Texas*, ACLU, https://www.aclutx.org/en/recent-history-restrictive-abortion-laws-texas (last visited Oct. 29, 2022); *see also* H.B. 15, 2003 Leg. Sess. (Tx. 2003).
[101] H.B. 15, 82nd Leg., 82 (R) Sess. (Tex. 2011).

they are already in a vulnerable position.

One of the most recent abortion restrictions that Texas implemented before the *Dobbs* decision is the Texas Heartbeat Act, also known as Senate Bill 8 ("SB 8").[102] S.B. 8 became effective in September 2021 and uniquely worked around the precedents set by *Roe v. Wade*.[103] The bill banned most abortions after six weeks and established a civil penalty for violating the law by outsourcing enforcement of the law to state citizens so that the state would still comply with U.S. Constitutional protections over abortion as a fundamental right at the time.[104] This law not only heavily restricts Texans from obtaining abortion care, but also forces those who help them to live in fear of being civilly liable for helping people get an abortion.[105] Through enacting S.B. 8, Texas lawmakers provided state citizens the authority to bring civil actions against anyone who helps a pregnant individual obtain an abortion, including physicians, friends, relatives, or even ride-share drivers who take a patient to an abortion appointment.[106] The law, which is still in effect, has no exceptions for pregnancies that are a result of rape or incest; it only provides an exception if there is a medical emergency.[107] S.B. 8 will likely have a detrimental impact on

[102] S.B. 8, 87th Leg., 87 (R) Sess. (Tex. 2021).
[103] *Id.*
[104] *See id.*
[105] *See id.*
[106] *See id.*
[107] *Id.*

Texas residents, especially the population of incarcerated individuals within the state as the civil penalties are still intact. Incarcerated individuals in Texas are disproportionately disadvantaged by this law. These individuals do not have the privilege of interstate travel. They are stuck in a state that completely banned abortion and targets anyone who might be willing to assist individuals in receiving abortion care. This reality is devastating for Texas residents and is exacerbated for imprisoned individuals in the state as greater oversight in the carceral system will make it difficult for confined individuals to access abortion services.

The *Dobbs* decision legitimized laws like S.B. 8 and provided states the opportunity to follow in Texas' footsteps of creating civil and criminal penalties for those who assist in providing abortion care or services. Texas compounded the devastating effects of S.B. 8 by enacting its total abortion ban roughly two months after the *Dobbs* decision.[108] This abortion ban creates criminal penalties for providers who aid in performing abortions at any stage of pregnancy without an exception for rape or incest but with a narrow allowance to save the life or health of the pregnant individual.[109] By creating a total abortion ban in the state, there is bound to be an influx of forced childbirth within the state's population,

[108] *Abortion in Texas*, ACLU (Aug. 29, 2023), https://www.aclutx.org/en/know-your-rights/abortion-texas; H.B. 1280, 2021 Leg., 87th Sess. (Tex. 2022).
[109] H.B. 1280, 2021 Leg., 87th Sess. (Tex. 2022).

including in prison systems. In 2006, a study funded by the National Institute of Justice, Office of Justice Programs, United States Department of Justice found that Texas prisons have the highest reported number of alleged incidents of sexual assault, with 550 individuals reporting for a rate per 1,000 prisoner population.[110] The Texas Department of Criminal Justice has also stated that elective abortions are only permitted when provided in accordance with state statutes.[111] Therefore, with S.B. 8 and the total abortion ban in place, incarcerated individuals in Texas who become pregnant are left with almost no option other than to carry their pregnancy to term and be forced to give childbirth.[112]

The total abortion ban and S.B. 8 essentially took away the choice for most incarcerated people in Texas to receive an abortion outside the exception of a life-threatening medical emergency to the pregnant individual. S.B.8 still carries the civil penalties for anyone who helps an individual obtain an abortion up to six weeks of pregnancy while the total ban carries the criminal penalties for providers or physicians who aid in performing abortions at any stage of the pregnancy.[113] By failing to provide exceptions for rape, incarcerated individuals will be forced to carry unwanted pregnancies resulting

[110] James Austin et al., *Sexual Violence in the Texas Prison System*, THE FJA INST. (Mar. 2006), https://www.ojp.gov/pdffiles1/nij/grants/215774.pdf.
[111] *See Correctional Managed Health Care Policy Manual*, TEX. DEP'T OF CRIM. JUST. (Sept. 28, 2021), https://www.tdcj.texas.gov/divisions/cmhc/docs/cmhc_policy_manual/G-55.01.pdf.
[112] *Id.*
[113] S.B. 8, 2021 Leg., 87th Sess. (Tex. 2021); H.B. 1280, 2021 Leg., 87th Sess. (Tex. 2022).

from rape to term as they cannot travel across state lines to receive abortion care. Forcing these individuals to carry unwanted pregnancies to term exemplifies the reproductive oppression that the *Dobbs* decision expanded across the country. Additionally, the core principles of reproductive justice will be violated as pregnant individuals who are imprisoned will be deprived of their ability to not have a child or to have a child in a safe and healthy environment. To that end, being forced to carry unwanted pregnancies to term, including those that are a result of rape in the prison system, violates reproductive justice rights and continues the cycle of reproductive oppression. Without a federal fundamental right to abortion and no state right in Texas, incarcerated individuals will be forced to give birth without an avenue for legal recourse and remedy. The lack of state and federal protection for abortion access places pregnant individuals who are imprisoned in Texas in an unjustifiable position where they will now be forced to suffer physically, emotionally, and mentally as the right to make decisions over their bodies is severely diminished.

II. *Substantive Due Process Rights at Risk*

Before the overturn of *Roe v. Wade*, pre-viability abortion was considered a fundamental right by the United States Supreme Court under its

substantive due process analysis.[114] Although access to abortion was unequal while federally protected, it was preferable to the elimination of abortion as a fundamental right after *Dobbs*. Substantive due process allows the court to protect fundamental rights that may not be explicitly stated in the United States Constitution.[115] In deciding *Dobbs*, the Supreme Court abandoned the fundamental right to abortion; however, this decision did not eradicate the fundamental rights to privacy or bodily autonomy.[116] Although these rights are still protected by the Constitution, they have been placed in severe jeopardy for individuals capable of pregnancy in the country's prison systems.

