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Patent Reparations: HBCUs Paving the Road to Recovery from Racial Disparities in the United States Patent and Trademark Office

Sandra L. Rierson*
Mimi Afshar**

The American patent ecosystem, which is almost as old as the country itself, has fostered persistent racial disparities in wealth in the United States. Enslaved people did not own their own labor and could not register patents or prosper from their inventions, which were often stolen from them.[1] After the Supreme Court's decision in *Dred Scott v. Sandford*, even free Black people were thwarted from obtaining patents for their inventions because they were not considered citizens of the United States.[2] The Civil War and Reconstruction nullified *Dred Scott*, but this period was quickly followed by Jim Crow and the legal doctrine of "separate but [un]equal" across much of the United States, which further impeded Black people from accumulating wealth or political

* Professor, Western State College of Law at Westcliff University. We would like to thank the participants at the Mosaic IP Law and Policy Roundtable Conference, hosted by the Institute for Intellectual Property & Social Justice at University of Illinois-Chicago (UIC) Law School, as well as the attendees at the Annual Law & Technology Summit at North Carolina Central University School of Law (both in October 2023), for helpful critiques of this work. We also received insightful commentary on an earlier version of this article during the *Social Justice in IP* panel at the 2023 Southeastern Association of Law Schools (SEALS) Annual Conference. We are also indebted to Professors Lateef Mtima and Brenda Simon for their feedback on this article. Finally, I would like to thank Western State College of Law for supporting this research.

** Senior Clinical Professor at North Carolina Central University School of Law. I would like to dedicate this article to my Patent Clinic students who stuck with me in their journey to become IP practitioners. I would like to thank Professor Rierson, my former law professor, for inviting me to be her co-author. Finally, I would like to thank NCCU School of Law for supporting this research.

1. *See infra* Section II.A., *The Impact of Chattel Slavery on the Ability to Patent*.

2. *See infra* Section II.B., *Dred Scott and the Deprivation of Citizenship as a Barrier to the Patent Office*.

power.[3] As a result, they remained hamstrung in their ability to exploit their inventions by obtaining patents. Even today, due to systemic racism in the United States — the modern shadow of slavery and Jim Crow — Black people are underrepresented in the United States Patent and Trademark Office (USPTO), both as inventors and members of the patent bar.[4] Societal inequities and racial discrimination continue to prevent Black people from fully participating in the nation's innovation ecosystem.[5]

The USPTO must play a key role in recovering and restoring the rights of Black Americans to create and own intellectual property and profit from it. Reparations, an essential step in achieving restorative justice, are due. Repairing the damage done to Black people by past patterns of *de jure* and *de facto* legal discrimination requires a multi-pronged approach. The USPTO has taken steps in the road to recovery, significantly by establishing patent and trademark clinics at law schools throughout the country, especially at historically Black colleges and universities (HBCUs).[6] This article demonstrates the need for restorative justice in the USPTO. It also examines the impact of the USPTO's current reparative efforts and makes recommendations for further progress.[7]

I. The Need for Reparations as a Tool of Restorative Justice in the United States Patent and Trademark Office

Significant racial disparities exist in the USPTO. Black people are and have historically been underrepresented among those inventors who obtain patents.[8] For this reason, they are less likely to derive wealth for themselves and their families from their inventions. For centuries, the nation's laws erected an impenetrable barrier between Black inventors and the patent office, even though the patent statutes themselves never mentioned race. These formal legal barriers were

3. *See infra* Section II.C., *The Impact of Racial Violence, Legal Segregation, and Disenfranchisement*.

4. *See infra* Section I.A., *Persistent Racial Disparities in the United States Patent and Trademark Office*.

5. *See infra* Section II.D., *The Impact of Systemic Racism on Access to the Patent System.*

6. *See infra* Section III.A., *Efforts by the United States Patent and Trademark Office to Remedy Racial Disparity in the Patent Ecosystem*.

7. *See infra* Section III.B., *Next Steps: Recommendations to Achieve Restorative Justice in the Patent Ecosystem.*

8. *See infra* notes 10–18, and accompanying text.

undergirded by a pervasive and persistent belief in white supremacy.[9] This is a wrong that needs to be righted. Reparations, an integral step in achieving restorative justice, are due.

A. Persistent Racial Disparities in the United States Patent and Trademark Office

Black people make up a significant and growing percentage of the population of the United States.[10] The 2020 census shows that 13.7% of the American population identifies as Black.[11] When people who identify as mixed race are included (census respondents who report being Black in combination with another ethnicity), the percentage increases to 14.2%, or 46.9 million people.[12] These percentages vary greatly by state, ranging from Mississippi (38%) and Louisiana (33%), to Idaho and Montana (both approximately 1%).[13] In almost every state, Black people are underrepresented among inventors who obtain patents and lawyers who are members of the patent bar.

The USPTO has never collected data regarding the race or ethnicity of inventors who apply for and obtain patents, but the studies that exist (which are based on limited data) reveal a persistent disparity.[14] A 2003

9. *See infra* notes 94–99, 143–149, and accompanying text; *see also infra* Section II.C., *The Impact of Racial Violence, Legal Segregation, and Disenfranchisement*.

10. Between 2000 and 2022, the percentage of Black people living in the United States (as a share of the general population) increased by 32 percent. *See* Gracie Martinez & Jeffrey S. Passel, *Facts About the U.S. Black Population*, Pew Rsch. Ctr. (Jan. 23, 2025), https://www.pewresearch.org/social-trends/fact-sheet/facts-about-the-us-black-population/.

11. Nicholas Jones, Rachel Marks, Roberto Ramirez & Merarys Ríos-Vargas, *2020 Census Illuminates Racial and Ethnic Composition of the Country*, U.S. Census Bureau (Aug. 12, 2021), https://www.census.gov/library/stories/2021/08/improved-race-ethnicity-measures-reveal-united-states-population-much-more-multiracial.html#:~:text=to%20self%2Didentify.-,Black%20or%20African%20American%20Population,the%20total%20population)%20in%202020.

12. *Id.*

13. Martinez & Passel, *supra* note 10.

14. *See* Miriam Marcowitz-Bittona & Emily Michiko Morris, *The Distributive Effects of IP Registration*, 23 Stanford Tech. L. Rev. 306, 333–34 (2020) (noting that "[t]he USPTO does not collect demographic information on inventors" and "very little empirical research exists on [patents and] race"). A significant gender gap also exists among patent applicants and patent holders, with women comprising only about 17.3% of "inventor-patentees" in the USPTO in 2019 (up from about 5% in 1980). Office of the Chief Economist, U.S. Patent and Trademark Office, *Progress and Potential: 2020 Update on U.S. Women Inventor-Patentees*, IP Data Highlights, No. 4 (July 2020), https://www.uspto.gov/sites/default/files/documents/OCE-DH-Progress-Potential-2020.pdf; *see also* Marcowitz-Bittona & Morris, *supra* note 14, at 329–33 (analyzing gender disparities in patent ownership internationally); *see also* J. Shontavia Jackson, Tonya M. Evans & Yolanda M. King, *Diversifying Intellectual Property Law: Why Women of Color Remain "Invisible" and How to Provide More Seats at the Table*, 10 Landslide 30 (2018). However, this article focuses on restorative justice to correct racial disparities, specifically tied to the history of white supremacy in the United States, and therefore intersectional analysis of race and gender in the patent field is beyond its scope.

survey of college graduates showed that only about 1.3% of Black male respondents had applied for a patent over the preceding five years, less than half the rate of white men (2.7%).[15] Moreover, when Black Americans apply for patents, they are less likely to be granted. An economic study published in 2010 found that, between 1976 and 2008, the USPTO granted patents to Black inventors at a rate of 6 per million, compared to a rate of 235 patents per million for U.S. inventors overall.[16] A study based on patents issued over the period 2001-2016 found that the USPTO granted patent applications by Black inventors at a rate approximately 30% lower than patent applicants overall.[17] Even among full-time STEM (science, technology, engineering, and mathematics) professors at Ivy League colleges and research universities, Black professors are much less likely to obtain patents compared to their white colleagues.[18]

Significant disparities also exist in the patent bar. As with patentees, little data or empirical research exists regarding racial diversity among patent attorneys in the United States.[19] However, the American Bar Association recently commissioned a study, published in 2020, examining the racial and gender composition of patent practitioners

15. Jessica Milli, Emma Williams-Baron, Meika Berlan, Jenny Xia & Barbara Gault, *Equity in Innovation: Women Inventors and Patents*, Inst. Women's Pol'y Rsch. 1, 5 (2016), https://iwpr.org/wp-content/uploads/2020/12/C448-Equity-in-Innovation.pdf (Figure 2). This same study showed that women of all races were significantly less likely to apply for patents than men (0.4% overall vs. 2.7% overall). *Id.* However, Black women were slightly more likely to apply for a patent than white women (0.5% vs. 0.3%). *Id.* Among the college graduates surveyed, those who identified as Asian/Pacific Islander were the most likely to have applied for a patent (5.1% for men and 0.9% for women). *Id.*

16. *See* Lisa D. Cook & Chaleampong Kongcharoen, *The Idea Gap in Pink and Black* (Nat'l Bureau Econ. Res., Working Paper No. 16331, at 39 tbl.1A) (Sept. 2010), https://www.nber.org/papers/w16331.pdf; *see also* Holly Fechner & Matthew S. Shapanka, *Closing Diversity Gaps in Innovation: Gender, Race, and Income Disparities in Patenting and Commercialization of Inventions*, 19 Tech. & Innovation 727, 729 (2018) (discussing the race patent gap); W. Michael Schuster, Evan Davis, Kourtenay Schley & Julie Ravenscraft, *An Empirical Study of Patent Grant Rates as a Function of Race and Gender*, 57 Am. Bus. L.J. 281, 288 (2020) (discussing this data).

17. *See* Schuster et al., *supra* note 16, at 304-08 tbl.1. The same study found that patent applications by Hispanic inventors were granted at a rate approximately 14% lower than inventors overall. *Id.* at 304. Due to the lack of self-reported data regarding race in the USPTO, the study was based on racial assumptions derived from the inventors' names and a smaller subset of data from voter rolls. *Id.* at 294-303 (explaining study methodology).

18. Jordana R. Goodman, *Sy-Stem-Ic Bias: An Exploration of Gender and Race Representation on University Patents*, 87 Brook. L. Rev. 853, 887–93 (2022). The study showed that, at Ivy League institutions, about 5.4% of all STEM professors are Black, but only 1.1% of professors obtaining patents are Black. *Id.* at 890. At research universities, the disparity was even greater: "[W]hite full-time STEM professors are approximately 18.78 times more likely to be patent inventors than their Black peers." *Id.*

19. *See* Elaine Spector & LaTia Brand, *Diversity in Patent Law: A Data Analysis of Diversity in the Patent Practice by Technology Background and Region*, 13 Landslide 32, 33 (2020) (observing that "granular diversity data with respect to the patent bar remains scant").

registered with the USPTO.[20] The study revealed that, even though racial diversity among patent attorneys has increased over the past decades, the diversity rate remains stubbornly and unacceptably low. Throughout the 1970s and 1980s, only about 1.7 percent of registered patent practitioners were racially diverse.[21] During the 1990s, that average increased to approximately 4 percent of patent practitioners each year.[22] Since 2000 the rate of registered patent attorneys who are racial minorities has hovered around 6.5 percent.[23] Most recently, the American Intellectual Property Law Association (AIPLA)'s 2023 annual survey revealed that only about 2.7% of its membership of the identifies as Black; almost 80% identifies as white.[24]

At least among patent practitioners, the data shows that the problem of Black underrepresentation is often most severe in states where chattel slavery was pervasive until it was ended by Constitutional amendment in 1865. Similar trends appear in areas with the highest numbers of lynchings in the late nineteenth to mid-twentieth century. For example, Louisiana currently has one of the highest percentages of Black population in the country (33%).[25] However, only 5% of its patent practitioners are considered "racially diverse."[26] In 1860 – one year before the Civil War began – Louisiana's total population was approximately 50% Black, and 95% of those Black people were enslaved.[27] Louisiana also suffered an extreme degree of racial violence during the period 1877-1950, as measured by the number of Black

20. *Id.* at 34. The study was based on the LinkedIn profiles and professional online activity of approximately half of all registered patent practitioners (24,589/47,228). *Id.*

21. *Id.* at 35. The ABA study does not differentiate among minorities; it calculates the percentage of registered patent practitioners who are "racially diverse." *Id.*

22. *Id.* at 35.

23. *Id.*

24. American Intellectual Property Law Association (AIPLA), *2023 Report of the Economic Survey* at 7 (Oct. 2023), https://www.aipla.org/docs/default-source/adr-neutrals/aipla-2023-report_protected.pdf?sfvrsn=de25a8b8_3 (prepared by the AIPLA Law Practice Management Committee). Other racial groups identified by the survey were Hispanic (2.3%), Asian/Pacific Islander (6.4%), North American Indian/Native Canadian (0.3%), Mixed Race (2.1%), and White/Caucasian (79.4%). *Id.* Although AIPLA membership includes attorneys who practice trademark and copyright law as well as patent law, 86.1% of the survey respondents reported being members of the patent bar. *Id.* at 6.

25. Martinez & Passel, *supra* note 10 (Black American population data (detailed tables)).

26. Spector & Brand, *supra* note 19, at 4 (Figure 8, Bottom Ten Least Diverse States for Patent Practitioners).

27. Campbell Gibson & Kay Jung, Historical Census Statistics on Population Totals by Race, and by Hispanic Origin, 1970 to 1990, for the United States, Regions, Divisions, and States, tbl.33 (U.S. Census Bureau, Population Division, Working Paper No. 56, 2002), https://www.census.gov/content/dam/Census/library/working-papers/2002/demo/POP-twps0056.pdf. About five percent of Louisiana's Black population was free in 1860 (18,647 free Black people out of a total Black population of 350,373). *Id.*

lynching victims (549), more than any state other than Mississippi (654) and Georgia (589).[28] Similarly, Black people currently comprise 25% of South Carolina's population,[29] but only 3.33% of its patent practitioners are non-white.[30] In 1860 South Carolina's population was 59% Black, 98% of which was enslaved.[31] A significant number of Black South Carolinians were murdered due to mob violence, or lynching, as well.[32]

The disparity between the racial composition of the overall population and that of patent practitioners is lower in Maryland, where Black people comprise 33% of the population[33] and 11% of its patent practitioners are diverse (the highest percentage in the nation).[34] Maryland was also a slave state, but it never seceded from the Union, and in 1860 its Black population was almost evenly divided between free and enslaved people.[35] Maryland also experienced racial violence in the form of lynchings, but not at the same level as states in the Deep South.[36] Racial disparity in the patent field is typically lower in states without a history of slavery, such as California (overall population 6% Black; racial diversity rate among patent practitioners 6%),[37] and Massachusetts (overall population 10% Black; racial diversity rate among patent practitioners 4%).[38]

These figures do not show that states without a history of chattel slavery lack racial disparities or a history of racial violence. Far from it.[39]

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28. Equal Just. Initiative, Lynching in America: Confronting the Legacy of Racial Terror 40 tbl.1 (3d ed. 2017), https://eji.org/wp-content/uploads/2019/10/lynching-in-america-3d-ed-080219.pdf [hereinafter Lynching in America].

29. Martinez & Passel, *supra* note 10 (Black American population data (detailed tables)).

30. Spector & Brand, *supra* note 19, at 4 (fig.8, Bottom Ten Least Diverse States for Patent Practitioners).

31. Gibson & Jung, *supra* note 27, at tbl.55.

32. Lynching in America, *supra* note 28, at 40 tbls.1, 2 (recording 185 lynchings of Black people in South Carolina during the period 1877-1950).

33. Martinez & Passel, *supra* note 10 (Black American population data (detailed tables)).

34. Spector & Brand, *supra* note 19, at 4 fig.7 (Top Ten Most Diverse States for Patent Practitioners).

35. Gibson & Jung, *supra* note 27, at tbl.35. In 1860, Maryland's Black population was 49% free and 51% enslaved. *Id.*

36. Lynching in America, *supra* note 28, at 45 tbl.7 (recording 28 lynchings of Black people in Maryland during the period 1877–1950).

37. Martinez & Passel, *supra* note 10 (Black American population data (detailed tables)); Spector & Brand, *supra* note 19, at 4 fig.7 (Top Ten Most Diverse States for Patent Practitioners).

38. Martinez & Passel, *supra* note 10 (Black American population data (detailed tables)); Spector & Brand, *supra* note 19, at 4 fig.7 (Top Ten Most Diverse States for Patent Practitioners).

39. California, for example, experienced severe racial violence and "ethnic cleansings" of its Chinese population in the nineteenth and early twentieth century. *See* Angela P. Harris, *Equality Trouble: Sameness and Difference in Twentieth-Century Race Law*, 88 Cal. L. Rev. 1923, 1969–70 (2000); *see also* John Wunder, *Anti-Chinese Violence in the American West, 1850-1910*, *in* Law for the Elephant, Law for the Beaver: Essays in the Legal History of the North American West 212-36 (John McLaren et al. eds., 1992). The state also has a long history of segregation

Moreover, the comparisons are based on a limited and imperfect set of data. However, the facts do show that the need for restorative justice in the patent realm is acute in areas of the country where centuries of racial oppression have inflicted the highest degree of historical damage on the Black population, through legal and extralegal means. This is a wrong that needs to be righted.

B. Using Restorative Justice to Repair Racial Harms

Restorative justice provides a framework to redress wrongs committed by individuals and by societies. The underrepresentation of Black inventors in the USPTO (and in the Patent Bar) is neither random nor merit-based. Today's inequality traces its roots to centuries of racial oppression, originating with chattel slavery, evolving into Jim Crow and decades of racial violence, and continuing to the present day. The process of restorative justice provides a way forward to right these societal wrongs. Generations of Black people have been deprived of the intergenerational wealth they should have derived from their ingenuity, because their ancestors were either excluded or erased from the United States Patent Office. Moreover, society has been deprived of the fruits of their inventiveness, to everyone's detriment.[40]

Restorative justice is particularly apt in the context of societal wrongs with complex and deep historical roots. The deaths of individual victims and perpetrators do not rectify the harms suffered or absolve the society of its obligation to repair them.[41] Past human rights abuses may reverberate for years, as the targeted group continues to suffer ongoing economic and social deprivations.[42] The harm reaches far beyond that suffered by individual victims, and therefore restorative justice aims to repair entire communities. Repairing the harm, *i.e.,* reparations, thus lie at the heart of the philosophy of restorative justice. Failure to provide

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and discriminatory treatment of Mexican Americans and other non-white Californians. *See, e.g.,* Ariela J. Gross, "*The Caucasian Cloak": Mexican Americans and the Politics of Whiteness in the Twentieth-Century Southwest*, 95 GEO. L.J. 337, 360 (2007); *see also* Mendez v. Westminister Sch. Dist. of Orange Cnty., 64 F. Supp. 544, 545 (S.D. Cal. 1946), *aff'd sub nom.* Westminster Sch. Dist. of Orange Cnty. v. Mendez, 161 F.2d 774 (9th Cir. 1947) (segregation in public schools).

40. *See* Schuster et al., *supra* note 16, at 313–14 (noting that "society loses would-be great inventors where large groups are disenfranchised from participating in invention," and "quality of invention" also suffers when inventors are "largely homogenous"); *see also* Goodman, *supra* note 18, at 855 ("Closing current racial and gender patent inventorship gaps would increase aggregate economic output by trillions of dollars.").

41. *See* Sandra L. Rierson & Melanie H. Schwimmer, *The Wilmington Massacre and Coup of 1898 and the Search for Restorative Justice,* 14 ELON L. REV. 117, 158–59 (2022).

42. *See* Lorie M. Graham, *Reparations, Self-Determination, and the Seventh Generation*, 21 HARV. HUM. RTS. J. 47, 81 (2008).

redress and repair for societal harms may result in debilitating inequities that harm the targeted group as well as the community as a whole.[43] Thus, the pursuit of restorative justice is not just a moral responsibility but a societal imperative.

Restorative justice encompasses reparations that are both backward and forward-looking. In other words, restorative practices do not solely react to past harms; they provide a framework to prevent harm in the future.[44] In terms of focus, restorative practices emphasize proactive remedies, or "restorative work in the community," over reactive efforts at harm repair, although both are necessary components of reparation.[45] With regard to the Black community in the United States, both types of reparations are due. Activists, politicians, and scholars have long advocated for the United States government to pay financial reparations to the Black community, to compensate for generations of abuse arising from slavery, Jim Crow, racial violence, and ongoing racial discrimination.[46] We support this ongoing movement. The exclusion of Black people from the nation's innovation ecosystem, and the simultaneous erasure of their contributions to it, is just one manifestation of a broader set of harms arising from these forces. However, the reparations described in this article are forward-looking. These remedies should be viewed as complementary to reparations in the form of compensation for past harms, not as a substitute.

Restorative justice practices require two basic steps: 1) acknowledging past harms and accepting responsibility for them; and 2) taking steps to repair the harm, to create or restore equity (which may be forward-looking).[47] Society must neither ignore nor excuse its past injustices,

43. *See* Janna Thomson, Taking Responsibility for the Past: Reparation and Historical Justice vii (2002) (Introduction).

44. *A Brief History of Restorative Practices*, Amherst Coll., https://www.amherst.edu/offices/restorative-practices/history-of-restorative-practices (last visited Jan. 7, 2025).

45. *Id.*

46. *See, e.g.*, William A. Darity Jr. & A. Kirsten Mullen, From Here to Equality: Reparations for Black Americans in the Twenty-First Century 1 (2020); H.R. Res 414, 118th Cong. (2023) ("[r]ecognizing that the United States has a moral and legal obligation to provide reparations for the enslavement of Africans and its lasting harm on the lives of millions of Black people in the United States"); Commission to Study and Develop Reparation Proposals for African Americans Act, H.R. 40, 117th Cong. (2021); DeNeen L. Brown, *40 Acres and a Mule: How the First Reparations for Slavery Ended in Betrayal*, Wash. Post (Apr. 15, 2021), https://www.washingtonpost.com/history/2021/04/15/40-acres-mule-slavery-reparations/.