The right to privacy is still protected as a fundamental right under both *Griswold v*. *Connecticut* and *Eisenstadt v*. *Baird*.[117] Before *Roe v*. *Wade* was decided, *Griswold* established that there is an implied right to privacy that is derived from the "penumbras" of multiple amendments in the Bill of Rights.[118] While this case specifically addressed the right to contraception for married couples, it played a large role in establishing the foundation for fundamental rights around

[114] *See* Roe v. Wade, 410 U.S. 113 (1973).
[115] *Substantive Due Process*, *supra* note 39.
[116] *See* Griswold v. Connecticut, 381 U.S. 479 (1965); *see also* Eisenstadt v. Baird, 405 U.S. 438 (1972).
[117] *See* Griswold v. Connecticut, 381 U.S. 479 (1965); *see also* Eisenstadt v. Baird, 405 U.S. 438 (1972).
[118] *See* Griswold v. Connecticut, 381 U.S. 479 (1965).

reproductive autonomy going forward.[119] A few years later, the Court decided *Eisenstadt*, which expanded the right to privacy to individuals and set the stage for *Roe v. Wade* a year later.[120] These cases gave individuals capable of pregnancy constitutionally protected interests in privacy and bodily autonomy.[121] Individuals in the country's prison systems are now at risk of losing these rights due to the inevitable consequences of the *Dobbs* decision.

Dobbs will have an unjust and unduly burdensome impact on the reproductive autonomy of imprisoned individuals across the country as pregnant individuals will be subject to forced births without access to travel or control over their health care. For millions of people, the reversal of *Roe* will detrimentally impact their reproductive health care. Moreover, imprisoned individuals are at a unique disadvantage by being physically trapped in the state they are in, leaving them without reproductive autonomy. Incarcerated individuals in states like Texas will now be severely limited in their access to reproductive health care and will be forced to carry unwanted pregnancies to term. They will not have the freedom to travel across state lines or receive abortion medication through the mail. They are completely reliant on the care provided by the state, which has the authority to limit abortion access. If these individuals are forced to carry

[119] *See id.*
[120] Eisenstadt v. Baird, 405 U.S. 438 (1972); Roe v. Wade, 410 U.S. 113 (1973).
[121] *See* Griswold v. Connecticut, 381 U.S. 479 (1965); *see also* Eisenstadt v. Baird, 405 U.S. 438 (1972).

unwanted pregnancies to term and give birth, their substantive due process rights to privacy and to bodily autonomy will be violated. Cases like *Griswold* and *Eisenstadt* are still precedents and provide constitutional protection over the right to privacy.[122] These cases do not protect the right to abortion; however, the *Dobbs* decision seems to inherently violate these rights for incarcerated individuals as they often have no control over the privacy or bodily autonomy around their pregnancies. In *Eisenstadt*, the right of the individual was the foundation for the right to privacy.[123] Therefore, it is difficult to argue that taking away an individual's choice to give birth does not violate their right to privacy.[124] In writing the majority holding in *Eisenstadt*, Justice Brennan stated that "if the right of privacy means anything, it is the right of the individual, married or single, to be free from unwarranted governmental intrusion into matters so fundamentally affecting a person as the decision whether to bear or beget a child."[125] *Eisenstadt* is still precedent in the United States, and it presents a challenge to the inevitable hardship that the *Dobbs* decision created for pregnant individuals who are imprisoned by reducing abortion access and subjecting them to forced births.

Depriving this population of control over their bodies is not a new

[122] Griswold v. Connecticut, 381 U.S. 479 (1965); Eisenstadt v. Baird, 405 U.S. 438 (1972).
[123] Eisenstadt v. Baird, 405 U.S. 438 (1972).
[124] *See id.*
[125] *Id.* at 453.

phenomenon in the United States. In 1942, the United States Supreme Court held in *Skinner v. Oklahoma* that an Oklahoma state law allowing the sterilization of "habitual criminals" violated the Fourteenth Amendment's Equal Protection Clause.[126] This case recognized the right to procreation as a fundamental right and held that forced sterilization would deprive prisoners of their basic liberties.[127] The Supreme Court recognized a liberty violation when applied to forcibly sterilizing incarcerated individuals, yet the *Dobbs* decision now presents an issue on the opposite side of the spectrum.[128] Forcing individuals to give birth because their access to abortion is completely disrupted by their status as a prisoner in a post-*Roe* world carries the same liberty violations that sterilizing these individuals does. In *Skinner*, Justice Douglas wrote for the majority that "there is no redemption for the individual whom the law touches. Any experiment which the State conducts is to his irreparable injury. He is forever deprived of a basic liberty."[129] Justice Douglas' statements are transferable to the current forced birth among incarcerated individuals pregnant in state prisons. If these individuals are forced to give birth because their state can legally deprive them of abortion access, they will face the "irreparable injury" of being forced to endure pregnancy, be "deprived

[126] Skinner v. Oklahoma, 316 U.S. 535 (1942).
[127] *Id*.
[128] *See id*; *See* Dobbs v. Jackson Women's Health Org., 142 S. Ct. 2228, 2279 (2022).
[129] Skinner v. Oklahoma, 316 U.S. 535, 541(1942).

of a basic liberty" of bodily autonomy, and have no course for judicial relief.[130] Forced childbirth presents an issue parallel to that of *Skinner* concerning the bodily autonomy of incarcerated persons. Thus, *Skinner* provides an example of how the court has remedied the privacy and bodily autonomy rights of this population before and how it should be applied in this context.[131]

Although the privacy rights of imprisoned individuals' space and belongings are treated differently by the Supreme Court, their overall right to privacy and bodily autonomy have historically been upheld. In *Hudson v. Palmer*, the Supreme Court held that the Fourth Amendment right against unreasonable search and seizure is diminished for imprisoned people and does not apply to their prison cells because the interest in security outweighs their privacy concerns.[132] Although imprisoned individuals have diminished privacy rights under *Hudson*, the weakened right to privacy cannot be applied to the inevitable forced childbirth that will result as a consequence of *Dobbs*. When discussing the bodily autonomy of incarcerated individuals, *Skinner* and *Eisenstadt* present the best example of current case law that protects the right to reproductive choice for incarcerated persons throughout the United States.[133] Protection around a prisoner's space or around their personal belongings should

[130] *See id. See also Roe v. Wade*, 410 U.S. 113 (1973); *Dobbs v. Jackson Women's Health Organization*, 142 S.Ct. 2228 (2022).
[131] *See* Skinner v. Oklahoma, 316 U.S. 535, 541 (1942).
[132] Hudson v. Palmer, 468 U.S. 517 (1984).
[133] *See* Skinner v. Oklahoma, 316 U.S. 535 (1942); Eisenstadt v. Baird, 405 U.S. 438 (1972).

not be treated the same as the privacy protections around their bodies. The conclusion in *Hudson* relied on security and safety precautions, whereas protections over a prisoner's body are rooted in the right to privacy established in *Griswold* and expanded in *Eisenstadt*.[134] Therefore, the *Hudson* framework should not be applied when analyzing pregnant, incarcerated individuals' right to privacy and abortion care.