47. *See* Howard Zehr, The Little Book of Restorative Justice 57 (2015) (describing the steps to "resolve any type of wrongdoing" as "1. The wrong or injustice must be acknowledged; 2. Equity needs to be created or restored; 3. Future intentions need to be addressed."); *see also* Mari J. Matsuda, *Looking to the Bottom: Critical Legal Studies and Reparations*, 22 Harv. C.R-C.L. L. Rev. 323, 397 (1987) (defining "reparations" to require the "formal acknowledgment of historical wrong, the recognition of continuing injury, and the commitment to redress").

if it intends to move beyond them. However, speaking truth does not, by itself, achieve restorative justice. It must be followed by efforts to repair harms that have been inflicted, even over centuries.[48] Together, the fundamental steps of restorative justice can lead to reconciliation and repair.

II. The First Steps of Restorative Justice: Acknowledging the Harm and Accepting Responsibility for It

Restorative justice requires society first to eschew the ineffective mantra of "forgive and forget" in favor of one that embraces a "truthful remembering."[49] Black underrepresentation in the USPTO derives from a legal system that, for centuries, was rooted in white supremacy.[50] The harms inflicted by that system must be acknowledged and understood before they can be repaired.

Unfortunately, in recent years the United States has taken several steps backward in its path toward "truthful remembering" of the human rights abuses inflicted upon Black members of American society. Since 2017, dozens of states have passed laws targeting the teaching of "race, racism, sexual orientation, and gender identity" to K-12 students in the United States.[51] The "first wave" of these laws, most of which were passed between 2017 and 2021, primarily focus on public school

48. *See* Zehr, *supra* note 47, at 90–91 (App. II) (noting that, under restorative justice principles, a just response "[r]epairs the harm caused by, and revealed by, wrongdoing (restoration)," and "[e]ncourages appropriate responsibility for addressing needs and repairing the harm (accountability)").

49. *See* Howard J. Vogel, *Healing the Trauma of American's Past: Restorative Justice, Honest Patriotism, and the Legacy of Ethnic Cleansing*, 55 Buff. L. Rev. 981, 1026 (2007).

50. *See* Keith Aoki, *Distributive and Syncretic Motives in Intellectual Property Law (with Special Reference to Coercion, Agency, and Development)*, 40 U.C. Davis L. Rev. 717, 744 (2007) (observing that "although the U.S. patent system purportedly encouraged and fostered opportunities for innovation across diverse social strata, it actually denied most [B]lack persons the ability to reap the rewards from their ingenuity, thus compounding racially oppressive legal, economic, and social structures").

51. Hannah Natanson, Lauren Tierney & Clara Ence Morse, *Which States are Restricting, or Requiring, Lessons on Race, Sex, and Gender*, Wash. Post (June 13, 2024), https://www.washingtonpost.com/education/2024/education-laws-states-teaching-race-gender-sex/l; *see also* Ileana Najarro, *Many States are Limiting How Schools Can Teach About Race. Most Voters Disagree*, Education Week (Oct. 30, 2023), https://www.edweek.org/teaching-learning/many-states-are-limiting-how-schools-can-teach-about-race-most-voters-disagree/2023/10. Although some states have passed laws expanding such instruction, approximately two-thirds of these new laws and regulations "circumscribe or ban lessons and discussions on some of society's most sensitive topics." Hannah Natanson, Lauren Tierney & Clara Ence Morse, *America Has Legislated Itself into Competing Red, Blue Versions of Education*, Wash. Post (Apr. 4, 2024), https://www.washingtonpost.com/education/2024/04/04/education-laws-red-blue-divide/.

curriculum regarding race and racial history.[52] Although many of these laws purport to restrict the teaching of critical race theory in public schools, the standards they have imposed are so vague and broad that they endanger any type of instruction about race or racial history. For example, Texas amended its Education Code in 2021 to prohibit teaching that portrays "slavery and racism [as] . . . anything other than deviations from, betrayals of, or failures to live up to, the authentic founding principles of the United States, which include liberty and equality."[53] These laws have had a chilling effect. Teachers are often understandably reluctant to address "political and social issues" in the classroom, especially if their school district has adopted rules regulating instruction regarding race, gender, and racial history.[54]

Most recently, President Trump has issued an executive order purporting to withhold federal funding from any K-12 public school that fails to provide students with a "patriotic education," defined to include "a clear examination of how the United States has admirably grown closer to its noble principles throughout its history" and "the concept that celebration of America's greatness and history is proper."[55] The National Education Association has condemned this Presidential directive as an attempt to punish schools for teaching "the whole history of America."[56] If this order is implemented, it would constitute an unprecedented federal intrusion in the management of public schools.[57] This executive order caps an escalating trend that threatens

52. Natanson et al., *Which States Are Restricting, or Requiring, Lessons on Race, Sex, and Gender, supra* note 51. More recent laws have tended to focus on the teaching of concepts related to gender identity and sexual orientation. *Id.*

53. H.B. No. 3979, https://legiscan.com/TX/text/HB3979/id/2407870 (amending Section 28.002 of the Education Code, adding section (h-3)(4)(B)(x)).

54. Hannah Natanson, *Teachers are Limiting Lessons on Political, Social Issues, Report Finds*, Wash. Post (Feb. 15, 2024), https://www.washingtonpost.com/education/2024/02/15/teachers-limit-political-social-issues-lessons/ (analyzing study conducted by the Rand Corporation based on survey of 1400 K-12 teachers in the United States). The study found that over 80 percent of teachers in school districts that restrict instruction regarding race or gender reported censoring classroom discussion of these topics. *Id.*

55. *Ending Radical Indoctrination in K-12 Schooling*, White House (Jan. 29, 2025), https://www.whitehouse.gov/presidential-actions/2025/01/ending-radical-indoctrination-in-k-12-schooling/ (last visited Feb. 25, 2025); Exec. Order 14190, 90 Fed. Reg. 8853 (Jan. 29, 2025). The executive order also attempts to restrict the ability of public schools to accommodate transgender students. *Id.*

56. Press Release, Nat'l Educ. Ass'n, *NEA President: Trump's Latest Punitive Executive Order Silences and Punishes Educators for Teaching the Truth* (Jan. 29, 2025), https://www.nea.org/about-nea/media-center/press-releases/nea-president-trumps-latest-punitive-executive-order-silences-and-punishes-educators-teaching-truth.

57. *See* Dana Goldstein, *With Sweeping Executive Orders, Trump Tests Local Control of Schools*, N.Y. Times (Jan. 30, 2025), https://www.nytimes.com/2025/01/30/us/trump-executive-orders-local-control-schools.html.

to undermine progress towards racial equity in the United States and obliterate efforts to achieve restorative justice.

America cannot move past its history of racial injustice by trying to forget, ignore, or excuse it. Anti-lynching activist and journalist Ida B. Wells recognized — over a century ago — that "[t]he way to right wrongs is to turn the light of truth upon them."[58] For that reason, the first step in addressing inequity in the USPTO is to acknowledge and explain why it exists. This article illuminates the following sources of harm that were inflicted on the Black population of the United States, specifically in the context of the ability to patent: 1) chattel slavery's negation of an enslaved person's ability to own intellectual property or profit from it; 2) the deprivation of citizenship rights imposed on free Black people, especially under the Supreme Court's decision in *Dred Scott*; and 3) the impact of racial violence and institutionalized discrimination during the Jim Crow era.

These sources of harm have had a two-fold effect: 1) to keep Black people out of the Patent Office, and 2) to render invisible those who did patent their inventions, despite these obstacles. Absence and invisibility of Black inventors reinforced the pervasive white mythology that Black people were incapable of inventing. Thus, a destructive feedback loop emerged: discrimination and deprivation of rights excluded Black people from the Patent Office (or erased the historical record of their contributions), while their apparent absence supposedly confirmed that only white men possessed an intellectual capacity worthy of the full rights of citizenship.[59] To break this cycle, we must first dispel the illusion that the USPTO is or has ever been color blind.[60]

A. The Impact of Chattel Slavery on the Ability to Patent

The institution of chattel slavery imposed an impenetrable barrier between its victims, who were Black, and the USPTO. Even when enslaved people created inventions that otherwise satisfied the

58. Ida B. Wells, The Light of Truth: Writings of an Anti-Lynching Crusader xix (Mia Bay & Henry Louis Gates, Jr., eds. 2014) (citing *A Lecture*, Washington Bee (Oct. 22, 1892)).

59. *See* Kara W. Swanson, *They Knew it All Along: Patents, Social Justice, and Fights for Civil Rights*, *in* The Cambridge Handbook of Intellectual Property and Social Justice 208, 212 (Steven D. Jamar & Lateef Mtima, eds., 2023) ("To those with legal, social, and economic power, the seeming absence of patents granted to white women and persons of color, proof that they lacked inventiveness, justified the exclusion of these groups from full legal personhood and the national narrative of belonging.").

60. *See* Marcowitz-Bittona & Morris, *supra* note 14, at 334–35 (noting that "evidence suggests that the patent examination process is . . . not neutral with regard to race and ethnicity, resulting in the issuance of problematic patents and an ethnic and racial bias in the examination process").

requirements of the Patent Act, they could not receive patents for them.[61] Instead, the people who claimed to own the inventors attempted to claim credit for their inventions, and sometimes succeeded.[62] Generations of Black people — from the passage of the first Patent Act in 1790 until the ratification of the Thirteenth Amendment in 1865 — were deprived of the ability to profit from their inventions by a legal system that was created and enforced by the local, state, and federal governments of the United States: chattel slavery.

Although the Patent Act never referred to race or enslavement, even in the eighteenth century, it effectively made it impossible for anyone to obtain a patent on an invention created by an enslaved person. Beginning in 1793, the Patent Act required any patentee to swear or affirm that he was the "true" or "original" inventor or discoverer of the device or machine that was the subject of the patent (the "Patent Oath").[63] The 1836 Patent Act also required the inventor to identify their country of citizenship.[64] Enslaved people did not own their labor and typically were not legally permitted to own property of any type under state law.[65] They also were not considered citizens of the United States.[66] Due to their legal status, they were not considered competent to take the Patent Oath.[67] A slaveholder seeking to profit from an enslaved person's invention also could not truthfully take the Patent Oath, because they could not swear to be the "true" or original inventor.[68] Therefore, no one could legally obtain a patent on an enslaved person's invention.

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61. *See infra* notes 63–67 and accompanying text.

62. *See infra* notes 75–83, 104–110 and accompanying text.

63. Patent Act of 1793, ch. 11, 1 Stat. 318-323, § 3 (1793); Patent Act of 1836, ch. 357, 5 Stat. 117, § 6 (1836) (requiring that the patent applicant "make oath or affirmation that. . .he is the original and first inventor or discoverer of the art, machine, composition, or improvement, for which he solicits a patent, and that he does not know or believe that the same was ever before known or used . . . ."); *see also* Bryan L. Frye, *Invention of a Slave*, 68 Syracuse L. Rev. 181, 183–84 (2018) (discussing the Acts).

64. Patent Act of 1836, ch. 357, 5 Stat. 117, § 6.

65. *See* Aoki, *supra* note 50, at 742 ("Because slaves were themselves the legal property of others, a slave could not own property (real, personal, or intellectual) in his or her own name or enter into contracts to safeguard associated rights."); Anthony R. Chase, *Race, Culture, and Contract Law: From the Cottonfield to the Courtroom*, 28 Conn. L. Rev. 1, 20 (1995) ("Apart from criminal law, a slave held no legal status and virtually no rights.").

66. *See* Portia P. James, The Real McCoy: African-American Invention and Innovation, 1619-1930, 49–50 (Smithsonian Inst. 1989) (quoting letter from Patent Commissioner Holt to Oscar J.E. Stuart (1857), in which Holt wrote, "[A]s the laws of the United States do not recognize slaves as Citizens it is impossible for the Negro slave 'Ned' to bring his [patent] application . . . .").

67. *See supra* notes 63–66 and accompanying text.

68. *See* Invention of a Slave, 9 Op. Att'y. Gen. 171 (1858).

Enslaved people would have encountered practical barriers to obtaining a patent as well. Even in 1793, submitting a patent application required payment of a $30 fee.[69] Although American patent applications were much more affordable than their European counterparts,[70] the need to pay any amount of money would have, by itself, barred enslaved people from the Patent Office. The application also had to include a written description of the invention and, where appropriate, drawings of it.[71] Patent applications had to be signed by the inventor and "attested by two witnesses."[72] Moreover, the inventor (or their lawyer) had to file all of these materials with the Secretary of State in Washington, D.C.[73] All of these requirements would have presented insurmountable hurdles for enslaved people, the vast majority of whom had no money or ability to earn it, no freedom of movement, and no education. In the South, enslaved people were typically legally forbidden to learn how to read or write.[74]

The barriers imposed between enslaved people and the Patent Office also would have made it more difficult for them to create inventions in the first place. However, the historical record shows that enslaved people did, in fact, create intellectual property that would have been patentable, but for the inventors' enslavement.[75] Some

69. Patent Act of 1793, ch. 11, 1 Stat. 318–323, § 11; Patent Act of 1836, ch. 357, 5 Stat. 117, § 9.

70. *See* Aoki, *supra* note 50, at 739–40 (noting that U.S. patent fees were "far lower" than those set in Europe at this time); Swanson, *supra* note 59, at 211 (noting that the American patent system developed during the eighteenth century "was more accessible than previous European systems of protecting inventions").

71. Patent Act of 1793, ch. 11, 1 Stat. 318-323, § 3. The Act required the inventor to "deliver a written description of his invention. . . in such full, clear and exact terms, as to distinguish the same from all other things before known, and to enable any person skilled in the art or science to make, compound, and use the same. And in the case of any machine, he shall . . . accompany the whole with drawings and written references…." *Id.*

72. Patent Act of 1793, Ch. 11, 1 Stat. 318–323, § 3; Patent Act of 1836, Ch. 357, 5 Stat. 117 § 6.

73. Patent Act of 1793, Ch. 11, 1 Stat. 318–323, § 3. The 1836 Act created the office of the Commissioner of Patents and required the patent applicant to file in the Patent Office, also in Washington, D.C. Patent Act of 1836, Ch. 357, 5 Stat. 117 § 6.

74. *See* Janel A. George, *Deny, Defund, and Divert: The Law and American Miseducation*, 112 Geo. L.J. 509, 517-19 (2024) (noting that "[m]any of the anti-literacy Slave Codes were enacted to quell insurrection and threats to the institution of slavery"). For example, the preamble to North Carolina's 1830 statute noted that "the teaching of slaves to read and write has a tendency to excite dissatisfaction in their minds and to produce insurrection and rebellion . . ." An Act to Prevent All Persons from Teaching Slaves to Read or Write, The Use of Figures Excepted, ch. VI, 1830 N.C. Sess. Laws 11 (1830). The act provided that a white person convicted of teaching or attempting to teach a slave to read or write would be punished by a fine of $100-200 or imprisonment. *Id.* ¶1. A free person of color – in addition to being fined or imprisoned – could also be punished by a whipping of 20-39 lashes. *Id.* An enslaved person convicted of this crime received a mandatory punishment of "thirty-nine lashes on his or her bare back." *Id.* ¶ 2.

75. In addition to individual ingenuity, the enslaved population also brought their cultural knowledge to America. *See* Aoki, *supra* note 50, at 738 (reflecting on W.E.B. DuBois's writings, demonstrating that Black Americans have "made distinctive, though usually unrecognized and

slaveholders claimed to own these patents, because they "owned" the inventors. A white Mississippi farmer and slaveholder, Oscar J.E. Stuart, filed a patent application in 1857 for a "double Cotton Scraper, and two plows," which he conceded that he did not invent.[76] The invention was created by a man referred to only as "Ned," an enslaved blacksmith on Stuart's farm.[77] The Patent Office rejected Stuart's application, because he could not (and did not) truthfully swear or affirm that he was the "original and first inventor or discoverer" of the cotton scraper.[78]

The decision was appealed, and the United States Attorney General concurred, in an opinion entitled *Invention of a Slave*. [79] The attorney general opined that "a machine invented by a slave, though it be new and useful, cannot, in the present state of the law, be patented."[80] The Patent Act did not reach these inventions, no matter how novel and brilliant, to the benefit of either the enslaved inventor or the slaveholder. In the 1857 Annual Report of the Patent and Trademark Office, Patent Commissioner Joseph Holt indicated that "applications have been filed for letters patent for several inventions, alleged to be valuable, and to have been made by slaves of the Southern States."[81] He concluded that, because "these [enslaved] persons could not take the oath required by the statute, and were legally incompetent . . . to receive a patent and to transfer their interest to others, the applications were necessarily rejected."[82] In 1859, Mississippi Senator Jefferson Davis (the future president of the Confederacy) submitted an unsuccessful patent application on behalf of his brother, Joseph Davis, who sought a patent for an improved boat propeller developed by a man he had enslaved, Benjamin T. Montgomery.[83] Jefferson's patent application

devalued, cultural, social, and inventive contributions from which America and the entire world [have] benefited"). Enslavers benefitted from the expertise of the people they had enslaved, as in, *e.g.*, the cultivation of rice and other crops prevalent in Africa as well as the Southern colonies. *See* James, *supra* note 66, at 22–24.

76. *See* Kara W. Swanson, *Race and Selective Legal Memory: Reflections on Invention of a Slave*, 120 Colum. L. Rev. 1077, 1085 (2020); Frye, *supra* note 63, at 189–209.

77. Swanson, *supra* note 76, at 1085.

78. *Id.* at 1087; *see also* H. Jackson Knight, Confederate Invention: The Story of the Confederate States Patent Office and its Inventors 47 (2011).

79. Invention of a Slave, 9 Op. Att'y. Gen. 171 (1858).

80. *Id.* at 171. The attorney general added that "if such a patent were issued to the master, it would not protect him in the courts against persons who might infringe it." *Id.* at 172.

81. *Annual Report of the Commissioner of Patents*, 13 Sci. Am. 170, 171 (1858), https://www.scientificamerican.com/article/commissioner-of-patents-1858-02-06/; *see also* Kenneth W. Dobyns, The Patent Office Pony, A History of the Early Patent Office 152 (1994).

82. *Annual Report of the Commissioner of Patents*, *supra* note 81, at 171.

83. Swanson, *supra* note 76, at 1088; Frye, *supra* note 63, at 210–14; Dobyns, *supra* note 81, at 153.

was rejected, presumably based on the attorney general's opinion in *Invention of a Slave*.[84]

Oscar J.E. Stuart lobbied for an amendment to the Patent Act to reverse the effects of the attorney general's decision in *Invention of a Slave*.[85] In 1859, North Carolina Senator David Reid, chair of the Committee on Patents and the Patent Office, introduced a bill to amend the Patent Act to enable slaveholders to obtain patents based on the ingenuity of the people they had enslaved.[86] Reid's bill provided that a "negro slave" who was an inventor could submit a patent application and have a patent issued in their own name, but all "rights conferred thereby" would vest in the "owner or owners of such negro slave."[87] The bill further specified that the owner of the enslaved person — not the inventor — had the right to assign the patent and otherwise "exercise and enjoy all rights and privileges conferred by law . . . as if such patent had issued in . . . [the enslaver's] own name . . . ."[88]

Congress did not enact Reid's proposed legislation (nor is there any record of debate on the bill).[89] However, the provisional government of the Confederacy passed a similar law just two years later.[90] Under the 1861 Patent Act of the Confederacy, enslavers were given the right to profit from the inventions of the people they enslaved.[91] The Act provided that if "the original inventor . . . for which a patent is solicited

84. *See* Frye, *supra* note 63, at 212, 214–15; James, *supra* note 66, at 53. After the Civil War, Montgomery sought to patent the boat propeller invention himself but was unsuccessful. Dobyns, *supra* note 81, at 153.

85. *See* Letter from Oscar J.E. Stuart to Sen. John A. Quitman (Aug. 29, 1857), *in* Dorothy Cowser Yancy, *The Stuart Double Plow and Double Scraper: The Invention of a Slave*, 69 J. Negro Hist. 48, 48-50 (1984). Stuart wrote that "no one could rationally doubt . . . the master has the same right to the fruits of the labor of the [intellect] of his slave, that he has to those of his hands . . . ." *Id.* at 49. Stuart implied that the Patent Act was unconstitutional as applied to slaveholders in this context. *Id.* (arguing that "any construction of a Statute . . . which is subversive of the right of any Citizen to an equality of Protection in his Person, and Property, must be abandoned . . ."). *See* Frye, *supra* note 63, at 195–206; James, *supra* note 66, at 49–52.

86. *A Bill to Authorize the Issue of Patents, in Certain Cases, to Negro Slaves for the Use of their Owners*, S. 548, 35th Cong. (1859), https://memory.loc.gov/cgi-bin/ampage?collId=llsb&fileName=035/llsb035.db&recNum=1588. *See also* Kathleen Wills, *Patenting an Invention as a Free Black Man in the Nineteenth Century*, 101 J. Pat. & Trademark Off. Soc'y 206, 215 (2019) (discussing same).

87. S. 548, 35th Cong. § 1 (1859). The proposed legislation required enslaved inventors to take the patent oath; it also mandated that the inventors' "owner or owners" verify these attestations by their own oaths, taken "to the best of … their knowledge and belief." *Id.* § 3.

88. *Id.* § 2.

89. *See* Frye, *supra* note 63, at 205–07 (discussing Brown's efforts to pass this legislation).

90. *See* Knight, *supra* note 78 , at 46–47 (describing the legislative history of the Act); *see generally* Dobyns, *supra* note 81, at 167–70 (describing the Confederate Patent Office).

91. Act of May 21, 1861, ch. 46, § 50, Pub. L., Provisional Cong., 2d Sess., *reprinted in* The Statutes at Large of the Provisional Government of the Confederate States of America 136, 148 (James M. Matthews ed., 1864), *available at* https://docsouth.unc.edu/imls/19conf/19conf.html#p136 [hereinafter Confederate Patent Act].

is a slave, the master of such slave may take an oath that the said slave was the original inventor" and — upon demonstrating that the other requirements of the Act were satisfied — the slaveholder would "receive a patent for said discovery or invention, and have all the rights to which a patentee is entitled by law."[92] No record exists of a patent obtained by a Confederate slaveholder, based on an enslaved person's invention.[93]

Although these laws aimed to benefit slaveholders, not enslaved inventors, they would have been rhetorically problematic for those who tried to rationalize slavery through claims of Black inferiority and white racial supremacy. To justify the violent and total deprivation of self-autonomy embodied in slavery, the white power structure portrayed Black people as lesser beings. Writing in *Notes on the State of Virginia*, Thomas Jefferson proposed gradual emancipation of Virginia's enslaved population, but only if the former slaves could be "colonized" and expelled from the United States.[94] Jefferson espoused separation of the races, in part, due to his professed belief in Black inferiority: he claimed that Black people were "much inferior" to whites in their capacity to reason, "as I think one could scarcely be found capable of tracing and comprehending the investigations of Euclid [geometry]."[95] He further wrote that "in imagination they are dull, tasteless, and anomalous," never exhibiting "an elementary trait of painting or sculpture" or poetry.[96] Jefferson concluded by stating his "suspicion" that Black people "are inferior to the whites in the endowments both of body and mind."[97] Decades later, "slavery apologists" continued to espouse the belief that "slaves simply lacked the requisite inventive agency to

92. *Id.*

93. *See* H. Jackson Knight, *Patents and the Confederacy*, 5 J. Fed. Cir. Hist. Soc'y 81, 83 (2011); *see also* Dobyns, *supra* note 81, at 207 (Appendix) (listing the 266 patents issued by the Confederate Patent Office during the period 1861–1864, none of which is described as based on an enslaved person's invention). Although Oscar J.E. Stuart lived in the Confederate South, no record exists of his obtaining a Confederate patent on the double plow and scraper devised by Ned, a man he had enslaved. Yancy, *supra* note 85, at 51.

94. Thomas Jefferson, *Notes on the State of Virginia* (1787) (Query XIV), *in* Thomas Jefferson: Writings 123, 264 (Merrill D. Peterson ed., 1984); *see also id*. at 270 ("When freed, [the slave] is to be removed beyond the reach of mixture."). Jefferson's pronouncements regarding the evils of the "mixture" of Black and white people were remarkable, given that he fathered six children with an enslaved woman, Sally Hemings, who herself was the half-sister of Jefferson's late wife Martha (the child of Martha's white father and an enslaved woman). *See generally* Annette Gordon-Reed, The Hemingses of Monticello (2009).

95. Jefferson, *supra* note 94, at 266.

96. *Id.* at 266–67. Jefferson also claimed that Black people "seem to require less sleep" than white people, and suffered less, as "[t]heir griefs are transient" and are "less felt, and sooner forgotten." *Id.* at 265.

97. *Id.* at 270.

generate or possess patentable ideas."[98] Even Oscar J.E. Stuart — the man who attempted to obtain patents on farm equipment designed by a man he had enslaved — averred that neither the letter nor the spirit of the patent laws reached Black Americans, whom he termed the "servile race," due to their "general Stupidity."[99]

This dehumanizing rhetoric clashed with the reality of the enslaved, Black inventor: a Black person capable of creating a novel and nonobvious device that satisfied the requirements of patentability. The "true inventor" doctrine in American patent law acted as a "federal certification that the named inventor(s) could originate, not just imitate . . . that they could think independently."[100] Moreover, "[o]nly white men . . . were generally believed to possess inventive ability."[101] Reid's proposed legislation would have recognized enslaved inventors as such: it provided for the issuance of patents in the name of the enslaved inventor, not the slaveholder.[102] Although the law ensured that only the slaveholder would profit from the invention, it nonetheless implicitly recognized that enslaved, Black people could invent.[103] Although the Confederate Patent Act provided that the patent would be issued in the name of the slaveholder, it also required slaveholders to take an oath identifying the enslaved person as "the original inventor . . . of the art, machine or improvement for which a patent [was] solicited."[104] The laws' inherent recognition of Black humanity and intellect may partially explain why Reid's proposed statute was never passed, and the Confederate Patent Act was never enforced.

To avoid the uncomfortable reality of an enslaved, Black inventor — and to realize profits — an untold number of slaveholders falsely attested that they had created inventions devised by enslaved people.[105] Perhaps most famously, evidence suggests that an enslaved man identified only as "Sam" conceived the cotton gin, although the patent was obtained

98. Aoki, *supra* note 50, at 743.

99. Letter from Oscar J.E. Stuart to Sen. John A. Quitman (Aug. 29, 1857), *in* Yancy, *supra* note 85, at 49; *see also* Aoki, *supra* note 50, at 743.

100. Swanson, *supra* note 59, at 211.

101. *Id.* at 212.

102. *See supra* note 87 and accompanying text.

103. *See* Swanson, *supra* note 76, at 1087 (observing that an acknowledgement of "Ned's abilities through a grant of patent to his invention, even if the patent were granted to Oscar [the slaveholder], would undermine the fragile construct of white supremacy by recognizing that Ned had conceived and created a novel machine that no white man had previously devised").

104. *See* Confederate Patent Act, *supra* note 91.

105. *See* Dorothy Cowser Yancy, *Four Black Inventors with Patents*, 39 NEGRO HIST. BULL. 574, 574 (1976) ("[I]t does seem plausible that many [slaveholders] could have simply patented their slaves' inventions in their names, swearing to a lie."); *see also* JAMES, *supra* note 66, at 53–55.

by a white man, Eli Whitney, in 1794.[106] It is ironic that this invention, derived from Black ingenuity, revolutionized the cotton industry to such a degree that it revitalized the economy of the Southern slaveocracy.[107] Thus, slavery itself was sustained by Black intellectual property that was "appropriated and exploited" by the white power structure.[108] Similarly, Cyrus McCormick patented the mechanical reaper in 1834, an invention that revolutionized farming and enabled McCormick to accumulate a large fortune.[109] The invention almost certainly owed its existence to the ingenuity of an enslaved man, Jo Anderson, who was legally considered the property of the McCormick family.[110] Many more innovations in farming and manufacturing during this era have been widely (though unofficially) attributed to the creativity and inventiveness of enslaved, Black people.[111]

For centuries, American laws, enacted and enforced by American citizens, forced enslaved Black people to forfeit their bodily autonomy and robbed them of the fruits of their labor, both mental and physical. The misappropriation of Black intellectual property in the form of patentable ideas constitutes just one example of a harm that was inflicted on enslaved people and deprived them of the ability to accumulate intergenerational wealth. The first step in repairing the damage done is to acknowledge that it occurred. The invisibility of Black contributions to the economic success of American society, especially during the eighteenth and nineteenth centuries, fed the narrative of white supremacy. Illuminating both the existence and the

106. *See* Sophia Iams, *Patently Biased: A Discussion of Historical and Systemic Causes of Racial Disparity in Patent Law*, 27 U.S. F. Intell. Prop. & Tech. L.J. 199, 204 (2023); Patricia Carter Sluby, The Inventive Spirit of African Americans (2004) at 12–15; Aoki, *supra* note 50, at 745–47.

107. Aoki, *supra* note 50, at 747 (noting that "Whitney's cotton gin checked certain economic inefficiencies of the plantation slave economy and delayed slavery's inevitable decline for at least two decades"); *see also* Sluby, *supra* note 106, at 15 (noting that, in a few short years after the development of the cotton gin, American cotton exports increased from 138,000 pounds per year to 6 million pounds annually).

108. Aoki, *supra* note 50, at 746.

109. *See Cyrus McCormick: Mechanical Reaper, Inducted in 1976*, Nat'l Inventors Hall Fame, https://www.invent.org/inductees/cyrus-mccormick (lasted visited Jan. 7, 2025).

110. James, *supra* note 66, at 54; Kara W. Swanson, *Centering Black Women Inventors: Passing and the Patent Archive*, 25 Stan. Tech. L. Rev. 305, 363 (2022); Shontavia Jackson-Johnson, *The Colorblind Patent System and Black Inventors*, 11 Landslide 16, 18 (2019).

111. *See* James, *supra* note 66, at 53–54 (listing as examples Hezekiah, an enslaved man who invented a cotton-cleaning machine in Alabama; Ebar, an enslaved man from Massachusetts who invented new method of broom-making; and Stephen Slade, an enslaved man who created an improved process for curing tobacco in North Carolina).

theft of Black intellectual property exposes the lie of Black inferiority and demonstrates the need for reparations.[112]

B. Dred Scott and the Deprivation of Citizenship as a Barrier to the Patent Office

Chattel slavery ended in the United States with the ratification of the Thirteenth Amendment, shortly after the end of the Civil War in 1865.[113] Millions of formerly enslaved people became free at this time, yet free Black people had lived in the United States from its inception as a British colony.[114] The 1860 census — the last census taken before the Civil War — counted almost half a million free Black people living in America.[115] Although these individuals were unchained by the legal bonds of chattel slavery, they suffered both legal and extralegal forms of discrimination that deprived them of the full rights of American citizenship, especially during the antebellum era. Denial of civil and political rights erected barriers between free Black people and the United States Patent Office.[116] Moreover, when Black men did patent their inventions, they were typically presumed to be white.[117] The Supreme Court's opinion in *Dred Scott v. Sandford*[118] — decided just two years before *Invention of a Slave*[119] — accentuated the link between the quest for Black citizenship rights and Black access to the United States Patent Office.[120]

In the very early days of the federal patent system, the barriers between free Black people and the USPTO were fundamentally practical rather than legal. At no time during its history has the Patent Act mentioned race or identified whiteness as a requirement of

112. *See* Olivia Constance Bethea, *The Unmaking of 'Black Bill Gates': How the U.S. Patent System Failed African-American Inventors*, 170 U. PA. L. REV. ONLINE 17 (2021) (arguing in favor of reparations to address the exclusion of Black inventors from the patent system and the resulting economic deprivations inflicted on the Black community).

113. U.S. CONST. amend. XIII; *see* Sandra L. Rierson, *The Thirteenth Amendment as a Model for Revolution*, 35 VT. L. REV. 765, 856–61 (2011) (describing the history of the ratification of the Thirteenth Amendment).

114. Free Black people were present even in the earliest days of the American colonies. *See generally* T.H. BREEN & STEPHEN INNES, MYNE OWN GROUND: RACE AND FREEDOM ON VIRGINIA'S EASTERN SHORE, 1640–76 (2004) (describing the free Black population of Northampton County, Virginia, during the seventeenth century).

115. *See* Gibson & Jung, *supra* note 27, at tbl.1 (identifying 488,000 free and 3,953,760 enslaved Black people living in the United States in 1860).

116. *See infra* notes 122–123 and accompanying text.

117. *See infra* notes 124–125 and accompanying text.

118. Dred Scott v. Sandford, 60 U.S. 393 (1856).

119. Invention of a Slave, 9 U.S. Op. Att'y. Gen. 171 (1858).

120. *See infra* notes 143–149 and accompanying text.

patentability.[121] However, the same logistical hurdles that would have made it impossible for an enslaved person to file a patent application would have thwarted most free Black people as well.[122] Lack of access to education and the resources necessary to prepare and file a patent application would have hindered many free Black inventors.[123] Moreover, those who surmounted these obstacles were often reluctant to reveal their race in the Patent Office, fearing that racial discrimination would thwart their patent applications and limit their ability to profit from their inventions.[124] As a result, Black inventors who were able to "pass" as white often did so, or they used a white intermediary to secure patent rights on their behalf.[125] For all these reasons, Black inventors were largely absent or invisible in the USPTO during the antebellum era.

The Patent Act forged an explicit link between patent eligibility and citizenship when the patent oath was amended to require the inventor to identify "of what country he is a citizen."[126] As noted above, enslaved people lacked even the most basic rights and were not considered "citizens" of the United States.[127] However, the citizenship status of free Black people —especially free Black men — was more complex and varied by state in the eighteenth and nineteenth centuries.[128] Moreover,

121. Other federal statutes of this era explicitly reserved certain federal rights and benefits for white people only. *See, e.g.,* Naturalization Act of 1790, ch. 3, § 1, 1 Stat. 103 (repealed 1795) (limiting naturalization of citizenship rights to "free white person[s]"); Naturalization Act of 1795, ch. 20, § 1, 1 Stat. 414 (repealed 1802) (same); Naturalization Act of 1802, ch. 28, § 1, 2 Stat. 153 (Apr. 14, 1802) (same). *See also* Leon F. Litwack, The Negro in the Free States, 1790–1860, 31 (1961) (listing other federal statutes from this era that either permitted or required race-based discrimination).

122. *See supra* notes 69–74 and accompanying text.

123. *See* Aoki, *supra* note 50, at 741–42 (noting that "the economic and educational conditions that many free blacks faced in the northern states simply were not conducive to pursuing whatever incentives and opportunities U.S. patent law provided").

124. *See The American Negro as an Inventor*, 3 Negro Hist. Bull. 83, 83 (1940) (noting that "[w]hether slave or free the Negro could not proceed far in matters requiring the sanction of government [during this era] except under the tutelage of some white man").

125. For example, Henry Boyd, a former slave who invented an improved process for manufacturing beds, secured a patent in 1833 through a white intermediary (George Porter), who falsely identified himself as the true inventor. *See* James, *supra* note 66, at 39–41. Boyd's "self-erasure" from the patent archive "may have been a means of avoiding not only possible racial bias but also outright race-based rejection or even invalidity if he sought a patent as a Black man in the age of slavery." Swanson, *supra* note 110, at 349–50. Thomas Jennings, another free Black inventor, obtained a patent for a dry-cleaning process in 1821 in his own name, but at the time he was almost certainly presumed white by the Patent Office. *See* James, *supra* note 66, at 31; Swanson, *supra* note 110, at 344–46.

126. Patent Act of 1836, ch. 357, 5 Stat. 117, § 6 (July 4, 1836).

127. *See supra* notes 65–67 and accompanying text.

128. *See* Sandra L. Rierson, *From Dred Scott to Anchor Babies: White Supremacy and the Contemporary Assault on Birthright Citizenship*, 38 Geo. Immigr. L.J. 1, 9–10 (2023) (critiquing Justice Roger B. Taney's analysis of the rights of free Black people during the founding period in

the extent and nature of these rights waxed and waned over time. The Constitution was ratified by the states from 1787–1788, shortly before the first Patent Act was passed in 1790.[129] At this time, free Black men had the right of suffrage in a majority of the thirteen original states: Massachusetts, New Hampshire, Connecticut, New York, New Jersey, Pennsylvania, and North Carolina.[130] Black men fought in some (but not all) state militias, including during the American Revolutionary War.[131] Some historians have characterized these developments during the Revolutionary period as America's "first civil rights movement."[132] Many states, especially in the South, curtailed or rescinded the rights of free Black people in the decades that followed, reacting to slave rebellions and other factors.[133] In sum, the degree to which citizenship rights were limited by color, as opposed to enslavement, was unsettled during the antebellum period.

Regardless of whether the federal government considered free Black people to be "citizens" and hence eligible to take the Patent Oath, several Black men did patent their inventions during this era.[134]

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the *Dred Scott* opinion). The citizenship rights of Black women were restricted by both gender and race. *See* Danielle M. Conway, *Black Women's Suffrage, the Nineteenth Amendment, and the Duality of a Movement*, 13 Ala. C.R. & C.L.L. Rev. 1 (2022).

129. Delaware was the first state to ratify the Constitution, on December 7, 1787. Pauline Maier, Ratification: The People Debate the Constitution, 1787–1788, 122 (2010). The Constitution went into effect when it had been ratified by nine of the thirteen original states. U.S. Const. art. VII. This milestone was reached on June 22, 1788 (New Hampshire). Maier, *supra* note 129, at 313. The final state to ratify the Constitution was Rhode Island, on May 29, 1790. *Id.* at 458–59. The first Patent Act was passed in 1790. Patent Act of 1790, ch. 7, 1 Stat. 109-112 (Apr. 10, 1790); *see also* P. J. Federico, *Operation of the Patent Act of 1790*, 18 J. Pat. Off. Soc'y 237 (1936).

130. *See* Paul Finkelman, *The First Civil Rights Movement: Black Rights in the Age of Revolution and Chief Taney's Originalism in* Dred Scott, 24 U. Pa. J. Const. L. 676, 684 n.33 (2022). In 1776, free Black men in Maryland "possessed all the basic civil rights of white [men] — the right to contract, to possess property, to sue and even to vote." David Skillen Bogen, *The Maryland Context of Dred Scott: The Decline in the Legal Status of Maryland Free Blacks 1776–1810*, 34 Am. J. Legal Hist. 381, 387 (1990). However, Maryland amended its constitution in 1783 to bar the importation of enslaved people into the state, while restricting the civil and political rights of Black people emancipated on or after 1783 ("Newly Free" Black men). *Id.* at 388–91. The 1783 rescission of rights did not affect those who were already free ("Historically Free" Black men). *Id.*

131. *See* Finkelman, *supra* note 130, at 703–04.

132. *Id*. at 703; *see also* Kate Masur, Until Justice Be Done: America's First Civil Rights Movement, from the Revolution to Reconstruction 8–9 (2021).

133. *See, e.g.*, Bogen, *supra* note 130, at 396–401 (describing the nineteenth century disenfranchisement of Maryland's Historically Free Black male population); John Hope Franklin, The Free Negro in North Carolina 1790–1860, 58–120 (1943) (describing North Carolina legislation curtailing the rights of free Black people during the 1820s and 1830s, including the disenfranchisement of free Black men in 1835).

134. There is no record of a Black woman obtaining a patent in the United States prior to the Reconstruction period. Martha Jones, a Black woman, obtained a patent on a device she created for husking and shelling corn in 1868. *See* Jackson-Johnson, *supra* note 110, at 18; *see also* Sluby, *supra* note 106, at 126 (identifying Judy W. Reed of Washington, D.C., as the first known Black woman to obtain a patent, for an improved dough kneader and roller).

The exact number of nineteenth-century Black patentees will never be known because — as noted above — they typically did not advertise their race in the Patent Office and often actively sought to conceal it.[135] The first known Black man to obtain a patent was a New Yorker, Thomas Jennings, who patented a dry cleaning process in 1821.[136] The Patent Office was probably unaware of Jennings' racial identity, which was documented only through his 1859 obituary, published in the Black press.[137] Another well-known Black inventor was Norbert Rillieux, a Louisiana native who obtained multiple patents on processes for refining sugar cane during the 1840s.[138] Rillieux was educated in France, where he studied engineering and to which he eventually returned to escape racism and discrimination in the United States.[139] A formerly enslaved man, Henry Boyd, invented an improved method for manufacturing beds in the 1840s but "left no trace of himself in the patent records" because he partnered with a white man (who falsely attested to the patent oath) to obtain his patent.[140] Henry Blair of Maryland patented two types of farm equipment, a seed planter and a cotton planter, in 1834 and 1836, respectively.[141] Blair is the only Black inventor from this period whose race was acknowledged by the U.S. Patent Office, which listed him "as a colored man."[142]

The legal landscape changed for free Black people when the Supreme Court decided *Dred Scott v. Sandford* in 1857. *Dred Scott* held that no Black person was or could ever become an American citizen, regardless of whether they were free or enslaved:

135. *See supra* notes 124–125 and accompanying text. Moreover, some free Black men were likely dissuaded from seeking patents on their inventions, due to the questions surrounding their ability to take the patent oath. Martin R. Delaney, a well-known Black abolitionist and advocate of Black colonization, failed to obtain a patent in 1852, because a patent attorney informed him that "only U.S. citizens could obtain a patent, and . . . [B]lacks were not considered citizens by the Patent Office." JAMES, *supra* note 66, at 38–39. A Black man from Massachusetts, Lewis Temple, "revolutionized the whaling industry with the introduction of his toggle harpoon," but he never patented the invention and therefore did not greatly profit from it. *Id.* at 35–36.

136. SLUBY, *supra* note 106, at 15–17. Jennings was a leader in New York's abolitionist movement. JAMES, *supra* note 66, at 37.

137. Swanson, *supra* note 110, at 344–46 (citing *Thomas L. Jennings*, ANGLO-AFRICAN (N.Y.C.), Apr. 1859, at 126–28); *see also* JAMES, *supra* note 66, at 31.

138. JAMES, *supra* note 66, at 41–43; SLUBY, *supra* note 106, at 25–30.

139. JAMES, *supra* note 66, at 41–43; *see also The American Negro as an Inventor*, *supra* note 124, at 83.

140. Swanson, *supra* note 110, at 343-44; *see also The American Negro as an Inventor*, *supra* note 124, at 83–84; JAMES, *supra* note 66, at 39–41.

141. Frye, *supra* note 63, at 185.

142. SLUBY, *supra* note 106, at 17–25; Swanson, *supra* note 110, at 345.

> We think [Black people] were not . . . intended to be included, under the word 'citizens' in the Constitution [because] they were at that time considered as a subordinate and inferior class of beings, who had been subjugated by the dominant race, and, *whether emancipated or not*, yet remained subject to their authority, and had no rights or privileges but such as those who held the power and the Government might choose to grant them.[143]

This sweeping pronouncement effectively stripped citizenship from hundreds of thousands of Black people in the United States.[144] If it had not been superseded by the Civil War and the Fourteenth Amendment, *Dred Scott* would have created a "permanent racial caste system" in the United States.[145] *Dred Scott's* pronouncement regarding Black citizenship effectively rendered free Black men and women stateless, even if they had lived for generations in the United States: the State Department refused to issue passports to Black Americans.[146] *Dred Scott* also impacted their ability to patent.

The Patent Act's citizenship oath required patentees to identify their country of citizenship.[147] Although the attorney general's opinion in *Invention of a Slave* did not address the rights of free Black people in the Patent Office, its reasoning applied to Black people who were free as well as enslaved under the *Dred Scott* decision.[148] Under *Dred Scott*, free Black people living in the United States had no country of citizenship and, therefore, could not legally identify themselves by taking the Patent Oath.[149] Thus, *Dred Scott* effectively created a patent system that was open to white people only, even though the Patent Act did not mention race. No Black person, free or enslaved, could obtain a

143. *Dred Scott*, 60 U.S. at 404–05 (1857) (emphasis added); *see also* Rierson, *supra* note 128, at 8–16 (discussing this reasoning in *Dred Scott*).

144. *See* Amanda Frost, You Are Not American: Citizenship Stripping from Dred Scott to the Dreamers 22 (2021) (noting that the *Dred Scott* decision "stripped national citizenship from half a million free [B]lacks living in the United States and barred four million enslaved [B]lacks from any hope of joining the polity, even if they bought or won their freedom").

145. Rierson, *supra* note 128, at 14.

146. *See* Jonathon J. Booth, *The Cycle of Delegitimization: Lessons from Dred Scott on the Relationship Between the Supreme Court and the Nation*, 51 UC L. Const. Q. 5, 31–34 (2024). During the Buchanan administration, the State Department refused to issue passports to free Black people even before the Supreme Court issued the *Dred Scott* decision. *Id.* at 33.

147. *See supra* note 64 and accompanying text.

148. *See* Frye, *supra* note 63, at 223–25 (discussing the impact of *Dred Scott* on the ability of free Black people to obtain patents).