II. CONCLUSION

The United States Supreme Court's decision to overturn *Roe v. Wade* will create a crisis of forced childbirth for individuals capable of pregnancy in state prison systems. This inevitable crisis will result in the violation of incarcerated individuals' fundamental rights to privacy and bodily autonomy. The *Dobbs* decision created a nightmare for individuals located in state prisons where the state banned or heavily restricted access to abortion. Individuals capable of pregnancy within state prison systems are a unique population within the United States because they have limited control over their location and livelihood, and they are completely reliant on the state for their reproductive health care. As exemplified throughout this paper, states drastically differ in how they regulate abortion, and incarcerated individuals are left with almost no control over their reproductive autonomy. By reversing *Roe v. Wade*, the Supreme Court

[134] *See* Griswold v. Connecticut, 381 U.S. 479 (1965); Eisenstadt v. Baird, 405 U.S. 438 (1972); Hudson v. Palmer, 468 U.S. 517 (1984).

eviscerated any protections over abortion access as a federal fundamental right.[135] In leaving it up to the states to legalize abortion, the Supreme Court further exacerbated the poor access to reproductive health care for pregnant individuals in state prisons and ensured that many of them will have their substantive due process rights to privacy and to bodily autonomy violated.

The overturning of *Roe* also placed the principles of reproductive justice in great jeopardy. Forced childbirth not only hinders the reproductive rights movement, but it also contradicts the principles of reproductive justice. Forcing imprisoned individuals to endure unwanted pregnancies and childbirth violates the core tenants of reproductive justice. The rights to not have a child and to have a child in a safe and healthy environment are completely diminished when imprisoned individuals are forced to go through childbirth. Reproductive autonomy is foundational to cultivating a progressive and modern society that allows all people to have a choice over what happens to their bodies and forced childbirth should not be tolerated under any circumstances within the United States.

Since the reversal of *Roe v. Wade*, the scramble to protect reproductive rights resulted in many politicians, organizations, and individuals advocating for federal policy around abortion. Although the Supreme Court took away the

[135] *See* Dobbs v. Jackson Women's Health Org., 142 S. Ct. 2228 (2022).

fundamental right to abortion, there are still remedies that can be formed through policy and legislation. For example, affording incarcerated individuals the right to vote could protect access to abortion. Currently, 11 states restrict the right to vote for an indefinite period once felons are released from prison, and 23 states have laws that do not allow felons to vote while in prison.[136] Decisions like *Dobbs* detrimentally impact individuals capable of pregnancy in state prisons, and providing these individuals the right to vote on laws that impact them is vital to protecting fundamental and reproductive rights.

To maintain the fundamental right of privacy and the right to bodily autonomy for imprisoned individuals across the country, a cumulative effort must be made to prevent the influx of forced childbirth that is bound to come. Individuals in prison are a vulnerable group of people within the United States that will disproportionately feel the brunt of the *Dobbs* decision, and it is critical that lawmakers and advocacy organizations continue to work to protect the rights and reproductive autonomy of people who are unable to do it for themselves.

[136] *Felon Voting Rights,* NAT'L CONF. OF STATE LEGIS., https://www.ncsl.org/research/elections-and-campaigns/felon-voting-rights.aspx, (last visited Nov. 20, 2022).

SPACE EXPLORATION, THE OUTER SPACE TREATY, AND THE FUTURE OF HUMAN SUBJECT RESEARCH ETHICS

Thomas Salazar

I. Introduction

In 2015, the National Aeronautics and Space Administration ("NASA") began a yearlong study on identical twin astronauts, Scott and Mark Kelly.[1] The research aimed to quantify the biological and cognitive impact of spaceflight on humans by comparing the effects of Scott's 340-day space expedition with data from his twin Matt, who remained Earth-bound.[2] The resulting publication explored the differences in physiology, cognition, genetics, and metabolism between the twins for the duration of the study.[3] Although the researchers observed many biological and cognitive changes in Scott during spaceflight, the majority of these changes returned to baseline after Scott's return to Earth.[4] However, the research revealed significant changes in telomere activity between the twins: Scott's telomeres became significantly shorter than Mark's after

[1] Francine Garrett-Bakelman et al., *The NASA Twins Study: A Multidimensional Analysis of a Year-long Human Spaceflight*, 364 SCIENCE, April 12, 2019, at 144.
[2] *See id.* at 2 (noting that experimental procedures included biological sampling, cognitive tasks, behavioral tasks, and vaccination tests).
[3] *Id.* at 1.
[4] *See id.* at 144 (noting some of the observed changes include gene expression, microbiome, cardiovascular, vision, and cognitive differences).

returning to Earth—a sign of rapid aging.[5] These results signal a major shift for aging research, with outer space set to become an attractive setting for studies aiming to advance our understanding of the aging process.

NASA's Twins Study shows that space's unique environment—characterized by confined areas, altered gravity fields, ionizing radiation, and noise—presents a new frontier for human subject research.[6] Since the International Space Station's ("ISS") inception in November 2020, astronauts aboard the ISS completed over 300 experiments involving human subjects.[7] These studies range from molecular analysis of bone density to physiological and behavioral interventions exploring circadian rhythms and sleep patterns.[8] As developments in both private and government-sponsored space exploration continue to unfold, human subject research in space will eventually become commonplace.

The Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, including the Moon and Other Celestial

[5] *See id.* at 16 (describing telomeres as a DNA-protecting structure and biological marker for aging, with shorter telomere length associated with advanced age and susceptibility to end-of-life diseases).
[6] *Id.* at 144.
[7] Alexandra Witze, *Astronauts Have Conducted Nearly 3,000 Science Experiments Aboard the ISS*, NATURE (Nov. 3, 2020), https://www.nature.com/articles/d41586-020-03085-8.
[8] European Space Agency, *20 Top Experiments From 20 Years of Human Research on the International Space Station*, SCITECHDAILY (Nov. 4, 2020), https://scitechdaily.com/20-top-experiments-from-20-years-of-human-research-on-the-international-space-station/.

Bodies ("Outer Space Treaty") governs all outer space activity.[9] Notably, the treaty states "[t]here shall be freedom of scientific investigation in outer space," but provides no ethical limits on human experimentation in space.[10] Thus, until a new treaty elaborates on the "freedom of scientific investigation" provision in the Outer Space Treaty, existing international ethical standards on human experimentation fill the ethical gaps. There exist three major international guidelines on human subject research ethics: the Universal Declaration of Human Rights, the Nuremberg Code, and the Declaration of Helsinki.[11] These guidelines primarily focus on the concepts of personal health, risk assessment, data privacy, informed consent, and voluntary research withdrawal.[12] However, the traditional application of these concepts fails to provide adequate guidance for the unique set of ethical challenges inherent to human experimentation in space.[13]

As space exploration becomes more accessible and human experimentation in space continues to flourish, it is critical to establish a comprehensive and uniform legal regime defining the rights and obligations of scientists and research subjects in space. Accordingly, the United Nations ("UN")

[9] Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, Including the Moon and Other Celestial Bodies, Dec. 19, 1966, 18 U.S.T. 2411-12.
[10] *Id*. at 2413.
[11] *History of Research Ethics*, U. NEV.: DIV. OF RSCH., https://www.unlv.edu/research/ORI-HSR/history-ethics (last visited Oct. 11, 2022).
[12] *Id.*
[13] *Infra* Section III. A.

should develop a new international legal instrument, the Space Human Research Convention, to expand upon the "freedom of scientific investigation" provision in the Outer Space Treaty and establish ethical standards for conducting human subject research in space. Part II of this note describes existing international principles governing the ethical review of human subject research.[14] Part III analyzes the ethical challenges unique to human experimentation in space.[15] Part IV proposes ethical safeguards that the Space Human Research Convention should consider when developing a code of conduct for human subject research in space.[16]

II. International Principles Governing Human Subject Research Ethics

Unethical research practices and abuse ran rampant around the world before the international community developed concrete ethical principles for the protection of human research subjects.[17] In the 1920s, researchers from the University of Adelaide in Australia performed pain and blood analysis experiments on Aboriginal Australians without their consent.[18] Similarly, Canadian researchers performed vaccination experiments on indigenous children

[14] *Infra* Part II.
[15] *Infra* Part III.
[16] *Infra* Part IV.
[17] *History of Research Ethics*, *supra* note 11.
[18] *See Apology for Past Experiments on Aboriginal People*, U. ADELAIDE (Feb. 8, 2002), https://www.adelaide.edu.au/news/news314.html; *see also* Joff Lelliott, *The Cultivation of Whiteness: Science, Health and Racial Destiny in Australia*, 326 BMJ 888, 88 (2003).

without their parent's consent in the 1930s.[19] In the United States, researchers denied African American subjects treatment for syphilis from 1932 to 1972 in order to study the progression of the disease.[20] Perhaps the most well-documented case of research abuse, and the turning point for international human subject research ethics, occurred during World War II.[21] During the course of the 1946 Nuremberg Trials, the world learned of the highly unethical experimentations conducted on concentration camp prisoners.[22] Nazi and Japanese officials subjected prisoners of war to medical experiments without their consent, which often resulted in death or severe disability.[23] In response, the international community enacted three declarations enshrining the rights of human beings and research subjects: the United Nation's Universal Declaration of Human Rights, the Nuremberg Trials Court's Nuremberg Code, and the World Medical Association's Declaration of Helsinki.[24]

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[19] Leslie Young, *What Happened to Jim? Experiments on Canada's Indigenous Populations*, GLOB. NEWS (Feb. 8, 2016), https://globalnews.ca/news/2503875/what-happened-to-jim-experiments-on-canadas-indigenous-populations/ (noting researchers did not seek parental consent for the indigenous children participants but did seek consent from the parents of any non-indigenous children enrolled).
[20] *See History of Research Ethics*, *supra* note 11 (noting many of the participants enrolled in the Tuskegee Syphilis Study died due to syphilis-related complications).
[21] *Id.*
[22] *History of Research Ethics*, *supra* note 11 (explaining that Allied nations established the Nuremberg Trials to hold German officials responsible for war crimes committed during World War II).
[23] *Id.*; STEVEN P. MARKS, *ENCYCLOPEDIA OF GENOCIDE AND CRIMES AGAINST HUMANITY* 669 (Dinah L. Shelton ed. 2005).
[24] *History of Research Ethics*, *supra* note 11; *see Declaration of Human Rights*, UNITED NATIONS, https://www.un.org/en/about-us/universal-declaration-of-human-rights (last

The United Nations released the Universal Declaration of Human Rights ("UDHR") in 1948, which established "fundamental human rights to be universally protected."[25] While the UDHR does not expressly list ethical human experimentation as a human right, Article 25 declares that "everyone has the right to a standard of adequate living for the health and well-being of himself… and medical care."[26] Arguably, the right to personal health, and in turn the right to undergo ethical experimentation, is included within the language of Article 25. This is because personal health is inextricably linked with medical care, and human experimentation is necessary to improve medical care.[27] Because the UDHR highlights universal human rights without distinctions based on nationality, citizenship, or location, its provisions presumably equally apply to humans in space.[28] However, the UDHR's provisions are not legally binding,

visited Oct. 13, 2022); *see The Nuremberg Code*, NAT'L INSTIT. OF HEALTH, https://history.nih.gov/display/history/Nuremberg+Code (last visited Oct. 13, 2022); *see WMA Declaration of Helsinki: Ethical Principles for Medical Research Involving Humans*, WORLD MED. ASS'N, https://www.wma.net/policies-post/wma-declaration-of-helsinki-ethical-principles-for-medical-research-involving-human-subjects/ (last visited Apr. 11, 2022).

[25] *Declaration of Human Rights, supra* note 24.

[26] *Id.* at art. 25.

[27] *See The Belmont Report*, NAT'L COMM'N FOR THE PROT. OF HUM. SUBJECTS OF BIOMEDICAL AND BEHAV. RSCH., (Apr. 18, 1979) (observing the blurred lines between research and medical practice); *Declaration of Helsinki, supra* note 24 ("Medical progress is based on research that ultimately must include studies involving human subjects.").

[28] *Declaration of Human Rights, supra* note 24.

which emphasizes the need for a multilateral treaty establishing ethical standards for human subject research in space.[29]

The Nuremberg Trials Court formulated the Nuremberg Code in 1949, which became the first international document explicitly outlining basic ethical principles for conducting human subject research.[30] In the section titled "Permissible Medical Experiments," the Code outlines ten ethical principles focused on adequate informed consent, risk assessment, voluntary participation, and voluntary withdrawal from research.[31] With respect to risk assessment, the Code states experiments should "avoid all unnecessary physical and mental suffering," should not be conducted if there is "reason to believe that death or disabling injury will occur," and risks "should never exceed" the benefits of the research.[32] Like the UDHR, the Nuremberg Code is not a legally binding document; nevertheless, the Code became the model for future regulatory frameworks of research ethics around the world.[33]