149. In 1861, the Patent Office rejected the patent application of a free Black man from Massachusetts on these grounds, prompting protest from Massachusetts Senator Charles Sumner. Frye, *supra* note 63, at 224–25 (citing Cong. Globe, 37th Cong., 2d Sess. 89 (Dec. 16, 1861)).

patent without using some means to conceal their race. Black inventors were thus rendered invisible by *Dred Scott* and the Patent Act.

The Civil War and the Reconstruction Amendments that were ratified in its aftermath supplanted the Supreme Court's *Dred Scott* decision. Both the Civil Rights Act of 1866[150] and Section 1 of the Fourteenth Amendment,[151] ratified in 1868, affirmed birthright citizenship for everyone born in the United States, regardless of race. The Supreme Court later observed that the "main purpose [of Section 1 of the Fourteenth Amendment] doubtless was . . . to establish the citizenship of free [Black people], which had been denied in [*Dred Scott*]; and to put it beyond doubt that all [Black people], as well as whites, born or naturalized within the jurisdiction of the United States, are citizens of the United States."[152] One impact of this meteoric change in federal law was felt in the Patent Office: the Patent Oath no longer made whiteness a prerequisite of patentability.

The end of the Civil War and the ratification of the Fourteenth Amendment did open up the Patent Office to the 4.5 million Black people living in the United States, approximately 4 millions of whom were newly freed from slavery. As a result, Black people — most often "mechanics, blacksmiths, domestic workers, and farm laborers" — filed a "burst of patents" in the USPTO.[153] The Reconstruction amendments lowered barriers to participation in civic life more generally and — for a time — enabled Black Americans to make enormous strides in fulfilling the promise of citizenship embodied in the Fourteenth Amendment. George Washington Murray, a Black man born enslaved in South Carolina, was a farmer and an inventor who became the first Black representative elected to the United States Congress in 1892.[154]

150. *An Act to Protect all Persons in the United States in Their Civil Rights and Furnish Means for Their Vindication* (Civil Rights Act of 1866), ch. 31, 14 Stat. 27, § 1 (Apr. 9, 1866) ("[A]ll persons born in the United States, and not subject to any foreign power, excluding Indians not taxed, are hereby declared to be citizens of the United States . . . .").

151. U.S. CONST. amend. XIV, § 1 ("All persons born or naturalized in the United States, and subject to the jurisdiction thereof, are citizens of the United States and of the State wherein they reside.").

152. United States v. Wong Kim Ark, 169 U.S. 649, 676 (1898); *see also* Elk v. Wilkins, 112 U.S. 94, 101 (1884).

153. JAMES, *supra* note 66, at 57–75 (describing inventions and patents obtained by Black men during the latter part of the nineteenth century); *see also* SLUBY, *supra* note 106, at 39–53 (describing inventions and patents obtained by Black men during the latter part of the nineteenth century); *id.* at 64–77 (discussing the work of inventors Elijah McCoy and Granville Woods).

154. *Found on Baker's List*, U.S. PAT. & TRADEMARK OFF., https://www.uspto.gov/learning-and-resources/journeys-innovation/historical-stories/found-bakers-list#:~:text=The%20list%20itself%20was%20the,patent%20holders%20throughout%20U.S.%20history; *George Washington Murray*, New York Public Library, https://www.nypl.org/events/exhibitions/galleries/george-washington-murray.

Combatting the myth of Black inferiority, on August 10, 1894, Murray read into the Congressional Record a list of 92 patents that had been obtained by Black men (eight of which were his own).[155] The list had been compiled by another Black man, Henry E. Baker, who obtained his law degree from Howard University in Washington, D.C. in 1881, and served as an assistant patent examiner at the United States Patent Office.[156] Baker spent decades researching and compiling his list of Black inventors, which later came to be known as "Baker's List." Baker's research was later published to highlight the inventiveness and intelligence of Black Americans and prove their entitlement to the full rights of American citizenship.[157]

The progress exemplified by men like Murray and Baker was thwarted by the combined impact of a conservative Supreme Court, a collapse of political will, and pervasive violence fueled by white supremacy.[158] Soon after Reconstruction, Jim Crow laws imposed legal segregation and stripped voting rights from Black Americans, and racial violence and intimidation often prevented them from exercising the rights that remained. Legal and extra-legal racial discrimination impeded Black Americans' access to economic opportunity, including their ability to patent.

After Murray served two terms in Congress, South Carolina disenfranchised Black voters and did not elect another Black congressional representative until 1993.

155. 26 Cong. Rec. H8382-83 (Aug. 10, 1894); Sluby, *supra* note 106, at 78–81.

156. *Found on Baker's List*, *supra* note 154; Swanson, *supra* note 76, at 1090–98 (discussing Baker's career and Baker's list); Sluby, *supra* note 106, at 82–85.

157. Swanson, *supra* note 76, at 1092-93; *Found on Baker's List*, *supra* note 154 (noting that "Baker's efforts to find and publicize records of African American inventiveness were attempts to counter the intensifying racism of his day"); *see also* Sluby, *supra* note 106, at 53–56 (discussing Baker's List and other publications showcasing Black intellectual achievement during this era). Baker's life's work is now housed at Howard University, in the Moorland-Spingarn Research Center. Sluby, *supra* note 106, at 85. The proposed Black Inventors Hall of Fame Museum, scheduled to open to the public in 2026 in Newark, New Jersey, can be seen as a modern-day analogue to Baker's List. *See* Steve Brachman, *Black Inventors Hall of Fame Museum: Highlighting the Lost Stories of American Innovation*, IP Watchdog (June 4, 2023), https://ipwatchdog.com/2023/06/04/black-inventors-hall-fame-museum-highlighting-lost-stories-american-innovation/id=161793/#.

158. *See, e.g.*, United States v. Cruikshank, 92 U.S. 542, 552–55 (1872) (holding that the federal government lacked the power to enforce individual rights under the First or Second Amendment, and further that the Fourteenth Amendment's guarantees of Equal Protection and Due Process applied only to the States, not individual defendants); Charles Lane, The Day Freedom Died: The Colfax Massacre, The Supreme Court, and the Betrayal of Reconstruction (2008) (documenting Louisiana election violence known as the Colfax Massacre, which was the subject of the federal prosecution invalidated in *Cruikshank*).

C. The Impact of Racial Violence, Legal Segregation, and Disenfranchisement

During the Jim Crow era, generally defined as 1870–1965, Black men and women were no longer enslaved but remained constrained by a legal and social system infused with white supremacism. Legal segregation deprived Black people of equal opportunity in education and employment. Black people could not effect change through the ballot box, even where they comprised a majority of the adult population, because they were disenfranchised as well. Black men and women also lived under the constant threat of racial violence, inflicted both on individuals and entire Black communities. During this era, a toxic sludge of violence, legal segregation, and lack of political representation impacted the ability of Black people to access the patent system as a tool for accumulating intergenerational wealth.[159] Over the seventy-year period from 1870 to 1940, the USPTO issued 2,127,079 patents. Only 726 of those patents — .03% — were awarded to Black Americans.[160]

1. Mass Violence Inflicted on Black Communities

Massacres of Black communities wiped out generations of economic progress by 1) destroying the businesses and homes of Black families, especially those in the middle and upper class, and 2) by politicide: murdering or exiling leaders in the Black community.[161] These violent disruptions to the economic ecosystems of Black communities severely impacted individual members of these communities, including their ability to invent and secure patents on their inventions. Economist Lisa D. Cook has shown that the patenting rates of Black people

159. *See generally* Lisa D. Cook, *Violence and Economic Activity: Evidence from African American Patents, 1870-1940*, 19 J. Econ. Growth 221 (2014).

160. Lynne Marie Kohm, Katrina Sumner & Peyton Farley, *Empowering Black Wealth in the Shadow of the Tulsa Race Massacre*, 57 Tulsa L. Rev. 243, 262 (2021).

161. *See* Rierson & Schwimmer, *supra* note 41, at 145–50. Politicide is defined as "killing [or removal] where the intended target is the entire leadership and potential leadership class of a more generally victimized and feared group." Michael Mann, The Dark Side of Democracy: Explaining Ethnic Cleansing 16 (2005). Ida B. Wells recognized this phenomenon, writing in 1892: "As a hewer of wood and a drawer of water — a menial — the Afro-American is welcomed everywhere. As a man — nowhere. The race teacher or preacher who tries to cultivate manhood and womanhood among his people is mobbed or run away." Ida B. Wells, *Bishop Tanner's 'Ray of Light*,' Independent (July 28, 1892), in Wells *supra* note 58, at 55 (anti-lynching editorial); *see also id.* at 75 (noting that, to teach "[t]he lesson of subordination," the white establishment would "[k]ill the leaders and it will cow the Negro who dares to shoot a white man, even in self-defense").

"systematically declined in areas affected by race riots and lynchings" in the late nineteenth and early twentieth centuries.[162]

Mass violence against Black communities began during the Reconstruction period and persisted at least through the 1940s, although instances of murderous racial violence occurred well past that point.[163] During this period, any hint of contact between Black men and white women (typically unproven and often fabricated) could trigger mass violence, resulting in loss of life and destruction of property in Black communities.[164] In some instances, the entire Black population was forced to abandon homes, farms, and businesses, resulting in all-white cities or counties.[165] Many of these ethnically cleansed cities and counties became known as "sundown towns," where Black people were either explicitly or implicitly forbidden to remain past sundown on any given day.[166] Racial attacks often focused on Black communities that were known to be economically prosperous,[167] such as Wilmington,

162. Cook, *supra* note 159, at 222.

163. *See* Margaret A. Burnham, By Hands Now Known: Jim Crow's Legal Executioners (documenting instances of racial violence in America during the period 1920-1960); *see* Laurel Wamsley, *Derek Chauvin Found Guilty of George Floyd's Murder*, NPR (Apr. 20, 2021), https://www.npr.org/sections/trial-over-killing-of-george-floyd/2021/04/20/987777911/court-says-jury-has-reached-verdict-in-derek-chauvins-murder-trial (police officer found guilty of the murder of George Floyd, a Black man, in Minneapolis, Minnesota, on May 25, 2020); Press Release, United States Department of Justice, Office of Public Affairs, *Federal Jury Finds Three Men Guilty of Hate Crimes in Connection with the Pursuit and Killing of Ahmaud Arbery* (Feb. 22, 2022), https://www.justice.gov/opa/pr/federal-jury-finds-three-men-guilty-hate-crimes-connection-pursuit-and-killing-ahmaud-arbery (three white men convicted of federal hate crimes for the pursuit and killing of Ahmaud Arbery, a Black man, who was jogging in Brunswick, Georgia, on February 23, 2020).

164. *See also* Lynching in America, *supra* note 28, at 30 (noting that "[n]early 25 percent of the lynchings of African Americans in the South were based on charges of sexual assault").

165. *See* Patrick Phillips, Blood at the Root: A Racial Cleansing in America (2017) (describing the forced expulsion of the Black population of Forsyth County, Georgia, in 1912, arising from the unsolved murder of a white woman); Elliot Jaspin, Buried in the Bitter Waters: The Hidden History of Racial Cleansing in America (2007) (describing "racial cleansings" in Washington County, Indiana (1864), Comanche County, Texas (1886), Pierce City, Missouri (1901), Marshall County, Kentucky (1908), Boone County, Arkansas (1905 and 1909), Forsyth County, Georgia (1912), Unicoi County, Tennessee (1918), Laurel and Whitney Counties, Kentucky (1919), Vermillion County, Indiana (1923), Mitchell County, North Carolina (1923), and Sharp County, Arkansas (1906)); James W. Loewen, Sundown Towns: A Hidden Dimension of American Racism 53-89 (2005) (describing the "Great Retreat," from 1890-1930s, during which Black populations were driven out of rural areas and forced to live in concentrated urban communities). This same phenomenon occurred with respect to Chinese populations in the West. *See* Loewen, *supra* note 165, at 50–54.

166. *See* Loewen, *supra* note 165, at 90–115.

167. Ida B. Wells wrote that "honest, hardworking, land owning men and women . . . have been hung, shot, whipped, and driven out of communities in Texas and Arkansas for no greater crime than that of too much prosperity." Wells *supra* note 58, at 89 (quoting *The Requirements of Southern Journalism*, originally published in the A.M.E. Zion Church Quarterly (Jan. 1893)).

North Carolina, in 1898,[168] Atlanta, Georgia, in 1906,[169] Tulsa, Oklahoma, in 1921,[170] and Rosewood, Florida, in 1923.[171] Cook notes that these incidences of mass violence would have impacted Black economic activity both directly and indirectly, as workshops owned by Black inventors in the affected business districts would have burned or otherwise been destroyed, and the value of any remaining commercial or residential property would have declined.[172] Moreover, the physical displacement and the rupture of social networks caused by these events would also likely negatively impact inventiveness, which typically requires "periods of concentrated, uninterrupted work and thought."[173]

One of the earliest instances of mass violence targeting a prosperous Black community occurred in Wilmington, North Carolina, in November 1898. At this time, Wilmington was the most populous city in the state of North Carolina, and its population was predominantly Black.[174] Many Black residents of Wilmington were successful members of the middle class.[175] Some were also public servants, such as police officers and firefighters.[176] Black progress in Wilmington was partially attributable to the existence of the "Fusionist" party in North Carolina, which united Republican voters and members of the Populist Party to defeat Democratic candidates in the elections of 1894 and 1896.[177] The conservative, white Democratic party launched a violent and effective campaign to retake control of the state, culminating in the elections of

168. *See infra* notes 174–86 and accompanying text; *see also* Cook, *supra* note 159, at 223 tbl.1.

169. James S. Hirsch, Riot and Remembrance: The Tulsa Race War and its Legacy 56–57 (2014); Edward Gonzalez-Tennant, The Rosewood Massacre: An Archaeology and History of Intersectional Violence 35 (2019); Eugene Robinson, *It Was Much More than Tulsa*, Wash. Post (May 31, 2021), https://www.washingtonpost.com/opinions/2021/05/31/it-was-much-more-than-tulsa/; *see also* Cook, *supra* note 159, at 223 tbl.1.

170. *See infra* notes 187–93 and accompanying text; *see also* Cook, *supra* note 159, at 224 tbl.1.

171. *See* Gonzalez-Tennant, *supra* note 169, at 23–30; *see also* Jessica Glenza, *Rosewood Massacre a Harrowing Tale of Racism and the Road Toward Reparations,* The Guardian (Jan. 3, 2016), https://www.theguardian.com/us-news/2016/jan/03/rosewood-florida-massacre-racial-violence-reparations; Rierson & Schwimmer, *supra* note 41, at 163–65 (discussing reparations for the Black community of Rosewood).

172. Cook, *supra* note 159, at 224.

173. *Id.* at 245.

174. LeRae Sykes Umfleet, A Day of Blood: The 1898 Wilimington Race Riot (rev. ed. 2020) 15 (noting that Wilmington was North Carolina's "primary port and largest city" during the Reconstruction era). Wilmington's population was predominantly Black during the period 1870–1890. *Id.* at 18.

175. *See id.* at 30–33.

176. *See id.* at 19–20. Wilmington had ten Black police officers at the time of the 1898 massacre and coup, all of whom were fired by the newly-installed white supremacist government (along with all the Black firefighters). Rierson & Schwimmer, *supra* note 41, at 141–42.

177. *See* Umfleet, *supra* note 174, at 21–34; James L. Hunt, *Fusion of Republicans and Populists*, NCPedia (2006), https://www.ncpedia.org/fusion-republicans-and-populists.

1898.[178] Using white supremacist propaganda accompanied by violence, voter intimidation, and voter fraud, the Democrats essentially swept the state.[179] In the city of Wilmington, however, some Republican and Populist officeholders were not up for reelection in 1898.[180] To oust them, the Democrats staged a successful coup, which installed a new mayor and inflicted mass violence on Wilmington's Black community.[181] The *Daily Record*, a progressive newspaper owned by Black leader Alexander Manly, was burned to the ground, ostensibly in retaliation for an editorial written months earlier, in which Manly had suggested that some liaisons between Black men and white women were consensual.[182] Manly escaped and never returned to Wilmington, along with other Black leaders who were either murdered or driven from the state.[183] Untold numbers of Black people were arbitrarily killed or driven from their homes.[184] After the massacre and coup of 1898, Wilmington's population became predominantly white, and prosperity declined among the Black citizens who remained.[185] Democrats used their political power in the state, obtained through violence and fraud, to enact laws that disenfranchised Black people.[186]

Perhaps the best-known example of racial violence inflicted on a Black community occurred approximately twenty years later, in the Greenwood district of Tulsa, Oklahoma.[187] Like Wilmington, the Greenwood district of Tulsa, known at the time as "Black Wall Street,"

178. Rierson & Schwimmer, *supra* note 41, at 128–32 (describing this campaign).

179. Umfleet, *supra* note 174, at 61–80.

180. *Id.* at 102.

181. Rierson & Schwimmer, *supra* note 41, at 132–34. The newly installed mayor, "Colonel" Alfred Moore Waddell, was a failed Civil War officer who gained notoriety for his race-baiting speeches in the months leading up to the election, including one in which he told the crowd, "You are Anglo-Saxons. You are armed and prepared, and you will do your duty. Be ready at a moment's notice. Go to the polls tomorrow and if you find the Negro voting, tell him to leave the polls and if he refuses kill, shoot him down in his tracks." *Id.* at 130; David Zucchino, Wilmington's Lie: The Murderous Coup of 1898 and the Rise of White Supremacy 11–13, 139–43 (2020). *See also* Umfleet, *supra* note 174, at 48–52.

182. *See* Umfleet, *supra* note 174, at 61–65, 83–86. A white mob destroyed Ida B. Wells's newspaper, *The Free Speech*, in Memphis, Tennessee, in June 1892, and Wells herself was forced into exile in New York, in response to the publication of a similar editorial. Wells, *supra* note 58, at 57–62.

183. Umfleet, *supra* note 174, at 106–13.

184. Zucchino, *supra* note 181, at 203–19.

185. By 1900, the population was almost evenly divided between white and Black people; by 1910 it was predominantly white. Umfleet, *supra* note 166, at 18. *See* Rierson & Schwimmer, *supra* note 41, at 141–43 (discussing economic decline in Wilmington's Black community after the massacre and coup of 1898).

186. Zucchino, *supra* note 181, at 313–17, 329–33.

187. *See generally* Scott Ellsworth, The Ground Breaking: The Tulsa Race Massacre and the American City's Search for Justice (2021); Randy Krehbiel, Tulsa, 1921: Reporting a Massacre (2019); Hirsch, *supra* note 169.

was predominantly Black and economically thriving.[188] The massacre was triggered by an encounter between a Black man and a white woman in an elevator, the details of which will never be known definitively, but was likely to have resulted from accidental and incidental contact between the two.[189] An estimated three hundred people, most of them Black, likely died in the ensuing violence.[190] Thousands of Black people became homeless, as white mobs looted and then burned the Greenwood district to the ground.[191] When authorities arrived to quell the violence, they indiscriminately arrested thousands of Black people.[192] Although multiple lawsuits have been filed to secure compensation for the victims of the Tulsa Race Massacre – including two individuals who are still alive, as of 2024 – none have succeeded.[193]

Cook's research shows that — at the turn of the century, around the time of the Wilmington coup and massacre — "a rise in race-related violence coincided with greater divergences in patenting rates between black and white inventors," as invention rates for Black inventors sharply declined.[194] She concludes that what she terms "major [race] riots," such as the Tulsa Massacre of 1921, are associated with a 13-14% lower rate of annual growth in patenting by Black people, as compared to a 2% decline for white people.[195] Overall, Cook calculates that lynchings and riots resulted in 1,132 "missing" patents that would have been issued

188. Ellsworth, *supra* note 187, at 13–17; Krehbiel, *supra* note 187, at 25.

189. Ellsworth, *supra* note 187, at 17–18; Krehbiel, *supra* note 187, at 30–34; Hirsch, *supra* note 169, at 78-80.

190. Ellsworth, *supra* note 187, at 123–24.

191. *Id.* at 24–34; Krehbiel, *supra* note 187, at 81 (noting that over 1,200 buildings were destroyed). Some white people justified the looting on the grounds that "Black success was an intolerable affront to the social order of white supremacy, so taking their possessions not only stripped blacks of their material status but also tipped the social scales back to their proper alignment." Hirsch, *supra* note 169, at 105.

192. Hirsch, *supra* note 169, at 108–10.

193. Ellsworth, *supra* note 187, at 191–93, 251–53; *see also* Rierson & Schwimmer, *supra* note 41, at 166–67, 166 n.376. The two remaining survivors of the Tulsa Race Massacre, as of July 2024, are Viola Fletcher (age 110) and Lessie Benington Randle (age 109). Sean Murphy, *Last Known Survivors of Tulsa Race Massacre Challenge Oklahoma High Court Decision*, Assoc. Press (July 2, 2024), https://apnews.com/article/tulsa-race-massacre-reparations-lawsuit-racial-injustice-cb616bdc1f57c269b3cec63baecf0008.

194. Cook, *supra* note 159, at 227 fig.1. Black people were not "wanting in inventive spirit" during this period, as illustrated by the display of almost 10,000 artifacts of Black achievement at the "Negro Exhibit" of the 1907 Jamestown Exposition. Sluby, *supra* note 106, at 85–91; *see also id.* at 94–97 (describing the work of Black inventor Garrett Morgan, including the gas mask, for which he received a patent in 1914), 102–07 (discussing various inventions by Black men during the early twentieth century). Black women also invented during this period (although in much smaller numbers); the most well-known and successful Black woman patentee of this era was Madame C.J. Walker. Sluby, *supra* note 106, at 125–33; James, *supra* note 66, at 85–86.

195. Cook, *supra* note 159, at 236–37 tbl.6.

to Black people during the period from 1882–1940, but for the effect of hate-related violence.[196]

2. Lynching: The Murder of Black Americans as Public Spectacle

The public execution of Black people wholly outside the judicial process – a crime often known as lynching – also forced Black people to live in fear and thwarted their economic prosperity during the late nineteenth to mid-twentieth century. [197] Lynching and mass racial violence were distinct but often interconnected phenomena during this period.[198] Some, but not all, lynchings escalated into wide-scale violence directed at Black communities.[199] Cook writes,

> Whereas race riots involved opposing groups, lynchings typically involved a group taking action against a specific individual or individuals. In addition to killing the victim, often a secondary objective was the externality a lynching produced — to intimidate the victim's family, community, or ethnic or racial group. A lynching signaled that personal security — and with it the freedom to work and innovate — was not guaranteed.[200]

Although vigilantism was relatively common in the early years of the United States, particularly in the West, extrajudicial killings brought about by mob violence (especially in the South) became racialized after the Civil War, targeting Black people.[201] The act and threat of lynching became "primarily a technique of enforcing racial exploitation — economic, political, and cultural."[202] Some lynchings were used to impose the death penalty on Black people suspected of

196. *Id.* at 222, 239. Cook's data also shows that "productive [patenting] activity [among Black people] increased after violence ceased." *Id.* at 222.