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[29] *See* Christian Tomuschat, *Protection of Human Rights under Universal International Law*, UN CHRONICLE (Dec. 16, 2016), https://www.un.org/en/chronicle/article/protection-human-rights-under-universal-international-law ("As a General Assembly resolution, it has never attained the status of a binding set of rules, but it has served as a source of inspiration, fomenting not only the codification process within the United Nations but also functioning as a model for national constitutions all over the world.")
[30] *See The Nuremberg Code*, *supra* note 24.
[31] See *id.* ("The voluntary consent of the human subject is absolutely essential.").
[32] *Id.*
[33] *See generally* International Compilation of Human Research Standards, OFF. FOR HUM. RSCH. PROTS., https://www.hhs.gov/ohrp/sites/default/files/2020-international-

In 1964, the World Medical Association followed the UN and Nuremberg Court by establishing the Declaration of Helsinki: a code of ethical guidelines for doctors who conduct biomedical research.[34] The Declaration of Helsinki mandated minimizing risk for research subjects, continual risk assessment throughout the research, providing additional protections for vulnerable participants, obtaining voluntary informed consent from all research participants, and maintaining the privacy and confidentiality of research subjects.[35] Notably, the Declaration of Helsinki also proclaims"[g]roups that are underrepresented in medical research should be provided appropriate access to participation in research."[36] Together, the UNHR, Nuremberg Code, and Declaration of Helsinki draw their authority from the degree of influence they have on human subject research regulations around the world.[37] A new international legal instrument to expand upon the Outer Space Treaty's "freedom of scientific investigation" provision will thus rely on these overarching ethical principles. However, the question remains: does the traditional application of these ethical standards provide adequate guidance for human experimentation in space?

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compilation-of-human-research-standards.pdf (last visited Oct. 24, 2022); *see also* Protection of Human Subjects, 45 C.F.R. § 46 (2018) (stating that the United States' regulations on human subjects research, which heavily focus on the concepts of informed consent, voluntary participation and withdrawal, and risk assessment).

[34] *WMA Declaration of Helsinki: Ethical Principles for Medical Research Involving Humans, supra* note 24.

[35] *Id.*

[36] *Id.*

[37] *See* International Compilation of Human Research Standards, *supra* note 33.

III. The Glove Does Not Fit: Why Existing International Ethics Principles Are Inadequate for Human Subject Research in Space

Space exploration has advanced significantly since the space race between the United States and the Soviet Union during the Cold War.[38] With the International Space Station's debut in November 2000, human subject research in space began improving the lives of astronauts and people on Earth through developments in genetic, metabolic, behavioral, and physiological science.[39] For example, Swedish researchers developed a drug improving lung circulation after studying the effects of reduced air pressure on astronauts in space.[40] Other studies researched maintaining muscle mass in space by collecting muscle biopsies from astronauts.[41] Immunology also flourished in space as the harsh environment causes a stress-induced immune response that researchers can harness for targeted medical treatment on Earth.[42] The current lack of international standards for human experimentation in space means that these research endeavors operated under the guidance of ethical principles designed for human subject research on

[38] Adam Mann, *What Was the Space Race? Origins, Events and Timeline*, SPACE (July 8, 2022), https://www.space.com/space-race.html (describing the space race as a "series of competitive technology demonstrations between the United States and the Soviet Union… to show superiority in space flight").
[39] European Space Agency, *20 Top Experiments From 20 Years of Human Research on the International Space Station*, SCITECHDAILY (Nov. 4, 2020), https://scitechdaily.com/20-top-experiments-from-20-years-of-human-research-on-the-international-space-station/.
[40] *Id.*
[41] *Id.* (noting that on average astronauts may lose up to 20% in muscle mass during a short-duration space mission).
[42] *See id.*

Earth. However, human subject research in space is fundamentally different from human subject research on Earth, resulting in an ethical gap when applying the existing standards to human subject research in space. Section A examines the fundamental differences between human experimentation in space and human experimentation on Earth.[43] Section B then explores the ethical limitations of existing international ethical standards for human subject research when applied to human experimentation in space.[44]

A. Human Subject Research in Space is Fundamentally Different Than Human Subject Research on Earth

Spaceflight is a perilous undertaking—the more that humans venture into space, the clearer the hazards of exploring such a hostile environment become. While humans on Earth enjoy the protection that the Earth's magnetic field and atmosphere provide against radiation, astronauts in space are continuously exposed to harmful levels of radiation from the sun and galactic cosmic rays.[45] The increased radiation exposure can result in cancer and degenerative diseases like Alzheimer's and heart disease.[46] Similarly, space exploration exposes humans to varying levels of gravity, which impacts bone and muscle density and results in

[43] *Infra* Section III.A.
[44] *Infra* Section III.B.
[45] Zarana Patel et al., *Red Risks for a Journey to the Red Planet: The Highest Priority Human Health Risks for a Mission to Mars*, 6 NJP MICROGRAVITY, NOV. 5, 2020, at 1.
[46] *Id.*

diseases like osteoporosis.[47] Long-term travel in a confined and isolated environment, such as a spaceship, can also have detrimental psychological effects.[48] Thus, unlike most behavioral and biomedical research on Earth—where humans are acclimated to their surroundings—human experimentation in space carries inherent and unknown risks by virtue of its hostile environment.

Human experimentation in space also presents special privacy and confidentiality concerns. Government space programs carefully select and train expedition crews, and usually release the personal information of the mission crew to the public.[49] Private companies, like SpaceX, that launch astronauts into space also publicly release the identity of their crewmembers.[50] The high profile of spacefarers means their status as research participants typically become public knowledge, thereby compromising their privacy and confidentiality. Even if researchers omit identifiable participant information from publications, such as age or sex, identifying individuals from a small pool of high-profile research

[47] *See id.*; *see also* Michael Johnson, *Preventing Bone Loss in Space,* NASA (Mar. 27, 2019), *http://www.nasa.gov/mission_pages/station/research/news/b4h-3rd/hh-preventing-bone-loss-in-space* (noting that bone density can decrease 1% to 1.5% per month on average during spaceflight).
[48] Patel, *supra* note 45, at 7 ("mental disorders could develop should adverse behavioral conditions be undetected and unmitigated").
[49] Astronaut Selection, NASA, https://www.nasa.gov/feature/astronaut-selection (last updated Jan 5, 2022) (observing that out of 12,000 astronaut applicants, NASA only selects "a few" for the training program).
[50] *See* Michael Sheetz, *Spacex Launches Crew-4 Mission for NASA, Has Now Sent 26 Astronauts to Space in Under Two Years*, CNBC (Apr. 27, 2022), https://www.cnbc.com/2022/04/27/elon-musks-spacex-launches-nasa-crew-4-astronaut-mission.html.

participants is feasible.[51] Accordingly, human research in space must balance the benefit to public welfare against the heightened potential harm to research participants due to compromised privacy and confidentiality.[52]