197. Most lynching victims were Black. Approximately 4,700 people were publicly murdered (i.e., lynched) during the period 1882–1968; almost 3,500 of them were Black. *History of Lynching in America*, NAACP, https://naacp.org/find-resources/history-explained/history-lynching-america (documenting 4743 lynchings during the period 1882–1968; 3446 victims were Black).

198. Lynching in America, *supra* note 28, at 39. Racial violence did not end in 1950 and still exists today. Hundreds of federal anti-lynching bills were introduced over many decades, but none were enacted until 2022, when Congress passed the Emmett Till Anti-Lynching Act. The Emmett Till Antilynching Act, Pub. L. 117-107, 136 Stat. 1135, 117th Cong. (2022), https://www.congress.gov/bill/117th-congress/house-bill/55/text.

199. Lynching in America, *supra* note 28, at 38 (noting that "[m]ost lynchings involved the killing of one or more specific individuals, but some lynch mobs targeted entire [B]lack communities by forcing [B]lack people to witness lynchings and demanding that they leave the area or face a similar fate").

200. Cook, *supra* note 159, at 225.

201. Lynching in America, *supra* note 28, at 27.

202. *Id.* at 30 (citation omitted).

committing crimes — especially if the crime involved a Black man and a white woman — with no judicial process.[203] Slightly over half of the lynchings carried out during this era were associated with an allegation of either murder or rape.[204] Some gruesome lynchings were carried out for "quarreling with white men" or other "minor social transgressions," or for no recorded reason at all.[205] These murders "were not merely singular occurrences; rather, they were persistent acts of violence that impeded the progress and prosperity of entire families, communities, and subsequent generations in the areas where they occurred."[206] Psychological trauma from these events often persists for decades, even across multiple generations.[207]

Although lynchings took place throughout the United States, they were concentrated in the South, especially during the peak period of 1880-1940.[208] The states with the highest number of lynchings were Mississippi (654), Georgia (589), and Louisiana (549).[209] On a per capita basis (number of lynchings compared to overall population, or overall Black population), lynchings were most highly concentrated in Mississippi, Florida, and Arkansas, with Louisiana ranking fourth.[210] These historical facts have modern consequences. Today, overall life expectancy is lower in counties with a history of lynching, as compared to counties in the United States that lack this history.[211] Economic

203. WELLS, *supra* note 58, at 134 (noting that the crime of rape was punished via lynching, during the period 1882-1891, only "when white women accuse [B]lack men, which accusation is never proven," while "the same crime committed [by Black men against Black women], or by white men against [B]lack women is ignored even in the law courts").

204. LYNCHING IN AMERICA, *supra* note 28, at 29.

205. The *Chicago Tribune* published a table listing known lynchings carried out from 1888 to 1891 and the ostensible reasons for the murders, including "quarreling with white men" and "no reason stated." WELLS, *supra* note 58, at 134; *see also* LYNCHING IN AMERICA, *supra* note 28, at 29–30 (noting that, in some instances, Black people were murdered "for violating social customs or racial expectations, such as speaking to white people with less respect or formality than observers believed was due").

206. Sotiris Kampanelis & Aldo Elizalde, *Lynching and Economic Opportunities: Evidence from the U.S. South*, 77 KYKLOS: INT'L REV. SOC. SCI. 977, 978 (June 17, 2024), https://onlinelibrary.wiley.com/doi/10.1111/kykl.12397; *see also id.* (concluding that "lynchings represent a historical negative shock for Black individuals in the United States with lasting intergenerational implications").

207. *See* Shytierra Gaston, *Historical Racist Violence and Intergenerational Harms: Accounts from Descendants of Lynching Victims*, 694 THE ANNALS OF THE AM. ACADEMY OF POL. & SOC. SCI. 78 (2021), https://journals.sagepub.com/doi/epub/10.1177/00027162211016317.

208. See Charles Seguin & David Rigby, *National Crimes: A New National Data Set of Lynchings in the United States*, 1883 to 1941, SOCIUS (2019), https://doi.org/10.1177/2378023119841780; LYNCHING IN AMERICA, *supra* note 28, at 39–43.

209. LYNCHING IN AMERICA, *supra* note 28, at 40 tbl.1.

210. *Id.* at 40 tbls.1, 3.

211. *See* Laura Kihlstrom & Russell S. Kirby, *We Carry History Within Us: Anti-Black Racism and the Legacy of Lynchings on Life Expectancy in the U.S. South*, 70 HEALTH & PLACE (July 2021),

studies have concluded that "[h]istorical lynching activity appears to have played a significant role in shaping current levels of hate crime against Black people."[212] Metrics of economic opportunity for Black people are significantly lower in counties with the highest rates of historical lynchings.[213]

These studies support an intuitive fact: people who have been murdered cannot support their families, and they certainly cannot invent or patent. People who have lost their homes and their livelihoods, or who have suffered the trauma of seeing their loved ones killed or brutalized by violence, are less likely to do so. For most people (of any race), the process of inventing and creating wealth through the patent system requires a baseline of physical safety and stability. Racial violence directed at Black Americans deprived them of this basic human right.

3. American Apartheid: The Jim Crow Era

Violence against Black communities and individuals created voter suppression and disenfranchisement, which in turn enabled the passage of legislation depriving Black people of their political, civil, and human rights.[214] These laws were often *de facto* enforced by lynch mobs and other agents of racial violence.[215] The Supreme Court's 1896 decision in *Plessy v. Ferguson*, which christened the infamous "separate but equal" doctrine in constitutional law, sanctioned laws mandating legal segregation in all walks of life.[216] Racial discrimination combined with unequal opportunities in education, employment, and housing impeded Black people from accumulating intergenerational wealth or political power. As a result, they remained hamstrung in their ability to invent or to exploit their inventions by obtaining patents.

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https://www.sciencedirect.com/science/article/abs/pii/S1353829221001143; *see also New Study Shows Impact of Lynching History on Life Expectancy Today*, Equal Just. Initiative (Oct. 5, 2021), https://eji.org/news/new-study-shows-impact-of-lynching-history-on-life-expectancy-today/.

212. Kampanelis & Elizalde, *supra* note 206, at 997–98 (Section 8.4, Additional Indicators of Racial Disadvantage).

213. *Id.* at 977–78; *see also* Sotiris Kampanelis, *The Legacy of Lynchings Still Hurts the Economic Prospects of Black Americans*, Sci. Amer. (July 25, 2024), https://www.scientificamerican.com/article/the-legacy-of-lynchings-still-hurts-the-economic-prospects-of-black/.

214. *See* Michael Klarman, From Jim Crow to Civil Rights: The Supreme Court and the Struggle for Racial Equality 30 (2004) (describing this "general pattern of [B]lack disfranchisement," which was consistent across the Southern states).

215. Cook, *supra* note 159, at 226 (noting that state residents "understood that violence would occur if the laws were not obeyed").

216. Plessy v. Ferguson, 163 U.S. 537 (1896), *overruled by* Brown v. Bd. of Educ., 349 U.S. 294 (1955).

The end of Reconstruction ushered in the Jim Crow era. Although Black men in the South registered to vote in large numbers and many became office-holders after the Civil War, by 1890 they had largely been disenfranchised by a combination of violence and laws designed to preserve white supremacy.[217] The coup and ethnic cleansing perpetrated in Wilmington, North Carolina, in 1898, epitomized the way in which violence disenfranchised Black men, enabling white legislatures to pass laws that deprived all Black Americans of equal citizenship.[218] The federal government's disengagement from the South further enabled states to pass a host of laws segregating Americans by race, primarily in the areas of voting, education, and public facilities.[219] Although the Fifteenth Amendment banned racial discrimination in voting, the Supreme Court's narrow interpretation of the amendment allowed whiteness to become a *de facto* requirement of suffrage.[220] Initially, these laws were concentrated in Southern states with a history of slavery before the Civil War. After the *Plessy* decision, however, segregation laws spread across the nation.[221]

Segregation laws negatively impacted Black citizens' ability to innovate and to profit from the patent ecosystem. These laws "decreased access to patenting institutions and to social networks and institutions

217. Black women did not enjoy the same (temporary) expansion of rights as Black men, after the Civil War. Few women of any race could vote in the nineteenth century. *See* Sandra L. Rierson, *Race and Gender Discrimination: A Historical Case for Equal Treatment Under the Fourteenth Amendment*, 1 DUKE J. GENDER L. & POL'Y 89, 95 (1994) (noting that woman suffrage was approved in the Wyoming and Utah territories in 1869 and 1870, respectively, and that women were allowed to vote in the Washington territory between 1883 and 1889). The Constitution did not bar gender discrimination in voting until the Nineteenth Amendment was ratified in 1920. U.S. Const. amend. XIX ("The right of citizens of the United States to vote shall not be denied or abridged by the United States or by any State on account of sex."); *see* KLARMAN, *supra* note 214, at 30–33. Voter registration percentages for Black men plummeted in the wake of state-enacted disfranchisement measures and extralegal violence designed to prevent Black men from voting. For example, Black voter registration fell from 95.6% to 9.5% in Louisiana after disenfranchisement laws were enacted in 1896; by 1904 the voter registration percentage was 1.1%. *Id.* at 32. In North Carolina, approximately 80,000 Black men registered to vote in 1868, after ratification of the Fourteenth Amendment; by 1900 that number had fallen to 15,000. ZUCCHINO, *supra* note 181, at 315.

218. *See supra* notes 174–86 and accompanying text.

219. Cook, *supra* note 159, at 223-24 tbl.1.

220. *See, e.g.*, Williams v. Mississippi, 170 U.S. 213, 220–22, 225 (1898) (holding that the 1890 Mississippi constitution, which included clauses imposing a poll tax, a literacy test, and a grandfather clause – exempting a person from these requirements if their grandfather had been a registered voter – did not violate the Fourteenth Amendment); KLARMAN, *supra* note 214, at 34–39 (noting that, during the *Plessy* era, "the Court rejected all constitutional challenges to [B]lack disenfranchisement").

221. *See* Cook, *supra* note 159, at 237 (noting that Illinois, Ohio, New Jersey, and New York — states where Black inventiveness was highest — adopted 145 new Jim Crow laws between 1896 and 1940, after passing only 58 such laws during the period 1870–1895).

that support invention and innovation."[222] Segregation laws caused rates of Black property ownership to fall, and Black businesses lost white clients.[223] Black people would have found it difficult to impossible to hire a patent attorney, to either obtain a patent or sue for infringement, because patent attorneys (all of whom were white) had offices in commercial districts where Black people were barred from entering.[224] Segregation also negated or restricted networking opportunities and access to education for Black inventors, further deterring their ability to patent.[225]

D. The Impact of Systemic Racism on Access to the Patent System

Even today, as a result of systemic racism in the United States — the modern shadow of slavery and Jim Crow — Black people are more likely to be impoverished and are less likely to obtain a graduate level education, especially in STEM (science, technology, engineering, math) fields.[226] They are more likely to be unemployed, in part due to persistent racial discrimination in the job market.[227] Lack of access to money and education continues to prevent Black people from exploiting their ideas by registering patents in the USPTO. Patent application fees are high, as is the cost of representation by patent attorneys.[228] These

222. *Id.* at 226.
223. *Id.* at 237–38.
224. *Id.* at 226.
225. *Id.* at 226–27.
226. Emily A. Shrider & John Creamer, U.S. Census Bureau, Poverty in the United States: 2022 20–21 tbl.A-1 (2023), https://www.census.gov/content/dam/Census/library/publications/2023/demo/p60-280.pdf (indicating an overall poverty rate of 17.1% for Black Americans, as compared to 10.5% for white Americans and 8.6% for white Americans, excluding the Hispanic population). Data for 2022 shows that Black Americans attained graduate degrees at a combined rate of 10.6% (8.1% masters; 1.0% professional; 1.5% doctoral), while white Americans attained graduate degrees at an overall rate of 15.7% (11.7% masters; 1.7% professional; 2.3% doctoral). *See also* Ji Hye "Jane" Kim, Maria Claudia Soler, Zhe Zhao & Erica Swirsky, *Race and Ethnicity in Higher Education: 2024 Status Report*, at 9 tbl.1.2, Am. Council on Educ. (2024), https://www.equityinhighered.org/wp-content/uploads/2024/05/REHE2024_Chapter1.pdf (last visited Mar. 22, 2025); *see infra* notes 230–33 and accompanying text.
227. *See* Max Zahn, *The Black Unemployment Rate is Consistently Twice That of White Workers. Here's Why*., ABC News (Feb. 3, 2024), https://abcnews.go.com/Business/black-unemployment-rate-consistently-white-workers/story?id=106910140#:~:text=Since%20the%20U.S.%20first%20collected,level%20of%20two%20to%20one (noting that the unemployment rate for Black people has persistently remained about twice as high as the overall rate for white people, since statistics were first measured in 1972). Economists have concluded that "[r]acial differences in the unemployment rate stem in large part from ongoing discrimination that influences choices made by companies about which workers to add or lay off," i.e., last hired/first fired. *Id.*; *see also* Sluby, *supra* note 106, at 175 (concluding that "[t]he social stigma of being other than white is a serious problem in the workforce").
228. *See infra* notes 284–97 and accompanying text.

socioeconomic forces continue to impede Black inventors' access to the USPTO.

1. Educational Disparities

The act of invention typically occurs in STEM fields. The type of progress that results in a patentable invention often requires graduate-level education in STEM. Lawyers cannot become patent agents or even sit for the Patent Bar without a STEM degree.[229] Persistent racial disparities in STEM fields are an additional cause of ongoing inequity in the patent ecosystem.

Black students face significant educational barriers in STEM fields. Black and Hispanic adults are less likely to earn degrees in STEM than other degree fields, and they continue to make up a lower share of STEM graduates relative to their share of the adult population.[230] According to the United States Department of Education, Black students earned no more than 9% of the STEM degrees awarded in 2018.[231] Interpreting a dataset of 110,000 students across six large research universities, another study has found that white males are still more likely than other groups to earn STEM-related degrees, even when they have a poorer academic record.[232] Current trends in STEM degree attainment appear unlikely to substantially narrow these gaps, according to the 2021 Pew Research Center analysis of federal employment and education data.[233]

229. *See* United States Patent & Trademark Office, Office of Enrollment and Discipline (OED), *General Requirements Bulletin for Admission to the Examination for Registration to Practice in Patent Cases Before the United States Patent and Trademark Office* 3–9, https://www.uspto.gov/sites/default/files/documents/OED_GRB.pdf (last visited Mar. 22, 2025). This requirement does not extend to those wishing to confine their practice to design patents, as opposed to utility patents. *Id.* at 9.

230. Meggan J. Lee, Jasmine D. Collins, Stacy Anne Harwood, Ruby Mendenhall & Margaret Browne Hunt, *"If You Aren't White, Asian or Indian, You Aren't an Engineer": Racial Microaggressions in STEM Education*, Int'l J. STEM Educ. 7, 48 (Sept. 14, 2020), https://doi.org/10.1186/s40594-020-00241-4.

231. *See* Cary Funk, *Black Americans' Views of Education and Professional Opportunities in Science, Technology, Engineering and Math*, Pew Rsch. Ctr. (Apr. 7, 2022), https://www.pewresearch.org/science/2022/04/07/black-americans-views-of-education-and-professional-opportunities-in-science-technology-engineering-and-math/(last visited July 10, 2024).

232. *See* Derrick Z. Jackson, *New Study Confirms: Structural Racism in STEM Programs Needs Fixing*, Equation (Oct. 26, 2022, 10:02 AM), https://blog.ucsusa.org/derrick-jackson/a-new-study-confirms-structural-racism-in-stem-programs-needs-fixing/; *see also* Neil Hatfiel, Nathanial Brown & Chad Topaz, *Do Introductory Courses Disproportionately Drive Minoritized Students Out of STEM Pathways?*, PNAS Nexus (2022), https://academic.oup.com/pnasnexus/article/1/4/pgac167/6706685. The study controlled for the high school preparation of students who intended to study STEM, assuming average grade points of 3.57 and ACT composite scores of 26 (placing students in the 83rd percentile). Jackson, *supra* note 232.

233. Lee et al., *supra* note 230.

The STEM gap is partially attributable to the discouragement and microaggressions that Black STEM students often encounter in these environments.[234] A "2020 study by researchers at the University of Illinois and the University of Utah found that Black STEM students faced a 57 percent increased probability of experiencing frequent racial microaggressions from instructors, teaching assistants, and advisers."[235] For example, a Black, female, STEM student wrote:

> I was in a STEM class . . . . I went to office hours that were being held before an exam later on in the day and I asked one of the TA's there a question regarding the material and he laughed in my face about what I was asking him. I felt highly insulted, and he made me feel as though I wasn't smart enough to be in the STEM program.[236]

The study reported that "[s]tudents of color who were STEM majors overheard racist jokes and comments in the classroom and racial slurs while walking to class."[237] "STEM students of color described feeling both hyper-visible and invisible and felt excluded from groups or social activities."[238] Even worse, students of color reported comments from faculty and staff in positions of authority who dismissed, discouraged, ignored, and even made fun of them.[239]

To expand the participation of Black students and other minorities in STEM fields, teachers and the educational institutions that employ them must work harder to eliminate overt and inherent bias in the classroom.[240] The creation of a positive environment where Black students are expected to participate and to succeed is critical to eliminating racial disparities in STEM. Mentors play a key role in achieving this goal.

2. Lack of Mentorship and Representation

A sense of belonging and a positive STEM identity can be associated with interest and retention in STEM.[241] Mentorships are

234. *See* Funk, *supra* note 231.
235. Lee et al., *supra* note 230.
236. *Id.*
237. *Id.*
238. *Id.*
239. *Id.*
240. *See* Bethea, *supra* note 112, at 33–34 (advocating for "bias training and inclusion programs" in academia and industry as a form of patent reparation).
241. Katherine Rainey, Melissa Dancy, Roslyn Mickelson, Elizabeth Stearns & Stephanie Moller, *Race and Gender Differences in How Sense of Belonging Influences Decisions to Major in STEM*, Int'l J. STEM Educ. (2018), https://doi.org/10.1186/s40594-018-0115-6.

integral to increasing minority interest in STEM careers and ensuring success. Numerous studies have shown that effective mentorship for underrepresented students enhances recruitment into and retention in research-related career pathways.[242] Furthermore, research on undergraduate students shows that mentors play a critical role in contributing to the development of science identity, an important factor in retaining underrepresented students in STEM.[243]

Mentorship by individuals of the same race and gender has been shown to significantly influence minority groups' pursuit of STEM careers.[244] Having a same-race mentor improves the retention and academic success of minority students in STEM.[245] Same-race mentorship can help minority students feel more understood and supported, which is crucial for their academic and professional development.[246] A survey of forty-eight STEM students (71% female, and 96% ethnic minorities), revealed that many had role models of the same gender (68%) or ethnicity (66%).[247] Over half felt that meeting STEM professionals who shared their gender and ethnicity would encourage them to pursue careers in STEM.[248] Another study focused on mentoring outcomes in STEM found that an overwhelming majority of over a thousand racially diverse undergraduate and graduate STEM

242. Shobha Bhatia & Jill Priest Amati, *"If These Women Can Do It, I Can Do It, Too": Building Women Engineering Leaders Through Graduate Peer Mentoring*, 10 LEADERSHIP & MGMT. IN ENG'G 174, 174–84 (2010), https://ascelibrary.org/doi/10.1061/%28ASCE%29LM.1943-5630.0000081, *see also* Nilanjana Dasgupta & Jane Stout, *Girls and Women in Science, Technology, Engineering, and Mathematics: STEMing the Tide and Broadening Participation in STEM Careers*, 1 POL'Y INSIGHTS FROM BEHAV. & BRAIN SCI. 21–29 (2014), https://journals. sagepub.com/doi/10.1177/2372732214549471.

243. Martin M. Chemers, Eileen L. Zurbriggen, Moin Syed, Barbara K. Goza & Steve Bearman, *The Role of Efficacy and Identity in Science Career Commitment Among Underrepresented Minority Students*, J. SOC. ISSUES 469–91 (2011), https://psycnet.apa.org/record/2011-21044-004; *see also* Sylvia Hurtado, Nolan L. Cabrera, Monica H. Lin, Lucy Arellamo & Lorelle L. Espinosa, *Diversifying Science: Underrepresented Student Experiences in Structured Research Programs*, RES. HIGHER EDUC. 189–214 (2009), https://pmc.ncbi.nlm.nih.gov/articles/PMC3596157/; *see also Mentoring Underrepresented Students in STEMM: Why Do Identities Matter?*, *in* THE SCIENCE OF EFFECTIVE MENTORSHIP IN STEMM 51, 62 (2019), https://nap.nationalacademies.org/read/25568/chapter/5.

244. Ebony McGee, *Mentoring Underrepresented Students in STEMM: A Survey and Discussion*, https://nap.nationalacademies.org/resource/25568/McGee%20-%20STEMM%20Mentoring%20Identity.pdf (last accessed July 29, 2024). Dr. McGee is the Associate Professor of Diversity and STEM Education at Vanderbilt University. *Id.*

245. *See* Seth Gershenson, Cassandra M.D. Hart, Joshua Hyman, Constance Lindsay & Nicholas W. Papageorge, *The Long-Run Impacts of Same-Race Teachers.* Nat'l Bureau Econ. Rsch., Working Paper No. 25254, 2021, http://www.nber.org/papers/w25254.

246. *Id.*

247. Katherine Kricorian, Michelle Seu, Daniel Lopez, Elsa Ureta & Ozlem Equis, *Factors Influencing Participation of Underrepresented Students in STEM Fields: Matched Mentors and Mindsets*, INT'L J. STEM EDUC. 7, 16 (2020), https://doi.org/10.1186/s40594-020-00219-2.

248. *Id.*

students surveyed felt it was important to have a mentor of the same race and gender.[249]

However, availability and access to same-race mentors is typically limited. Workers of color in organizations often have difficulty gaining access to same-race mentors, due to the low number of mentors at higher organization levels and because they often are positioned on the periphery of workplace social networks.[250] This lack of access is concerning, given the significant impact that mentorship has on career development and success. Accordingly, more robust mentorship programs can support and guide minority students through their educational journeys, to attain the STEM degrees they need to invent, patent, and become patent lawyers.