For the foreseeable future, access to space is limited: only carefully-selected professionals and wealthy individuals can currently engage in spaceflight.[53] Most space travelers to date have been educated, adult white men from developed countries.[54] As a result, the available subject pool for human subject research in space is small and not representative of the world's diverse population. This limitation presents a roadblock for research that attempts to

[51] *See* Khaled Emam, *A Systematic Review of Re-Identification Attacks on Health Data*, 10 PLOS ONE 12 (Apr. 16, 2015) (describing artificial intelligence's ability to extract information and patterns from multiple data sources to re-identify individuals).
[52] *Cf.* Laura Lin & Brian A. Liang, *HIV and Health Law: Striking the Balance between Legal Mandates and Medical Ethics*, 7 AM. MED. ASS'N J. OF ETHICS 687, 689-690 (2005) (noting that improper disclosure of certain conditions, such as HIV/AIDS, may have serious consequences for research participants).
[53] *See* Bruno Venditti, *The Cost of Space Flight Before and After SpaceX*, SPACE (Jan. 27, 2022), https://www.visualcapitalist.com/the-cost-of-space-flight/ ("For a suborbital trip on Virgin Galactic's SpaceShipTwo and Blue Origin's New Shepard, seats typically cost $250,000 to $500,000. Flights beyond that to actual orbit—a much higher altitude—are far more expensive, fetching more than $50 million per seat.").
[54] *See, e.g.*, Jason Treat et al., *How 'The Right Stuff' Has Changed*, NAT'L GEOGRAPHIC (Nov. 6, 2020), https://www.nationalgeographic.com/science/graphics/charting-how-nasa-astronaut-demographics-have-changed-over-time (reporting that most NASA astronauts have been military educated); *see also* Alice Gorman, *Almost 90% of Astronauts Have Been Men. But the Future of Space May Be Female*, CONVERSATION (June 15, 2020), https://theconversation.com/almost-90-of-astronauts-have-been-men-but-the-future-of-space-may-be-female-125644 (observing that 90% of astronauts have been men); *see also* Dana Dovey, *Why Is Space Still So White*?, MARIE CLARIE (Apr. 16, 2020), https://www.marieclaire.com/career-advice/a31959000/women-of-color-astronauts/ (noting that women and people of color have been historically excluded from NASA space missions).

generalize data from a human subject pool to an entire population; particularly, the generalizability of clinical trials depends on achieving a statistically significant quota of human participants.[55] Until the spacefaring population is large and representative enough of the population on Earth, the validity of clinical trials in space will remain in jeopardy.

Human subject research in space also introduces unique undue influence and conflict of interest challenges.[56] Given the high costs and specialized training required to travel to space, the spacefaring population is characterized by people who have worked their entire life towards this goal and have the resources to do so.[57] Because space travelers have a compelling incentive to support the enterprise that enabled their life in space, they are more vulnerable to pressures inducing them to enroll in or remain in research. Undue influence concerns could also arise if compensation for participating in space research involved receiving special perks or items that would entice spacefarers to enroll in the study against their better judgment. Further, space exploration and space experimentation is time-

[55] *Generalizability and Transferability*, WAC CLEARINGHOUSE, https://wac.colostate.edu/resources/writing/guides/gentrans/ (last visited Apr. 26, 2022) ("The larger the sample population, the more one can generalize the results").
[56] National Research Council & Instutute of Medicine Committee on Assessing Integrity in Research Environments, *Integrity in Scientific Research, NAT'L ACAD. OF SCI.*, (2002) (defining conflict of interests as "interests in the outcome of the research that may lead to a personal advantage and that might therefore, in actuality or appearance, compromise the integrity of the research").
[57] *See* Ilana Kowarski, *How to Become an Astronaut and What to Study*, U.S. NEWS (Feb. 1, 2021), https://www.usnews.com/education/best-graduate-schools/articles/how-to-become-an-astronaut-and-what-to-study-for-this-career.

consuming and costly.[58] After investing billions of dollars to conduct an experiment in space, pharmaceutical companies may be inclined to alter or withhold adverse research results to increase profits or delay losses.

Issues involving data and intellectual property ownership for human subject research in space also exist. According to the Outer Space Treaty, "exploration and use of outer space… shall be carried out for the benefit and in the interests of all countries…and be the province of all mankind."[59] If a private pharmaceutical company develops an anti-aging drug from their research with space subjects, does the Outer Space Treaty suggest they must provide the world access to the drug? Do data privacy laws like United States' Health Insurance Portability and Accountability Act ("HIPAA") and the European Union's General Data Protection Regulation ("GDPR") still protect the data of their respective nationals in space from breaches by other nations? In short, who owns the rights to the information learned from human experimentation in space? These lingering questions and the inherent ethical challenges of human research in space highlight the need for more robust and legally binding instruments defining the rights and obligations of scientists and research participants in space.

B. Ethical Limitations of the Universal Declaration of Human Rights, the Nuremberg Code, and the Declaration of Helsinki When Applied to Human Experimentation in Space

[58] *See* Venditti, *supra* note 53.
[59] *Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, Including the Mood and Other Celestial Bodies*, *supra* note 9.

Existing international codes of ethical research conduct—the UDHR, the Nuremberg Code, and the Declaration of Helsinki—originated years before humans first explored space and decades before astronauts aboard the ISS conducted the first human experiments.[60] These international ethical codes were developed in response to specific abuse in research observed around the world including the exploitation of vulnerable populations, failure to obtain adequate informed consent, and research where the risks outweighed any potential benefits.[61] While existing ethical principles provide some guidance, human experimentation in space presents a novel set of ethical challenges that existing instruments do not properly account for.[62]

The UDHR's proclamation that medical care is a fundamental right when linked to ethical experimentation covers only a subset of the human research that can be conducted in space.[63] Arguably, human experimentation in space that does not have medical objectives, such as social and behavioral research, does not fall under the UDHR's provision. Similarly, research that does not have the prospect of providing any direct medical benefit to the participant but may have downstream public health benefits also does not fall under the UDHR's purview.

[60] *History of Research Ethics, supra* note 11; *20 Top Experiments From 20 Years of Human Research on the International Space Station, supra* note 8.
[61] *See supra* Part II.
[62] *See supra* Section III.A.
[63] *Declaration of Human Rights, supra* note 24.