3. Majority Cultural Bias in Patent Law

Racial disparity in the population of attorneys who become patent lawyers — particularly those serving as patent agents at the USPTO — can also impact Black inventors' ability to obtain patents. Every invention to some extent stems from an individual's collective experiences, including exposure to certain subjects, discussions with mentors and peers, home location, age, wealth, and many other factors.[251] An inventor can leverage their cultural capital — the knowledge, skills, and education gained from these experiences — to create something new and potentially achieve higher societal status.[252] A lack of shared cultural experiences between the patent practitioner or patent examiner and Black inventors negatively impacts the number of patents applied for and granted to Black inventors. Studies have shown that disparities in representation and cultural capital among examiners and patent practitioners — two gatekeepers of the patent system — affect underrepresented inventors' access to the patent system.[253]

The cultural gap between minority-group inventors and patent practitioners, nearly all of whom are majority group, leads to inadequate

249. Stacey Blake-Beard, Melissa L. Bayne, Faye J. Crosby & Carol B. Miller, *Matching by Race and Gender in Mentoring Relationships: Keeping our Eyes on the Prize*, 67 J. Soc. Issues 622–43 (2016); *see also* McGee, *supra* note 244.

250. Stacey Blake-Beard, Audrey Murrell & David Thomas, *Unfinished Business: The Impact of Race on Understanding Mentoring Relationships* (Harv. Bus. Sch., Working Paper No. 06-060, 2006), https://www.hbs.edu/ris/Publication%20Files/06-060.pdf.

251. *See* Jordana R. Goodman & Kamal Patterson, *Access to Justice for Black Inventors*, 77 Vand. L. Rev. 109, 110 (2024).

252. *Id.*

253. *Id.* at 111–12.

and unequal representation and decision-making.[254] Black inventors often face challenges in effectively communicating their inventions to practitioners and examiners who lack the necessary cultural background to understand them. For example, patent practitioners and examiners who lack the cultural context to understand Black hair care products may not adequately understand or appreciate inventive contributions in this field.[255] This lack of knowledge results in a higher burden of explanation by Black inventors to achieve the same level of protection as their majority-group counterparts.[256] Additionally, systemic biases and stereotypes can influence the evaluation of patent applications, often leading to stricter scrutiny and higher rejection rates for minority inventors.[257]

The cultural gap between Black inventors and patent lawyers (most of whom are white), combined with a lack of mentorship and resources, impedes inventors attempting to navigate the complex patenting process.[258] Fostering cultural competence and inclusivity within the patent system is one way to address these disparities and to ensure that all inventors have equal opportunity to protect and profit from their inventions.

III. Restorative Justice Continued: Patent Reparations

The persistent racial disparities that exist in patenting today have deep historical roots in slavery, racial violence, Jim Crow, and pervasive racial discrimination.[259] The mythology of white supremacism engendered these atrocities and, because it persists, the wounds it has inflicted on Black Americans continue to fester. Restorative justice offers a path forward to achieve a more just society and to repair long-standing harms.

To be effective, restorative justice must be more than performative. In too many cases, governments have convened commissions to revisit past incidences of human rights violations (typically committed or enabled by the government itself), and yet ignored or undermined their recommendations to repair the harms inflicted on the targeted

254. *Id.* at 110.
255. *Id.* at 136.
256. *Id.*
257. *Id.* at 127–133; *see also supra* notes 14–18 and accompanying text (discussing elevated rejection rates for minority inventors in the USPTO).
258. *See supra* notes 19–24 and accompanying text (discussing racial disparities among patent attorneys).
259. *See supra* Section II, *The First Steps of Restorative Justice: Acknowledging the Harm and Accepting Responsibility for It*.

group.[260] In other words, acknowledging that the harm occurred — by itself — does not achieve restorative justice. Erecting monuments and writing reports accurately describing human rights abuses (and perhaps removing memorials celebrating the perpetrators) serve a restorative purpose. However, these actions are first steps, not endpoints, of restorative justice. They must be followed by efforts to repair the harm that has been done.

A. Efforts by the United Patent and Trademark Office to Remedy Racial Disparity in the Patent Ecosystem

The USPTO acknowledged and documented significant racial disparities in the nation's innovation ecosystem, specifically regarding patents, in a report transmitted to Congress in 2019.[261] To address the inequality and inefficiency generated by these disparities, it recommended the creation of the Council for Inclusive Innovation, or CI^2. [262] The founding members of CI^2 are intellectual property leaders in corporate, academic, professional, and government organizations, including the president of Howard University.[263] CI^2 is charged with developing a comprehensive national strategy to expand American innovation by tapping into the strength of America's diversity.[264]

Although CI^2's mission is not framed in the language of restorative justice, it exists for a reparative purpose. Even before the USPTO formed CI^2, it adopted policies that were designed to lower barriers to the Patent Office, seeking to increase the participation of Black Americans and other underrepresented groups. The USPTO has hosted events and initiatives to celebrate the achievements of Black inventors

260. *See, e.g.*, Ellsworth, *supra* note 187, at 175–76 (discussing the Tulsa Race Riot Report and resulting Tulsa Race Riot Reconciliation Act, which included no reparations for survivors); *see also* Rierson & Schwimmer, *supra* note 41, at 165–67. Referring to Oklahoma's response to the Tulsa Massacre, Human Rights Watch official Laura Pitter observed that while "[c]reating a museum to showcase victims' experiences can be part of reparations," doing so can be damaging rather than helpful "when it's done in lieu of or at the expense of other types of necessary repair, and without properly consulting the survivors or the descendants." *US: Failed Justice 100 Years After Tulsa Race Massacre Commission Alienates Survivors; State, City Should Urgently Ensure Reparations*, Hum. Rts. Watch (May 21, 2021), https://www.hrw.org/news/2021/05/21/us-failed-justice-100-years-after-tulsa-race-massacre#For_more_information.

261. See Andrei Iancu & Laura Peters, *Reports of Congress, Study of Underrepresented Classes Chasing Engineering and Science Success, Success Act of 2018*, USPTO 12 (2019), https://www.uspto.gov/sites/default/files/documents/USPTOSuccessAct.pdf.

262. *About the Council for Inclusive Innovation*, U.S. Pat. & Trademark Off., https://www.uspto.gov/initiatives/equity/ci2/about (last visited Nov. 19, 2024).

263. *Members of the Council for Inclusive Innovation*, U.S. Pat. & Trademark Off. https://www.uspto.gov/initiatives/equity/ci2/members (last visited Nov. 19, 2024).

264. *About the Council for Inclusive Innovation*, U.S. Pat. & Trademark Off., *supra* note 262.

and their contributions to American society, to combat the historical invisibility of Black innovation and achievement.[265] To this same end, the USPTO has announced that it will rename its Public Search Facility after Henry E. Baker, the pioneering Black lawyer and patent examiner who compiled Baker's List, the first list of Black patent holders, as a weapon against white supremacy.[266] Many of these policies have either been recently implemented or have yet to take effect; therefore, the degree to which they will succeed in reducing inequity at the USPTO is not yet known.

1. Lowering Barriers to the Patent Office by Adopting a First-to-File System and Reducing Fees

Recent policy changes in the USPTO aim to support independent and micro-entity inventors, who are disproportionately from minority groups. Minority inventors are more likely to be independent inventors with low incomes, due to several socio-economic factors.[267] Data shows significant disparities in innovation rates by race and socioeconomic status.[268] Minority and low-income individuals often face challenges in accessing capital and credit.[269] Studies have shown that minority business owners are more likely to rely on personal savings and credit cards for funding, due to fear of being turned down for loans.[270] Many minority communities experience higher rates of poverty and lower

265. James O. Wilson, *Black History Month: Advocating for and Supporting Diversity, Equity, and Inclusion at the USPTO*, U.S. Pat. & Trademark Off. (Feb. 22, 2023), https://www.uspto.gov/subscription-center/2023/black-history-month-advocating-and-supporting-diversity-equity-and.

266. Press Release, *USPTO to Rename Public Search Facility After Pioneering Black Patent Examiner Henry Baker*, U.S. Pat. & Trademark Off. (Feb. 24, 2023), https://www.uspto.gov/about-us/news-updates/uspto-rename-public-search-facility-after-pioneering-black-patent-examiner; *see also supra* notes 156–57 and accompanying text (discussing Baker and Baker's List).

267. Alexander Bell, John Van Reenen, Raj Chetty & Xavier Jaravel, *Expose Talented Kids from Low-Income Families to Inventors and They're More Likely to Invent*, Smithsonian Mag. (Jan. 25, 2018), https://www.smithsonianmag.com/innovation/expose-talented-kids-from-low-income-families-inventors-theyre-more-likely-to-invent-180967932/; *see also* Alexander M. Bell, Raj Chetty, Xavier Jaravel, Neviana Petkova & John Van Reenen, *Who Becomes an Inventor in America? The Importance of Exposure to Innovation* 2, Nat'l Bureau Econ. Res., Working Paper No. 24062 (2019), https://www.nber.org/system/files/working_papers/w24062/w24062.pdf.

268. Bell et al., *supra* note 267 (discussing data showing that "white children are three times as likely to become inventors as are black children"); *see also supra* notes 14–18 and accompanying text; *see infra* notes 283–87 and accompanying text (discussing these disparities).

269. *Preserving Minority Depository Institutions, Research on Low- and Moderate-Income Communities*, Bd. of Governors of Fed. Rsrv. Sys. (last visited Nov. 19, 2024), https://www.federalreserve.gov/publications/2016-preserving-minority-depository-institutions-Research-on-Low--and-Moderate-Income-Communities.htm.

270. *Id.*

median incomes compared to white communities, further constraining their financial ability to pursue and patent new inventions.[271]

Recognizing these socio-economic barriers, the USPTO has adopted policies designed to reduce the cost of patenting an invention, to increase the accessibility of the Patent Office to independent and micro entity inventors. Recent structural changes to United States patent laws and USPTO regulations are a step in the right direction to assist underrepresented minority groups in securing patents. These changes are designed to lower barriers for Black Americans and other historically disadvantaged groups, aiming to reduce social disparities in patenting.[272]

The Leahy-Smith America Invents Act (AIA), which went into effect on March 16, 2013, proposed extensive changes to the United States patent legal system and to the USPTO itself. [273] Two structural barriers were lowered by this statute: 1) the adoption of the "first to file" system of establishing priority in a patent, displacing the "first to invent" system; and 2) lowering the fees associated with obtaining a patent. Both changes in patent policy should positively impact historically disadvantaged groups in accessing the USPTO.

The USPTO switched from a "first-to-invent" to a "first-inventor-to-file" patent system on March 16, 2013, as part of the AIA.[274] Under the first-to-file system, patents are awarded to the first inventor to file a patent application, as opposed to the first to invent. The "first inventor to file" provision is highly significant to independent inventors. The first-to-invent system requires inventors to maintain their invention records, while the first-to-file system does not.[275] Keeping records

271. Valerie Wilson, *Racial Disparities in Income and Poverty Remain Largely Unchanged Amid Strong Income Growth in 2019*, Econ. Pol'y Inst., Working Economics Blog (Sept. 16, 2020), https://www.epi.org/blog/racial-disparities-in-income-and-poverty-remain-largely-unchanged-amid-strong-income-growth-in-2019/ (last visited July 18, 2024); *see also supra* note 226 and accompanying text.

272. Press Release, *USPTO Announces National Strategy for Inclusive Innovation*, U.S. Pat. and Trademark Off. (May 1, 2024), https://www.uspto.gov/about-us/news-updates/uspto-announces-national-strategy-inclusive-innovation; *see also* Kathi Vidal, *The Unleashing American Innovators Act: Promoting Inclusive Innovation Under the New Law*, U.S. Pat. & Trademark Off. (Jan. 10, 2023), https://www.uspto.gov/blog/the-unleashing-american-innovators-act.

273. Press Release, *President Obama Signs America Invents Act, Overhauling the Patent System to Stimulate Economic Growth, and Announces New Steps to Help Entrepreneurs Create Jobs*, Obama White House (Sept. 16, 2011), https://obamawhitehouse.archives.gov/the-press-office/2011/09/16/president-obama-signs-america-invents-act-overhauling-patent-system-stim.

274. Pub. L. No. 112-29, 125 Stat. 284 (2011).

275. Robert W. Pritchard, *The Future Is Now - The Case for Patent Harmonization*, 20 N.C. J. Int'l L. 291, 313 (1995) ("American inventors are required to keep accurate records of all acts of invention in the event that a patent is involved in an interference proceeding and the inventor is required to prove conception, reduction to practice, and diligence").

is a cumbersome process that many independent inventors do not fully appreciate or have the resources to undertake.[276] The first-to-invent system may result in complicated and expensive interference proceedings[277] that will be unnecessary under the simpler, first-inventor-to-file system.[278] The small, independent inventor is almost always at a major disadvantage in an interference proceeding against a large entity, typically a corporation.[279] Accordingly, in the first inventor-to-file system, the question of right to a patent between interfering parties should be satisfied by a quick examination of filing dates, thus eliminating the need for interference proceedings.[280] As a result, the cost of the patenting process should "be greatly diminished under a first inventor-to file system."[281]

The second major innovation of the AIA has been to make targeted reductions in patent fees. The USPTO is a fully fee-funded agency and must periodically assess and adjust fee rates to ensure that its fee collections cover its costs.[282] The fees associated with filing, prosecuting, and maintaining patents financially support the USPTO so that the USPTO does not rely on taxpayer money to function.[283] These fees have increased over the years. The fees can discourage independent inventors and small businesses from obtaining patents.[284] Since patents provide a competitive edge in many markets, high patent fees act as barriers to entry in these markets.[285] The impact of rising fees has primarily fallen on independent inventors, often comprising Black

276. *Id.*

277. "In patent terms, when two independent inventors lay claim to the patent for the same invention, a 'priority dispute' arises." Sean T. Carnathan, *Patent Priority Disputes–A Proposed Re-Definition of "First-to-Invent*," 49 Ala. L. Rev. 755, 756 (1998). The mechanism for resolving the dispute before the USPTO is called an interference. *Id.*

278. Pritchard, *supra* note 275, at 313.

279. *Id.* ("Currently, interference proceedings are cumbersome, inadequate, and often seemingly inexplicable.") (internal citations omitted).

280. *See* Report of the President's Commission on the Patent System, To Promote Progress of the Useful Arts in an Age of Exploding Technology 5–6 (1966); *see also* Pritchard, *supra* note 275.

281. Gregory J. Wrenn, *What Should Be Our Priority—Protection for the First to File or the First to Invent?*, 72 J. Pat. & Trademark Off. Soc'y 872, 878 (1990), *see also* Pritchard, *supra* note 275.

282. *Budget and Financial Information, Congressional Budget Justifications, Fiscal Year 2025 USPTO Budget*, U.S. Pat. & Trademark Off., https://www.uspto.gov/about-us/performance-and-planning/budget-and-financial-information (last visited July 16, 2024).

283. Andrea Arndt & Alex W. Holtshouser, *New USPTO Fee Schedule Reduces Costs for PCT Patent Filings and Small and Micro Entities*, IP Blog Dickinson Wright (Jan. 17, 2023), https://intellectualproperty.dickinson-wright.com/2023/01/17/new-uspto-fee-schedule-reduces-costs-for-pct-patent-filings-and-small-and-micro-entities/.

284. *Id.*

285. *Id.*

and other minority groups, who cannot afford to pay them.[286] Research has shown that patent costs can be disproportionately prohibitive to women and people of color due to lower earnings.[287]

The AIA significantly reduced USPTO fees for independent inventors who qualify as "micro entities" and "small entities."[288] The "micro entity" discount cuts most patent fees by 75 percent, if certain conditions are met.[289] A person or business does not qualify as a micro-entity if they were named as the inventor on more than four previous patent applications, or if they have a gross income more than three times the median household income for the preceding year.[290] The AIA has reduced fees for "small entities" as well, by 50%.[291] A small entity is generally defined as a business which, including affiliates, has fewer than 500 employees, a qualifying nonprofit organization, or an individual who has not assigned, licensed or otherwise conveyed or promised to convey an interest in the invention to a non-small entity.[292] To be a small entity applicant, all parties that hold rights in the invention must qualify for small entity status.[293]

USPTO fees were reduced even further when Congress passed and President Biden signed into law the Consolidated Appropriations Act of 2023, which included the Unleashing American Innovators Act of 2022.[294] The law aims to support small and micro entities by increasing small entity discounts from 50 percent to 60 percent, and micro entity discounts from 75 percent to 80 percent.[295] "Access to the innovation ecosystem by all is critical to inclusive innovation and growing our economy by $1 trillion by quadrupling the number of U.S. inventors,"

286. *Id.*

287. Elyse Shaw & Cynthia Hess, *Closing the Gender Gap in Patenting, Innovation, and Commercialization: Programs Promoting Equity and Inclusion*, Inst. for Women's Pol'y Rsch. (July 24, 2018), https://iwpr.org/wp-content/uploads/2020/10/C471_Programs-promoting-equity_7.24.18_Final.pdf.

288. 35 U.S.C. § 123(a); *see also* 37 C.F.R. § 1.27.

289. Andrew Faile, *Ensuring the Validity of Micro Entity Certifications — which Provide Reduced Fees to Eligible Inventors and Small Businesses*, U.S. Pat. & Trademark Off. (Sept. 8, 2021), https://www.uspto.gov/blog/ensuring-the-validity-of-micro.

290. 37 C.F.R. § 1.29.

291. Faile, *supra* note 289.

292. 13 C.F.R. § 121.802(a).

293. Faile, *supra* note 289.

294. Unleashing American Innovators Act of 2022, S. 2773, 117th Cong. (2021), https://www.congress.gov/bill/117th-congress/senate-bill/2773.

295. Reducing Patent Fees for Small Entities and Micro Entities Under the Unleashing American Innovators Act of 2022, 88 Fed. Reg. 36247 (Mar. 22, 2023), https://www.federalregister.gov/documents/2023/03/22/2023-05382/reducing-patent-fees-for-small-entities-and-micro-entities-under-the-unleashing-american-innovators (last visited July 16, 2024).

remarked USPTO Director Kathi Vidal.[296] This increase in discounts further incentivizes small and micro entities to participate in the patent system.[297]

2. Bringing the Patent Office to the Inventor

From the earliest days of the Patent Office, its central location in Washington, D.C. has presented a barrier to inventors who live hundreds or perhaps even thousands of miles away.[298] One key provision in the Unleashing American Innovators Act (UAIA), signed into law on December 29, 2022, further expands the outreach footprint of the USPTO. [299] The UAIA directs the USPTO to establish a Southeast Regional Office within three years of enactment.[300] It also further requires the USPTO to establish a community outreach office in the northern New England region within five years of enactment.[301] The goal of these new offices is to create partnership with community organizations for grassroots education about the patent system, the benefits of inventor innovation, and entrepreneurship.[302] The ripple effect should increase inclusion for underrepresented inventors. This program requires USPTO's satellite offices to conduct community outreach to increase participation in the patent system by women, people of color, military veterans, individual inventors, and other underrepresented groups.[303]

The UAIA also requires the USPTO to establish at least three additional community outreach offices and to conduct a study to determine whether additional satellite (regional) offices are needed.[304] Collectively, the new offices will further extend the USPTO's outreach efforts, as well as place additional focus on reaching inventors and

296. *Patent Fees for Small and Micro Entities Reduced*, U.S. Pat. & Trademark Off. (Dec. 30, 2022), https://www.uspto.gov/subscription-center/2022/patent-fees-small-and-micro-entities-reduced.

297. *Id.*

298. See *supra* note 73 and accompanying text.

299. Unleashing American Innovators Act of 2022, S.2773, 117th Cong. (2021), https://www.congress.gov/bill/117th-congress/senate-bill/2773/text; *see also Unleashing American Innovators Act of 2022*, U.S. Pat. & Trademark Off., https://www.uspto.gov/ip-policy/legislative-resources/unleashing-american-innovators-act-2022 (last visited Jan. 7, 2025).

300. Unleashing American Innovators Act of 2022, *supra* note 299, at §3(b).

301. *Id.* at §4(a)(3).

302. Press Release, *Atlanta; New Hampshire County Selected for New USPTO Outreach Office Locations,* U.S. Pat. & Trademark Off. (Dec. 13, 2023), https://www.uspto.gov/about-us/news-updates/atlanta-new-hampshire-county-selected-new-uspto-outreach-office-locations.

303. *Id.*

304. Unleashing American Innovators Act of 2022, *supra* note 299, at §4.

entrepreneurs from underrepresented backgrounds.[305] Furthermore, the USPTO will establish a southeast regional satellite office and will offer a "pre-patentability assessment" pilot program to determine whether an invention meets the patentability threshold.[306]

3. Assisting Inventors Who Lack Access to Counsel

Self-represented or *pro se* inventors need help to obtain patents, because they lack the skill set and experience required for patent prosecution (the process of obtaining patents).[307] Inventors without legal representation often struggle to overcome the complex legal, technical, and procedural challenges involved in drafting patent applications.[308] Lack of access to counsel, which is prevalent among Black inventors and other members of underrepresented groups, is a major impediment to accessing the patent system.

The process of obtaining a patent is complex.[309] It requires drafting and filing a patent application, followed by corresponding with the USPTO over the scope of protection.[310] A patent application contains a description of the invention that concludes with one or more claims.[311] The claims must provide an adequate disclosure to the public of the bounds of the invention.[312] The patent applications need to meet statutory requirements of novelty, non-obviousness and detailed description understood by one of ordinary skill in the art.[313] The difficulty of understanding these requirements is evident through the cases that attempt to interpret them, even struggling to define what the

305. Press Release, Atlanta; *New Hampshire County Selected for New USPTO Outreach Office Location*s, *supra* note 302.

306. Unleashing American Innovators Act of 2022, *supra* note 299, at §6.

307. *See* Brenda M. Simon, *Artificial Intelligence and the Self-Represented Inventor,* Loyola Los Angeles L. R. (forthcoming 2025), *available at* https://papers.ssrn.com/sol3/papers.cfm?abstract_id=4792163.

308. *Id.* at 7; *see also* United States Patent and Trademark Office, Manual of Patent Examining Procedure [hereinafter MPEP], https://www.uspto.gov/web/offices/pac/mpep/index.html (setting forth the procedures by which the USPTO examines patent applications); Kate S. Gaudry, *The Lone Inventor: Low Success Rates and Common Errors Associated with Pro-Se Patent Applications*, 7 PLOS ONE, at 3 (Mar. 21, 2012), https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0033141 (studying the difficulties self-represented inventors face during patent examination).