The Nuremberg Code provides more robust ethical principles for conducting human subject research than the UDHR.[64] However, these guidelines still fall short when applied to human experimentation in space. The Nuremberg Code's primary ethical principle, informed consent, requires researchers to disclose the risks of the research and participants to voluntarily agree to take part in the study.[65] For human experimentation in space, the consent process is muddled. Considering our limited knowledge of space's dangers, researchers are unable to provide a complete overview of the risks that participants may encounter during research in space.[66] Further, the inherent pressures of undue influence and coercion for spacefarers may compromise their ability to provide voluntary consent. The Nuremberg Code also requires that the risks of research "should never exceed" the benefits; given that space's environment is inherently hostile to humans, how can researchers adequately balance the potential risks and benefits of research in space?[67]

The Declaration of Helsinki brought forward new ethical considerations for human experimentation including the equitable selection of subjects, special protections for vulnerable groups, and maintenance of the privacy and

[64] *Id.*; *see The Nuremberg Code*, *supra* note 24.
[65] *See The Nuremberg Code*, *supra* note 24.
[66] *See Red Risks for a Journey to the Red Planet: The Highest Priority Human Health Risks for a Mission to Mars, supra* note 45.
[67] *Id.*

confidentiality of research participants.[68] Human subject research in space poses unique issues concerning the equitiable selection of subjects. Given the limited pool of potential research participants in space, researchers are unable to provide underrepresented groups appropriate access to the direct benefits of research.[69] This means that astronauts and wealthy individuals will generally have first access to new developments in medicine and technology derived from space research.

While the Declaration of Helsinki mandates special protections for vulnerable populations, it is unclear whether space explorers fall into this category.[70] Arguably, living in space's dangerous environment and the potential for coercion or undue influence warrant additional protections for human research participants in space.[71] However, because the Declaration of Helsinki states that research with vulnerable populations is only justified when "responsive to the health needs or priorities of this group," research in space would be limited to studies that provide direct benefits to research participants or the spacefaring population, thereby stifiling scientific research.[72] Additionally, maintaining the privacy and confidentiality of research participants in space, as required by the

[68] *Declaration of Helsinki, supra* note 24.
[69] Dovey, *supra* note 54 (noting that women and people of color have been historically excluded from NASA space missions).
[70] *Declaration of Helsinki, supra* note 24 (defining vulnerable populations as those with "increased likelihood of being wronged or of incurring additional harm").
[71] *See supra* Section III.A.
[72] *Declaration of Helsinki, supra* note 24.

Declaration, also proves particularly difficult given the high profile of spacefaring individuals and the ease with which these participants could be re-identified from publications and reports.[73]

The UDHR, the Nuremberg Code, and the Declaration of Helsinki provided the framework for ethical codes of research conduct around the world. However, there is a lack of consensus on whether the application of these ethical principles permits certain types of research. One notable example is human cloning research, which some countries deem too risky and a violation of fundamental human rights.[74] In the United States, human cloning is permitted under federal law, but regulations exclude cloning research from eligibility for federal funding.[75] Another example is research testing chemical or biological warfare agents on humans, which the United States explicitly prohibits.[76] Research involving non-viable fetuses and neonates is also restricted in some countries, including the United States.[77] The lack of consensus regarding these

[73] *See supra* Section III.A.
[74] *See generally* International Compilation of Human Research Standards, *supra* note 33 (listing Finland, Romania, Slovakia, Slovenia, Croatia, Cyprus, Estonia, Iceland, Lithuania, Macedonia, Russia, Singapore, Israel, Georgia, Portugal, Chile, and the European Union as territories prohibiting human cloning).
[75] The Whiterspoon Council, *The Threat of Human Cloning*, ATLANTIS (Mar. 8, 2019), https://www.thenewatlantis.com/publications/part-four-cloning-policy-in-the-united-states (observing that while there is no federal law prohibiting cloning, most states have banned human cloning research).
[76] 50 U.S.C. § 1520a (2022) (noting that the code prohibits such research except for certain protective or peaceful purposes).
[77] International Compilation of Human Research Standards, *supra* note 33.

special topics underscores the potential ethical gaps that could arise when applying the UDHR, the Nuremberg Code, and the Declaration of Helsinki to human experimentation in space.

IV. The Solution: A New Binding International Agreement Establishing the Rights and Obligations of Scientists and Research Participants in Space

The Outer Space Treaty is the cornerstone of international space law and establishes core principles for the exploration and use of outer space.[78] However, the treaty's vague language allows parties to interpret its terms with considerable fluidity.[79] The treaty's "freedom of scientific investigation" provision is a prime example of this limitation by only declaring that parties of the treaty are free to conduct scientific research in space.[80] While the treaty proclaims that parties "shall carry on activities… in accordance with international law," there are currently no international, legally-binding documents on ethical human experimentation.[81] The UDHR, the Nuremberg Code, and the Declaration of Helsinki provide non-binding guidance for research endeavors in space, but these

[78] *Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, Including the Mood and Other Celestial Bodies*, *supra* note 9.
[79] *See generally* Paul G. Dembling & Daniel M Arons, *The Evolution of the Outer Space Treaty*, 33 J. AIR L. & COM., 419, 423, 428-429 (1967) (describing how many of the provisions in the Outer Space Treaty were intentionally drafted in vague terms as compromise between signatory states).
[80] *See Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, Including the Moon and Other Celestial Bodies*, *supra* note 9.
[81] *See id.; see History of Research Ethics*, *supra* note 11 (stating the Nuremberg Code is not binding); *see* Michael D E Goodyear, Karmela Krleza-Jeric, & Trudo Lemmens, *The Declaration of Helsinki*, 335 BMJ 624, 625 (2007) (stating that the Declaration of Helsinki has limited legal authority).

instruments fail to properly account for some of the novel ethical challenges that human subject research in space presents.[82] Since the inception of the Outer Space Treaty in 1967, the UN has brokered supplemental treaties expanding upon the Outer Space Treaty's rescue, liability, and registration provisions.[83] Given the prospect of a space research boom in the near future, now is the time for a new multilateral treaty—the Space Human Research Convention ("SHRC")—to establish rights and obligations for scientists and research participants in space.[84]

The SHRC should address the novel ethical challenges found in space research by expanding upon existing human experimentation ethical principles, such as informed consent, privacy, and confidentiality.[85] In response to the inherent dangers of conducting research in space's hostile environment, the SHRC should include a provision proscribing government entities and private research companies from recruiting research participants on Earth for research to be conducted in space. This provision would ensure only individuals who are