309. Gaudry, *supra* note 308.

310. *Id.; see also* Christopher A. Cotropia & David L. Schwartz, *The Hidden Value of Abandoned Applications to the Patent System*, 61 B.C. L. Rev. 2809, 2816 (2020).

311. Gaudry, *supra* note 308.

312. *Id.*

313. 35 U.S.C. §§ 102, 103, & 112.

appropriate level of skill in the art should be.[314] As a result, examiners are over twice as likely to reject the application of a self-represented inventor for technicalities than the application of an inventor who has legal representation.[315] The USPTO appreciates this difficult endeavor: "The patent process is a complex set of laws, regulations, policies and procedures; therefore, the USPTO always recommends using a registered patent attorney or agent to assist in preparing patent application."[316] Accordingly, any legal assistance provided to these *pro se* applicants is invaluable.

Under the AIA, the USPTO launched the Pro Se Assistance Program to provide outreach and education to applicants who file patent applications without the assistance of a registered patent attorney or agent (*pro se* applicants).[317] USPTO employees cannot provide legal advice to patentees.[318] However, through increased assistance and resources for independent inventors and small business communities, this program aims to increase the quality of *pro se* applications and assist *pro se* applicants with making informed decisions regarding their patent applications.[319]

The Patent and Trademark Resource Center Program also manages a nationwide network of academic, public, and state libraries that have been designated Patent and Trademark Resource Centers (PTRC).[320] These resource centers provide the public with various trademark and patent assistance.[321] The PTRC representatives are trained to help inventors and small businesses find the information they need to protect their intellectual property.[322] They can show the public how to use patent and trademark search tools, explain the application process, assist in using the USPTO's directory of local patent attorneys, offer classes, help find patent and trademark owner and assignee information,

314. Cotropia & Schwartz, *supra* note 310, at 2816.

315. Simon, *supra* note 307, at 14; Gaudry, *supra* note 308, at 7; Colleen V. Chien, *Rigorous Policy Pilots the U.S.P.T.O. Could Try,* 104 Iowa L. Rev. Online 1, 21 (2019) (finding that the number of formality rejections increases as the size of the patent applicant decreases).

316. *Filing a Patent on Your Own: Pro Se Assistance Program*, U.S. Pat. & Trademark Off., https://www.uspto.gov/patents/basics/using-legal-services/pro-se-assistance-program (last visited July 17, 2024).

317. *Pro Se Assistance Center*, U.S. Pat. & Trademark Off., https://www.uspto.gov/patents/patents-ombuds/pro-se-assistance-center (last visited July 2024).

318. *Id*.

319. *Id.*

320. *Patent and Trademark Resource Centers*, U.S. Pat. & Trademark Off., https://www.uspto.gov/learning-and-resources/patent-trademark-resource-centers (last visited July 9, 2024).

321. *Id.*

322. *Id.*

and direct the public to other USPTO resources.[323] Additionally, the USPTO offers ongoing training and education for these applicants through webinars on filing applications, quick clinic video series, knowledge packs for pre-filing, prior inventor info chats, and inventor hour webinars.[324]

4. Providing Inventors with Access to Counsel: The Patent Pro Bono Program

Although the USPTO has created resources designed to benefit *pro se* inventors, they cannot substitute for competent legal representation in patent drafting and patent prosecution.[325] Drafting patent claims is considered the most challenging part of a patent application, even for patent practitioners, due to the precision and expertise required to define the scope of the invention clearly and comprehensively.[326] Claims must be written to cover the invention broadly enough to protect against infringers, yet specific enough to be distinguished from prior art and to meet legal standards.[327] A poorly drafted patent application will not survive the scrutiny of a patent examiner, as each patent application must meet stringent statutory requirements.[328] Not surprisingly, the likelihood of *pro se* inventors abandoning their patent applications is about twice that of inventors who are legally represented.[329] *Pro se* inventors sometimes abandon their patent applications, not for substantive reasons, but because they are not equipped with proper knowledge of the complexities of patent prosecution.[330]

The Patent Pro Bono Program offers free legal assistance to eligible inventors and small business owners for preparing and filing patent

323. *Id.*

324. *Filing a Patent on Your Own: Pro Se Assistance Program*, *supra* note 316; *Patent Process Overview*, U.S. Pat. & Trademark Off., https://www.uspto.gov/patents/basics/patent-process-overview; *PTAB Inventor Hour*, U.S. Pat. & Trademark Off., https://www.uspto.gov/patents/ptab/events/inventor-hour.

325. *See generally* Gaudry, *supra* note 308.

326. 35 U.S.C. § 112(b) ("The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the inventor or a joint inventor regards as the invention."); *see also id.* § 112(c)–(e) (defining the convention by which an inventor must properly draft a claim set).

327. *See* Shyh-Jen Wang, *Designing Around Patents: A Guideline,* 26 Nature Biotech. 519, 519–22 (May 2008), https://www.nature.com/articles/nbt0508-519 ("To design around a patent, one should construct the newly designed device or process so as to fall outside the scope of the claims…."); Simon, *supra* note 307, at 10.

328. *See* Gaudry, *supra* note 308.

329. Simon, *supra* note 307, at 3; *see also* Gaudry, *supra* note 308 (studying the difficulties self-represented inventors face during patent examination).

330. Simon, *supra* note 307, at 11; *see also* Gaudry, *supra* note 308, at 8–9.

applications.[331] This nationwide network of independently operated regional programs connects volunteer patent attorneys and agents with financially under-resourced inventors and small businesses to facilitate access to patent protection.[332] Applicants must have a gross household income less than three times the federal poverty level guidelines; they must also demonstrate an understanding of the patent system, either by having a provisional application already on file with the USPTO, or by completing the certificate training course; applicants must be able to describe the specific features of their invention and how it operates.[333]

A study by the USPTO found that, from 2015 to 2022, volunteer patent attorneys and non-attorney advocates (patent agents) donated more than $39.3 million worth of legal services through the Patent Pro Bono Program.[334] The donation of these legal services is expanding access to the patent system for financially under-resourced independent inventors and small businesses.[335] These programs effectively expanded access for underserved communities, with Black inventors comprising 30% of program applicants in 2021 and 35% in 2022.[336] The Patent Pro Bono Program constitutes an important tool in increasing access to the USPTO for Black inventors.[337]

5. Providing Inventors with Access to Counsel: USPTO Certified Patent Clinics

Increasing rates of Black ownership of patented inventions — repairing the damage done to Black people by past patterns of *de jure* and *de facto* legal discrimination — requires a multi-pronged approach.

331. *Patent Pro Bono Program: Free Patent Legal Assistance*, U.S. Pat. & Trademark Off., https://www.uspto.gov/patents/basics/using-legal-services/pro-bono/patent-pro-bono-program (last visited Aug. 4, 2024).

332. *Id.*

333. *Id*.

334. Press Release, *Patent Pro Bono Report: Over $39.3 Million Donated in Free Legal Services to Inventors and Small Businesses*, U.S. Pat. & Trademark Off. (Jan. 30, 2024), https://www.uspto.gov/about-us/news-updates/patent-pro-bono-report-over-393-million-donated-free-legal-services-inventors [hereinafter Patent Pro Bono Report]. The USPTO's $1.2 million annual expenditure on regional patent pro bono programs magnified the impact, yielding $5.52 to $9.67 in direct legal assistance for every dollar spent. In 2023, the USPTO increased the program's budget from $680,000 to $1.2 million. *Unleashing American Innovators Act of 2022 - Study of the Patent Pro Bono Programs, Final Report to Congress*, U.S. Pat. & Trademark Off. (Dec. 29, 2023), https://www.uspto.gov/sites/default/files/documents/FINAL_SignedUSPTOStudyUAIAPatentProBonoProgram.pdf.

335. *Unleashing American Innovators Act of 2022 - Study of the Patent Pro Bono Programs, Final Report to Congress, supra* note 334.

336. *Id.* The primary barrier to participation in the program is the financial screening requirement, which the USPTO is working to raise to 400% of the federal poverty line.

337. Patent Pro Bono Report, *supra* note 334.

Education is a key part of that initiative. The USPTO has made broad efforts to foster a more diverse innovation ecosystem by providing resources, mentorship programs, and education to law school students.[338] Most significantly, in 2008 the USPTO funded a program for law school clinics to serve patent and trademark applicants on a pro bono basis.[339] The Law School Clinic Certification Program [hereinafter "Program"] allows law students to practice patent and/or trademark law before the USPTO under faculty supervision.[340] These clinics serve clients who qualify for assistance on a pro bono basis.[341] Under the supervision of a patent supervising attorney, students participate in all aspects of obtaining a patent, from the initial analysis of patentability, to drafting, editing, and filing provisional and non-provisional patent applications, as well as responding to communications from the USPTO (Office Actions).[342] These clinics strive to prepare students to become "practice ready" in patent law.[343]

The Program began as a pilot in 2008 with six participating law school clinics.[344] Currently, sixty-eight law school clinics participate in the Program; thirty-eight clinics participate in both the patent and trademark portions of the Program; twenty-six clinics provide trademark services only; four clinics participate solely in the patent portion of the Program.[345] The goal of the Program is to provide law students with the opportunity to gain experience practicing before the USPTO, while providing pro bono legal services to under-resourced companies, small businesses, and individuals with innovative ideas.[346] In doing so, the

338. *Law School Clinic Certification Program*, U.S. Pat. & Trademark Off., https://www.uspto.gov/learning-and-resources/ip-policy/public-information-about-practitioners/law-school-clinic-1 (last visited July 24, 2024); *see also* An Act to Establish the Law School Clinic Certification Program of the United States Patent and Trademark Office, and for Other Purposes, Pub. L. No. 113-227, 128 Stat. 2114 (2014), https://www.govinfo.gov/content/pkg/PLAW-113publ227/pdf/PLAW-113publ227.pdf (co-sponsored by Reps. Hakeem Jeffries (D-NY) and Steve Chabot (R-OH)).

339. *Law School Clinic Certification Program*, *supra* note 338.

340. *Id.*

341. *Id.*

342. *Id.*

343. *Id.*

344. The first six law schools to be certified by the United States Patent and Trademark Office (USPTO) for their patent and trademark clinics under the Law School Clinic Certification Program were American University, Washington College of Law; the John Marshall University Law School; University of Connecticut School of Law; University of Maine; Vanderbilt Law School; and William Mitchell College of Law (now Mitchell Hamline School of Law). Telephone Interview with Emily Sprague, Staff Attorney, Office of Enrollment and Discipline, USPTO (July 18, 2024).

345. *See USPTO Law School Clinic Certification Program (Participating School Map)*, U.S. Pat. & Trademark Off. https://www.uspto.gov/sites/default/files/documents/Law_school_clinic_flyer_2024.pdf (last visited July 26, 2024).

346. *Id.*

Program provides significant benefits not only for the clinic students, schools and the USPTO, but also for the clients whom these clinics serve.[347] The Program allows law school students to practice patent and trademark law before the USPTO under the guidance of a Faculty Clinic Supervisor.[348] A Faculty Clinic Supervisor is a registered patent attorney or patent agent who has practiced before the USPTO in patent matters (patent program) or is a licensed attorney in good standing with the highest court of a State who has practiced before the USPTO in trademark matters (trademark program).[349] Between 2016 and 2023, more than 2,700 law school clinic students participated in the Program; 1270 patent applications were filed; and, of the applications filed from 2017-2023, 337 patents were granted.[350]

These programs play an especially important role at historically Black college and university (HBCU) law schools, where many of the students who participate in the patent clinics are non-white.[351] One way to address racial disparity, without targeting funds directly by race or ethnicity, is through the HBCU colleges and universities across the country.[352] These clinics train STEM law students to become practice ready, preparing them for careers in patent law.[353] This training not only equips students with the necessary skill-set to excel in the field, but also increases their chances to secure employment post-graduation.[354] Additionally, the clinics create a community where Black inventors receive tailored support from practitioners who share similar cultural backgrounds, fostering trust and collaboration.[355]

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347. *Id*.

348. *Id*.

349. Michelle K. Lee & William R. Covey, *Report on the Law School Clinic Certification Program*, Off. Enrollment & Discipline U.S. Pat. & Trademark Off. (Dec. 2016), https://www.uspto.gov/sites/default/files/documents/USPTO_Law_School_Clinic_Cert_Program_Report-Dec_2016.pdf.

350. *Id.*; Telephone Interview with Gerard Taylor, Attorney Advisor, Office of Enrollment and Discipline, USPTO (Aug. 1, 2024).

351. *Historically Black Colleges and Universities*, Nat'l Ctr for Educ. Stat., https://nces.ed.gov/fastfacts/display.asp?id=667 (last visited February 4, 2025).

352. In light of the Supreme Court's interpretation of race-conscious admissions policies in the context of the Fourteenth Amendment's Equal Protection Clause and Title VI of the Civil Rights Act, the USPTO may be reluctant to target grants, scholarships, or any other resources based on race. *See* Students for Fair Admissions, Inc. v. President & Fellows of Harvard Coll., 600 U.S. 181 (2023) (striking down university admissions policies on the grounds that they did not withstand strict scrutiny under the Fourteenth Amendment). Strengthening efforts to create and support clinics at HBCUs would further numerous policy goals, as explained throughout this article, without distributing benefits on the basis of race or otherwise violating the Fourteenth Amendment, as interpreted in this case.

353. Lee & Covey, *supra* note 349.

354. *Id.*

355. *Id.*

HBCUs were founded prior to 1964 to grant access to, and ensure everyone receives, a quality college education.[356] Specifically, HBCUs were created with the principal mission of educating Black students.[357] "HBCUs were developed because strict racial segregation prevented Black people from attending white institutions in the South and elsewhere in the nation."[358] Studies show that, during the period 1870-1940, the establishment of HBCUs increased patent activity by Black inventors in the localities where the HBCUs were located, primarily because inventors were drawn to communities containing these schools and the resources they provided.[359] Today, HBCU students are predominantly Black, low income, and Southern.[360] HBCUs remain a critical source of education for the Black community. In the 2022/23 academic year, the number of Black undergraduate students enrolled at Howard University exceeded the number of Black students enrolled at every Ivy League university combined.[361]

As of 2024, there are 107 HBCUs in the United States with more than 228,000 students enrolled.[362] Of these 107 institutions, only six offer legal education: (1) Howard University School of Law (Howard) in Washington, D.C., (2) North Carolina Central University School of Law (NCCU) in Durham, North Carolina, (3) Thurgood Marshall School of Law at Texas Southern University (Thurgood Marshall) in Houston, Texas, (4) Florida A&M University School of Law (Florida A&M) in Tallahassee, (5) Southern University Law Center (Southern) in Baton Rouge, Louisiana, and (6) the University of the District of Columbia David A. Clarke School of Law (UDC). Three of these

356. *Minority Education Initiatives*, Off. Fed. Contract Compliance Programs, U.S. Dep't Labor, https://www.dol.gov/agencies/ofccp/compliance-assistance/outreach/hbcu-initiative/about (last visited May 28, 2024).

357. *Id.*

358. Phillip L. Clay, *Historically Black Colleges and Universities Facing the Future: A Fresh Look at Challenges and Opportunities*, 2 (Sept. 2012) (Ford Foundation Working Paper), https://kresge.org/sites/default/files/Uploaded%20Docs/Clay-HBCUs-Facing%20the-Future.pdf (last visited July 17, 2024).

359. Andrei Iancu & Laura A. Peters, *Report to Congress, Study of Underrepresented Classes Chasing Engineering and Science Success, SUCCESS Act of 2018,* U.S. Pat. & Trademark Off. (Oct. 2019), https://www.uspto.gov/sites/default/files/documents/USPTOSuccessAct.pdf (citing Sarada & Ziebarth, *Changes in the Demographics of American Inventors, 1870–1940,* Explorations in Econ. Hist. (2019)); *see also* Sluby, *supra* note 106, at 123–24 (discussing the links between HBCUs and Black inventors).

360. Clay, *supra* note 358, at 12. Overall, about one-tenth of HBCU students identify with a racial group other than Black. *Id.*

361. Shaun Harper, *Howard University Among HBCUs With More Black Students Than All 8 Ivy League Institutions Combined*, Forbes (July 7, 2023), https://www.forbes.com/sites/shaunharper/2023/07/02/howard-university-among-hbcus-with-more-black-students-than-all-8-ivy-league-institutions-combined/.

362. *Minority Education Initiatives*, *supra* note 356.

six law schools currently house USPTO patent and trademark clinics: (1) Howard, (2) Southern, and (3) NCCU.[363]

HBCUs promote social justice in various meaningful ways.[364] The IP offerings and certified USPTO IP clinics at HBCUs exemplify this commitment to social justice. As detailed above, there is a notable disparity in the number of Black inventors applying for patents and in their success rate in obtaining inventions in the USPTO.[365] By producing minority patent practitioners who can assist minority inventors with their patents, these programs take a crucial step in addressing these disparities and advancing social justice.

This initiative not only empowers minority inventors by providing them with the necessary resources and support to protect their innovations, but also ensures that the IP sector becomes more inclusive and representative. Minority patent practitioners often make higher earnings in this specialized field, yet their backgrounds instill a sense of empathy towards others. This unique perspective allows them to advocate effectively for fellow minorities and underrepresented groups, fostering a more equitable legal environment. Choosing to pursue a career in intellectual property law — sometimes facetiously referred to as "coming to the dark side" in the law school environment — should not be viewed as an *alternative* to a career devoted to achieving social justice. In fact, this area of law significantly *promotes* social justice by bridging the gap between minority communities and the IP sector. By increasing the number of minority patent practitioners, these programs not only address economic and professional disparities but also contribute to a more diverse and just legal system. One educator stated:

363. *Id.*

364. Dr. Melanie Carter, Ph.D, the associate provost and director of the Center for HBCUs, states: "Often at HBCUs, there's an emphasis on looking at ourselves and our students and our communities from an asset versus a deficit model," said Carter. "Being culturally grounded, understanding the importance of culturally relevant teaching–all those kinds of things are preparing young people to flourish in a society that was not intended to support their growth and development." Zsana Hoskins, *Humble Beginnings: A Look at How Black Institutions in America Have Changed Over Time*, AFRO NEWS: BLACK MEDIA AUTH. (May 18, 2024), https://afro.com/hbcus-history-education-contribution/. "HBCUs played a critical role in nurturing the leaders, ideas, and strategies that propelled the Civil Rights Movement forward. Through their emphasis on social justice, community engagement, and the development of critical thinking skills, HBCUs empowered students to challenge systemic racism and inequality." Marc Gonzalez, *Igniting Change: How HBCUs Shaped the Civil Rights Movement and Empowered Black Leaders*, LANDMARK EDUC. TOURS (July 25, 2023), https://landmarkeducationaltours.com/how-hbcus-shaped-the-civil-rights-movement-and-empowered-black-leaders/#:~:text=HBCUs%20played%20a%20critical%20role,challenge%20systemic%20racism%20and%20inequality (last visited July 18, 2024).

365. *See supra* notes 14–18 and accompanying text.

> Despite a rise in IP developed at HBCUs since 2010, as a collective they have yet to fully harness their IP generating potential. [I]nventors of color are significantly underrepresented among patent owners. It is extremely important that we begin to bring IP and inventorship education to students at HBCUs to increase the community's exposure to innovation and opportunities to commercialize their ideas and inventions.[366]

The three existing USPTO clinics at Howard, NCCU, and Southern, have all significantly contributed to the mission of reclaiming Black space in the nation's innovation ecosystem.[367]

Founded in 1869, Howard University School of Law is the first historically Black law school in the United States.[368] The school has long embraced the mission of nurturing and promoting Black inventors. Notable alumni include Henry E. Baker, author of Baker's List and one of the earliest advocates of Black inventors in the USPTO, as well as the first Black woman lawyer, Charlotte E. Ray.[369] Howard Law Professor Lateef Mtima recently testified before Congress regarding the need for diversity in the innovation ecosystem and strategies for achieving this goal in the USPTO.[370]

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366. A. Kenyatta Greer, *Morris to Advise HBCU IP Collaborative*, Emory Lawyer, Emory University, https://law.emory.edu/lawyer/issues/2021/fall/worth-noting/morris-to-advise-hbcu-ip-collaborative/index.html (last visited July 18, 2024) (quoting Professor Nicole Morris, director of the TI:GER (Technological Innovation: Generating Economic Results) program).

367. Southern University Law Center was founded in 1947 in Baton Rouge, Louisiana, in response to a lawsuit demanding access to legal education for Black students in the state. *A History of the Law Center*, S. Univ. L. Ctr., https://www.sulc.edu/page/about (last visited July 26, 2024). The school's mission is to provide high-quality legal education to a diverse group of students, emphasizing civil and common law training. *Admissions Overview*, S. Univ. L. Ctr., https://www.sulc.edu/page/prospective-students-tuition-budgeting (last visited July 17, 2024). The Technology and Entrepreneurship Clinic at Southern provides free legal services in connection with trademark and patent law issues, as well as services in connection with entity formation/structuring and some regulatory/licensing issues, for entrepreneurs, non-profits, and inventor clients with limited financial resources. *Technology and Entrepreneurship Law Clinic*, S. Univ. L. Ctr., https://www.sulc.edu/page/technology-and-entrepreneurship (last visited October 27, 2024).

368. *About Us/Our History*, How. Univ. Sch. L., https://law.howard.edu/about/our-history (last visited February 03, 2024).

369. *Id*. The former Vice-President of the United States and the 2024 Democratic nominee for the Presidency of the United States, Kamala Harris, is also a Howard University alum. *Kamala Harris, The Vice-President: Fighting for the People and Delivering for America*, White House, https://www.whitehouse.gov/administration/vice-president-harris/ (official biography); Michael Scherer, Matt Viser, & Tyler Pagger, *Harris Officially Secures Democratic Nomination for President*, Wash. Post (Aug. 2, 2024), https://www.washingtonpost.com/politics/2024/08/02/harris-becomes-democratic-nominee/*; see also supra* notes 155–57 and accompanying text (discussing Baker and Baker's List).

370. *Improving Access and Inclusivity in the Patent System: Unleashing America's Economic Engine: S. Hrg. 117-531, Before the S. Comm. on the Judiciary*, 117th Cong. 54, 69 (2021) (statement of Prof. Lateef Mtima, Howard University School of Law).