[82] *See supra* Section III.
[83] *Space Law Treaties and Principles*, UNITED NATIONS OFF. FOR OUTER SPACE AFFS., https://www.unoosa.org/oosa/en/ourwork/spacelaw/treaties.html (last visited Oct. 24, 2022) (showing these supplemental treaties are the Rescue Agreement, the Space Liability Convention, and the Registration Convention).
[84] *See* Candler Hobbs, *The Future of Space Exploration*, GEORGIATECH, https://coe.gatech.edu/news/2021/11/future-space-exploration (last visited Nov. 17, 2021) (noting that government entities, like NASA, and private companies are preparing for "human space exploration missions of greater distance and duration," which will "allow for amazing science to be conducted"); *see* 51 U.S.C. § 50901 (2008) (declaring that the U.S. government supports space exploration by the private sector, which has "begun to develop commercial launch vehicles capable of carrying human beings into space").
[85] *See* authorities cited *supra* note 24.

already travelling to space are eligible for space research, thereby preventing unnecessary exposure to the dangers of microgravity and space radiation.[86] Regarding the unknown risks of space exploration, the SHRC should require preclinical studies assessing any potential risks to human participants prior to conducting a full trial in space. If the preclinical study identifies potential risks beyond the known microgravity and radiation dangers, the research should only be conducted if there is a prospect of direct benefit to the research participant. These ethical safeguards are analogous to the protections found in U.S. regulations for vulnerable populations in human subject research, including pregnant women and fetuses.[87]

The SHRC should also address the privacy, confidentiality, and data sharing concerns present in space research by requiring Certificates of Confidentiality ("CoC") for all research participants. In the United States, CoCs provide additional privacy safeguards to research participants by preventing researchers from compelled disclosure of identifiable research data in "any Federal, State, or local civil, criminal, administrative, legislative, or other proceedings."[88] Given the high profile of space explorers and the Outer Space

[86] *See Red Risks for a Journey to the Red Planet: The Highest Priority Human Health Risks for a Mission to Mars*, *supra* note 45.
[87] *See* 45 C.F.R. § 46.201, 46.204, 46.205 (2018); *History of Research Ethics*, *supra* note 11.
[88] *See Certificates of Confidentiality – Privacy Protection for Research Subjects: OHRP Guidance (2003)*, DEP'T OF HEALTH AND HUM. SERVS.,

Treaty's provision that information learned from space activities is the "province of all mankind," mandatory CoCs would ensure that identifiable research information remains private by precluding improper disclosures.[89] The CoCs should also mandate that only collective, as opposed to individual, data from the research be reported in publications to further protect individual privacy. Regarding data ownership, the SHRC should foster scientific development by allowing the intellectual property rights of research data to remain under the ownership of the entity conducting the research. Additionally, the SHRC should conform to the principles of the Outer Space Treaty by requiring technological advancements harnessed from such data to be accessible to all mankind.

One of the main logistical challenges of conducting human research in space is the limited subject pool. Without a statistically significant or representative sample, it is difficult to generalize research results from participants to the general population.[90] To address this limitation, the SHRC should require space researchers to follow the recommendations of the Institute of Medicine Committee for small-sample clinical trials.[91] These recommendations

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https://www.hhs.gov/ohrp/regulations-and-policy/guidance/certificates-of-confidentiality/index.html (last visited Nov. 1, 2022) (reporting that typically only NIH-funded research receive CoCs, but researchers can request them on a case-by-case basis for non-NIH research).

[89] *See Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, Including the Moon and Other Celestial Bodies art.1, supra* note 9.

[90] *See supra* Section III.A.

[91] *See generally* CHARLES H. EVANS, STRATEGIES FOR SMALL-NUMBER-PARTICIPANT CLINICAL RESEARCH TRIALS 91-93 (2001).

include defining the research scope early in the research, tailoring the research design for small populations, performing corroborative statistical analyses, and exercising caution when interpreting research results.[92] As space exploration becomes more accessible to the general public, research sampling concerns will become less salient. Accordingly, the SHRC should revisit these requirements periodically to assess whether they are still needed.

To address the unique undue influence and coercion issues inherent in space research, the SHRC should impose limitations on participant compensation.[93] Specifically, restricting nonfinancial incentives for compensation will prevent researchers from abusing scarce resources to induce participation in research. Further, the SHRC should restrict authority figures from directly participating in the recruitment of research participants. Spacefarers may interpret recruitment efforts by authority figures as an expectation to participate, rather than a request for voluntary participation. Thus, allowing only third parties or junior-level research associates to conduct recruitment may be necessary to minimize the possibility of coercion and undue influence.

Space research is bound to encounter additional emergent challenges as technologies enable us to travel further into the cosmos. To tackle this uncertainty, the SHRC should establish Space Ethical Review Boards ("SERBs").

[92] *Id.* at 60, 89-90.
[93] *See supra* Section III.A.

SERBs should function similarly to Institutional Review Boards ("IRBs") on Earth, which serve as ethical committees for the review of human subject research.[94] Like IRBs, SERBs should have the ability to approve and disapprove space research prior to research onset, monitor research post-approval for unanticipated risks, evaluate conflicts of interest, and provide additional ethical safeguards to research participants as needed. While human research on the ISS already undergoes formal ethical review by the Human Research Multilateral Review Board ("HRMRB"), the jurisdiction of the HRMRB is limited to research with astronauts aboard the ISS.[95] In contrast, SERBs should have jurisdiction over all human experimentation conducted in space. The SHRC should also require a SERB at each space site that conducts research, allowing the SERB to gain experience and expertise in reviewing the site's unique ethical challenges over time. Overall, these SHRC measures will minimize potential research abuse in space and foster public trust in the space research enterprise.

V. Conclusion

[94] *See History of Research Ethics*, *supra* note 11 (observing that the goal of the IRBs is to formally review and monitor human subjects research to ensure that subject safety, rights, and welfare are adequately protected).
[95] *See* HMRB, NASA, https://irb.nasa.gov/HRMRB/ (last visited Nov. 10, 2022) (noting that the HRMRB is "represented by International Space Station (ISS) International Partner (IP) members of the space agencies of the United States, Russia, Canada, Japan, and Europe"); *see* 14 C.F.R § 1214.403 (1998) (requiring written approval by the HRMRB before any research with human subjects commences).

The rise of space exploration has profound implications for the future of human experimentation in space. Currently, the Outer Space Treaty and existing international ethics instruments do not provide adequate guidance for addressing the novel ethical challenges attributable to space research.[96] Some of these unique challenges include heightened privacy, informed consent, undue influence, and conflict of interest concerns.[97] To address these ethical gaps, the UN should broker a new treaty—the Space Human Research Convention—to establish rights and obligations for scientists and research participants in space. Notably, Institutional Review Boards on Earth provide a workable model for establishing Space Ethics Review Boards that are tasked with protecting the rights and welfare of spacefaring research subjects. Moving forward, international space law must ensure that progress in space exploration and science is not made at the expense of vulnerable research participants in space.

[96] *Supra* Section III.
[97] *Id.*