The USPTO clinic at Howard (the Clinic) has been part of the Howard Clinical Law Center since 2018.[371] During its first five years of operation (2019-2024), 119 students participated in the Clinic, serving 96 clients.[372] Most of these law students had non-STEM backgrounds, yet they successfully interacted with inventors and designers to prepare patent applications that were submitted to the USPTO.[373] The Clinic obtained ten utility patents and one design patent during this same period of time.[374] The majority of the Clinic's clients were inventors or designers from the local community who could not have accessed the USPTO without *pro bono* legal representation.[375]

Like Howard, North Carolina Central University School of Law (NCCU) has a long history of enhancing diversity within the legal profession and producing socially responsible lawyers. Established in 1939, NCCU aims to provide affordable, practice-oriented legal education to historically underrepresented students.[376] The NCCU Patent Clinic, which opened in 2012, has helped several Black inventors secure patents for their inventions.[377] To date, the USPTO has issued twenty patents to clients of the NCCU Patent Clinic; 64% of these clients are minority inventors.[378] Since 2019, forty-seven students have participated in the NCCU patent clinic, serving 117 client's.[379]

One notable example of the work done by the NCCU Patent Clinic relates to a patent issued to Mr. Mario Holman.[380] His invention, a hair sculpting device, creates a wave-like pattern in hair utilizing a plurality of long and short bristles in a repeating pattern, while penetrating

371. Adjunct Professor Darrell G. Mottley founded and supervised the Clinic from the Fall 2018 Semester until the Spring 2024 Semester. Professor Mottley is now a full-time, Assistant Clinical Professor of Law, at Suffolk University Law School, where he serves as the Faculty Director of the Intellectual Property and Entrepreneurship Clinic. *Darrell Mottley (Biography)*, SUFFOLK UNIV., https://www.suffolk.edu/academics/faculty/r/a/darrell-mottley?ref=map; *see also* Interview with Darrell Mottley, Assistant Clinical Professor at Suffolk University Law School, in Durham, N.C. (Sept. 2024).

372. Interview with Darrell Mottley, *supra* note 371.

373. *Id*. At the Howard clinic, a supervisor who is a licensed Patent Attorney assigns an invention disclosure to a team of students. *Id.* The students perform a patentability search and prepare a search report/analysis of patentability for the client. *Id.* The students work directly with the inventor(s) to draft a utility or design patent application, working with the Clinic supervisor. *Id.* They draft applications in stages, including drawings, claims, and specification, and file the final product with the USPTO. *Id.*

374. *Id*.

375. *Id*.

376. *About the School of Law*, N. C. CENTRAL UNIV. SCH. L., https://law.nccu.edu/about/nccu-school-of-law/ (last visited July 17, 2024).

377. Data on file with the author.

378. Data on file with the author.

379. Data on file with the author.

380. U.S. Patent No. 11,583,063.

the scalp to release oils that promote hair follicles' health.[381] Despite the existence of similar devices, the NCCU Patent Clinic successfully navigated several rejections to secure the patent.[382] A patent attorney who lacked the necessary cultural context to understand Mr. Holman's invention may have been unwilling to represent him in the patent process.[383] Mr. Holman, a barber from Durham, North Carolina, described this achievement as a "transformative event in his life."[384]

The NCCU Patent Clinic has also enabled STEM students to gain valuable experience in patent law, leading to employment in IP firms post-graduation.[385] Under the Supervising Attorney, students participate in all aspects of obtaining a patent, from the initial analysis of patentability, to drafting, editing, and filing provisional and non-provisional patent applications, as well as responding to communications from the USPTO.[386] They also meet with clients, where they conduct meetings and counsel clients under the supervision of the supervising patent attorney.[387] For example, Malcolm Lewis, a former student, acknowledged the NCCU Patent Clinic's invaluable contribution to his professional training:

> NCCU's USPTO Certified Patent Clinic helped prepare me to be the best summer associate I could be. While the Patent Clinic taught me

381. *Id.*

382. Data on file with the author.

383. *See supra* notes 251–58 and accompanying text (discussing the impact of cultural biases in patent law).

384. Interview with Mario Holman, in Durham, N.C. (Fall 2023).

385. Several NCCU alums attribute their success in the IP field to their experience in the NCCU patent and trademark clinic. For example, Austin Sanders writes, "The patent clinic provides students with real-world patent preparation and prosecution experience while providing a free service to its surrounding community. I believe my experience at the patent clinic was paramount in Neo IP's decision to hire me out of the law school . . . ." Interview with Austin Sanders, graduate of NCCU School of Law, in Durham, N.C. (2021). Another patent clinic alum, Lorena Gomez, observes that "a strong foundation in patent law makes law students more attractive to tech employers because many tech firms/companies rely heavily on patents to protect their intellectual property. Many of the employers that called me in for an interview asked me what IP classes I had taken in law school and why. They also asked me to describe the type of work I did in the patent law clinic. I quickly realized that having knowledge of patent law and showing an interest in other IP areas, such as trademarks, significantly impacted my ability to obtain a position in the tech field." Interview with Lorena Gomez, graduate of NCCU School of Law, in Durham, N.C. (2021). William Breeze similarly attested that his clinic experience "was one of the biggest factors in equipping me with the skills and experience to be ready to practice on day one after graduation. Not only was I practice-ready, but participating in the USPTO-certified IP Clinic made my resume stand out to potential employers. The Clinic supplemented my doctrinal knowledge acquired in class and demonstrated how the lessons learned in the classroom would be implemented in the real world." Interview of William Breeze, graduate of NCCU School of Law, in Durham, N.C. (2024).

386. Data on file with the author.

387. Data on file with the author.

> immensely about the patent prosecution process, it also gave me ample practical experience in interviewing and counseling clients, regularly billing hours, creatively approaching unexpected complex issues, maximizing available resources whenever limited, and appropriately reporting to a superior professional authority figure.[388]

Additionally, the clinic has played a crucial role in encouraging students who came to law school *without* a STEM background to supplement their education and pursue careers as patent attorneys.[389] For instance, Ms. Enisha Smith, a Black female law student, developed an interest in intellectual property law and decided to join the NCCU patent clinic, despite coming to law school "knowing little to nothing about this area of law."[390] Ms. Smith states, "Using my experience from the Patent Clinic, I secured a student assistant position at the Intellectual Property Law Institute at NCCU Law and served as editor-in-chief of the Intellectual Property Law Review. I also facilitated a Copyright and Trademark Bootcamp and organized an Intellectual Property Mini-Conference, seminar session, and panel discussion, all with the assistance of the director of the Patent Clinic, Professor Mimi Afshar."[391] After completing her law degree in 2019, Ms. Smith enrolled at North Carolina A&T State University, another HBCU, to pursue a degree in electrical engineering, so that she could become a member of the patent bar (which she did). Ms. Smith then secured a position with a prominent IP firm based in Minneapolis, Minnesota. Ms. Smith attributes a great deal of her success to the NCCU Patent Clinic, which supported her "during my entire transition from knowing little to nothing about patent law to my advancement as a new patent attorney."[392]

The importance of USPTO clinics in HBCU law schools cannot be overstated. These clinics provide critical legal services to underserved populations, particularly in the Black community. They also contribute to the development of more Black and other minority patent practitioners. By providing dedicated support and training, these programs empower

388. Interview with Malcolm Lewis, 2023 graduate of North Carolina Central University School of Law, in Durham, N.C. (Nov. 2023).

389. Data on file with the author.

390. Interview with Enisha Smith, 2019 graduate of North Carolina Central University School of Law, in Durham, N.C. (Nov. 2023). Ms. Smith is an associate attorney at Marshall Gerstein & Borun, LLP.

391. *Id.*

392. *Id.*

Black inventors and law students, fostering innovation and diversity with the IP field.

B. Next Steps: Recommendations to Achieve Restorative Justice in the Patent Ecosystem

Looking forward, the following are potential steps in further paving the road to recovery from racial disparities in the USPTO. Many of these proposals seek to build on the work that is already being done in the USPTO to expand access and thereby increase contributions to the innovation ecosystem by Black inventors and other members of underrepresented groups.[393] These policies can serve as tools to repair the damage that has been done by centuries of exploitation of Black intellectual property and lack of recognition — invisibility — of Black contributions to American progress.

1. Enhancing Support for and Expanding USPTO Clinics, Especially at HBCUs

Expanding patent clinics, especially at HBCUs, constitutes a crucial patent reparation. As described above, these clinics provide direct support and resources to underrepresented Black inventors and communities.[394] They also offer significant benefits to students who participate. Currently, only half of HBCU law schools participate in the USPTO patent and trademark clinic program (the Program). Program expansion, especially in underserved areas of the country, should be a key priority of the USPTO as part of its CI[2] initiative.[395]

Clinic expansion should target areas of the country where the availability of pro bono legal services for Black and other underrepresented inventors is likely to be low. For example, according to the most recent census, the state of Florida is home to 21,538,187 people, including over 3.2 million Black people and over twice that

393. *See supra* Section III. A., *Efforts by the United Patent and Trademark Office to Remedy Racial Disparity in the Patent Ecosystem*. These efforts include lowering patent fees, increasing support for *pro se* patent applicants, and enhancing the Patent Pro Bono Program. *Id.*; *see also* Fechner & Shapanka, *supra* note 16, at 732 (advocating for reduced fees).

394. Press Release 24-05, *USPTO Empowers Innovation Among Black Inventors and Entrepreneurs by Increasing the Number of Patent and Trademark Resource Centers at HBCUs*, U.S. Pat. & Trademark Off., *https://www.uspto.gov/about-us/news-updates/uspto-empowers-innovation-among-black-inventors-and-entrepreneurs-increasing* (Feb. 23, 2024).

395. Council for Inclusive Innovation (CI2), U.S. Pat. & Trademark Off., https://www.uspto.gov/initiatives/equity/ci2 (last visited October 27, 2024); *see also supra* notes 261–64 and accompanying text (discussing CI2 and its mission).

many people who identify as Hispanic or Latino.[396] Florida has a history of slavery and racial violence.[397] Only one USPTO clinic is located in Florida, at the University of Miami School of Law.[398] That clinic is located approximately 500 miles away from the state's only HBCU law school, at Florida A&M in Tallahassee. Florida A&M is the nation's largest HBCU, and over a third of the population of Tallahassee is Black.[399] If Florida A&M were to establish a USPTO clinic, lack of clients would almost certainly not be a problem. Other states have neither a USPTO clinic nor an HBCU law school, even though they have significant Black populations and a history of Black oppression. For example, there are zero USPTO clinics (and no HBCU law schools) in Mississippi, Alabama, Arkansas, and South Carolina, all states with a history of slavery and racial violence.[400]

To expand patent clinics at HBCUs and other law schools where minority populations are underserved, the USPTO must take a strategic approach. The USPTO can start by encouraging the HBCUs currently offering the Program to host visits and workshops for HBCUs and other schools that do not yet have the Program. These events would showcase the benefits and successes of the existing clinics, with the goal of inspiring other institutions to adopt similar initiatives. In addition, the USPTO should organize official events at these HBCUs, highlighting the Program's significance for minority students and underserved inventors. Doing so would spread awareness about the value of invention and patenting and how to access the agency's services. It should also encourage HBCUs to conduct community outreach involving local schools and communities, to reinforce their role as institutions that drive positive change and support aspirations of minority inventors and entrepreneurs.

Furthermore, the USPTO should establish a dedicated grant program to provide financial support to HBCUs or other law schools

396. Florida, U.S. Census Bureau (2020), https://data.census.gov/profile/Florida?g=040XX00US12#populations-and-people; Florida, Race and Ethnicity, U.S. Census Bureau (2020), https://data.census.gov/profile/Florida?g=040XX00US12#race-and-ethnicity.

397. *See supra* note 171 and accompanying text (discussing racial violence in Rosewood, Florida); *see also* Talk of the Nation, *Florida's History of Race-Related Violence*, NPR (Apr. 3, 2012, 1:00 PM), https://www.npr.org/2012/04/03/149928187/floridas-history-of-race-related-violence.

398. *See USPTO Law School Clinic Certification Program* (*Participating School Map*), *supra* note 345.

399. Tallahassee, Florida Population 2024, World Population Rev., https://worldpopulationreview.com/us-cities/tallahassee-fl-population (reporting Tallahassee population as 35.53% Black and 5.71% two or more races).

400. *USPTO Law School Clinic Certification Program* (*Participating School Map*), *supra* note 345.

looking to start patent clinics, especially those in underserved areas of the country and/or with large minority student populations. This program could cover expenses such as hiring full-time instructors and operational costs. Grant funding and scholarships should also be used to strengthen and support STEM education at HBCUs, especially for students who wish to supplement their undergraduate educations so that they are eligible to take the Patent Bar. Subsidizing STEM education for both undergraduate and law students at HBCUs, and at other schools serving disadvantaged or underserved populations, would constitute a valuable investment in the nation's innovation ecosystem.[401] The USPTO could also facilitate partnerships between HBCUs and corporations interested in fostering innovation and diversity. Engaging successful alumni from HBCUs to support patent clinics is another way to assist such schools. Alumni can provide mentorship, funding, and networking opportunities, serving as role models and advocates for the Program.

Federal funding should be available to promote and expand HBCU patent clinics and achieve related goals. On May 16, 2024, The Biden-Harris Administration announced a new record in federal funding and investments in HBCUs, totaling more than $16 billion from fiscal years (FY) 2021 through current available data for FY 2024.[402] Between FY 2021 and FY 2023, the Biden-Harris Administration invested over $11.4 billion in HBCUs, which includes $1.6 billion to "drive the advancement of academic and training programs, community-based initiatives, and research innovation" at HBCUs, as well as nearly $719 million "to

401. *See* Jackson, *supra* note 232 (noting that "HBCUs usually provide a more supportive and affirming culture on campus [for minority students] despite far fewer resources than predominantly White institutions, and that seems particularly true in the sciences"). HBCUs account for eleven of the top fifteen institutions, in terms of PhDs awarded in natural sciences and engineering to Black students, for the period 2010-2019. Freeman A. Hrabowski III & Peter H. Henderson, *Nothing Succeeds Like Success*, Issues in Sci. & Tech. tbl.1 (July 29, 2021), https://issues.org/nothing-succeeds-like-success-underrepresented-minorities-stem/#h-table-1. The HBCUs on this list include North Carolina A&T, Howard, Florida A&M, Spelman, Xavier, Morgan State, Jackson State, and Morehouse College. Of the top fifteen schools, the non-HBCUs with relatively high numbers of Black PhD STEM graduates are the University of Maryland, Baltimore County (UMBC), the University of Maryland, College Park, the University of Florida, and the Massachusetts Institute of Technology (MIT). *Id.*

402. Press Release, *FACT SHEET: Biden-Harris Administration Announces Record Over $16 Billion in Support for Historically Black Colleges and Universities (HBCUs)*, White House (May 16, 2024), https://www.whitehouse.gov/briefing-room/statements-releases/2024/05/16/fact-sheet-biden-harris-administration-announces-record-over-16-billion-in-support-for-historically-black-colleges-and-universities-hbcus/ [hereinafter *Biden-Harris HBCU Fact Sheet*]. HBCUs have been historically underfunded by the government, a problem that persists today. *See* Susan Adams & Hank Tucker, *How America Cheated its Black Colleges*, Forbes (Sept. 22, 2022, 8:15 PM), https://www.forbes.com/sites/susanadams/2022/02/01/for-hbcus-cheated-out-of-billions-bomb-threats-are-latest-indignity/.

expand STEM academic capacity and educational programs."[403] While numerous critical needs throughout the nation's network of HBCUs are worthy of funding, supporting USPTO clinics at these schools surely ranks among them.

2. Increasing Participation in STEM Education by Black and other Minority Students

The USPTO (and the United States government more broadly) needs to facilitate STEM exposure and education for Black students and other members of underrepresented groups. One way to achieve this goal is through targeted grants and scholarships at HBCUs and other universities located in underserved areas, as discussed above.[404] Other methods include developing mentorship programs and improving social networks for these students.[405] Enhancing STEM education and mentorship can build a more diverse pipeline of inventors.

To encourage Black and other minority-group students to enter STEM fields and help them to thrive in these settings, educational institutions must create an environment where these students feel seen, accepted, and where they are expected to succeed. One example of a program achieving these goals is the Meyerhoff Scholars Program at the University of Maryland, Baltimore County (UMBC). This program demonstrates that targeted support can improve retention and success rates for underrepresented students.[406] Initiated in 1993, the program has turned out more than 1,400 STEM graduates, two-thirds of whom are from populations normally underrepresented in STEM and the majority of whom are Black.[407] The program is committed to increasing the representation of minorities in science and engineering.[408] Rather than emphasize competition, Meyerhoff Scholars rely on mutual support and continually challenge each other to do more, creating an environment that amounts to positive peer pressure.[409] Students are encouraged to form and attend study groups for classes within their

403. *Biden-Harris HBCU Fact Sheet*, *supra* note 402.
404. *See supra* Section III.B.1., *Enhance Support for and Expand USPTO Clinics, Especially at HBCUs*.
405. *See* Bethea, *supra* note 112, at 33 (supporting mentorship and social networking for Black students as part of a program of patent reparations).
406. *13 Key Components*, UMBC Meyerhoff Scholars Program, https://meyerhoff.umbc.edu/13-key-components/ (last visited July 29, 2024).
407. *Id.*
408. *Id.*
409. *Id.*

majors.[410] To provide students with the tools they need to succeed in their first college semester and become familiar with the program, all incoming Meyerhoff Scholars attend an accelerated six-week residential program called Summer Bridge.[411] The program has had a dramatically positive impact on the number of minority students succeeding in STEM fields; students who participated were 5.3 times more likely to have graduated from or be currently attending a STEM Ph.D. or M.D./Ph.D. program than those students who were invited to join the program but declined and attended another university.[412] Other universities have adopted programs modeled after Meyerhoff, such as the University of North Carolina at Chapel Hill and Penn State University, with positive results.[413]

Other initiatives like the Hidden Genius Project seek to repair the opportunity gap for Black students in high school, thereby better preparing them to seek out and excel in STEM education at the college level. The Hidden Genius Project is an Oakland-based nonprofit that offers a 15-month program for hundreds of Black male high-school students across seven cities, teaching coding and entrepreneurship.[414] The organization's stated mission is to train and mentor "Black male youth in technology creation, entrepreneurship, and leadership skills to transform their lives and communities."[415] According to CEO Brandon Nicholson, the group provides Black male students with mentorship and networking opportunities that are typically accessible to their white peers through family and friends.[416]

All of these programs share a common goal: to create an environment where Black and other underrepresented students can thrive and have the confidence necessary to innovate and contribute their talents to the STEM field. These types of initiatives require financial support, which is often provided by donors and foundations, but also can and should be supported by the USPTO. Developing pipelines of STEM students, particularly from these underrepresented groups, is mission critical to the patent office.

410. *Id.*
411. *Id.*
412. *Results*, UMBC Meyerhoff Scholars Program, https://meyerhoff.umbc.edu/about/results/ (last visited July 29, 2024).
413. Hrabowski & Henderson, *supra* note 401.
414. *See* Zahn, *supra* note 227; *see also About*, Hidden Genius Project, https://www.hiddengeniusproject.org/about/ (last visited Aug. 4, 2024) [hereinafter *The Hidden Genius Project*].
415. *The Hidden Genius Project*, *supra* note 414.
416. *See* Zahn, *supra* note 227.

3. Lifting the Cloak of Invisibility: Collecting Demographic Data Regarding America's Inventors

From the earliest days of the Patent Office, the United States government has collected no demographic data regarding America's inventors.[417] Although this anonymity allowed inventors to conceal their race — which many Black Americans believed was necessary to obtain and market a patent, especially in the nineteenth century — it also erased the historical record of their contributions as Black inventors.[418] Today, the lack of accurate demographic data impedes research and efforts to improve racial equity in the patent sphere.[419] In 2019 (and again in 2021), Hawaii Sen. Mazie Hirono proposed a bill to require the voluntary collection of demographic information for patent applications, and for other purposes, by the USPTO.[420] The Inventor Diversity for Economic Advancement Act of 2019, or the IDEA Act, directs the USPTO to collect demographic data — including gender, race, and military or veteran status — from patent applicants on a voluntary basis.[421] It further requires the USPTO to both issue reports on the data collected and make the data available to the public, thereby allowing outside researchers to conduct their own analyses and offer insights into the various patent gaps in the society.[422] Dr. C. Nicole Mason, President and CEO of the Institute for Women's Policy Research, strongly supports the IDEA Act: "For too long, researchers have used names and zip codes as proxies for gender, race, and income to study the diversity gaps in patenting . . . The IDEA Act will provide us with the information

417. *See* Marcowitz-Bittona & Morris, *supra* note 14, at 333–34.

418. *See supra* notes 124–25 and accompanying text: "Moreover, those who surmounted these obstacles were often reluctant to reveal their race in the Patent Office, fearing that racial discrimination would thwart their patent applications and limit their ability to profit from their inventions. As a result, Black inventors who were able to "pass" as white often did so, or they used a white intermediary to secure patent rights on their behalf."

419. Spector & Brand, *supra* note 19, at 33 (addressing the lack of demographic data regarding patent agents and patent practitioners).

420. IDEA Act, S. 2281, 116th Cong. (2019); *see also* Mark E. Stallion, *The Bi-partisan IDEA Act: A Great Idea, or Pointless Data Gathering?*, REUTERS (Aug. 6, 2021, 1:59 PM), https://www.reuters.com/legal/legalindustry/bi-partisan-idea-act-great-idea-or-pointless-data-gathering-2021-08-06/. A similar bill was introduced in the House by New Mexico Rep. Nydia Velazquez. IDEA Act, H.R. 1723, 117th Cong. (2021).

421. IDEA Act, S. 2281, 116th Cong. § 2 (2019) (allowing the USPTO to collect data regarding the "gender, race, ethnicity, national origin, sexual orientation, age, military or veterans status, disability . . . education level attained, and income level" of inventors). The data would be confidential, voluntarily provided, and would not be associated with the inventor's patent application. *Id.*

422. *Id.*

needed to better understand and address the patent disparities among women, people of color, and other underrepresented groups." [423]

Although this bill was referred to both the House and Senate Judiciary Committees, Congress has taken no further action on the bill since that time.[424] Speaking in favor of the bill, Sen. Hizuno observed that "if we have any hope of closing the various patent gaps [based on gender, race, and other factors], we must first get a firm grasp on the scope of the problem."[425] A co-sponsor of the bill, North Carolina Republican Senator Thom Tillis, is hopeful that the Act will help to close the patent gap to ensure all Americans have the opportunity to innovate and have a better understanding of the background of individuals who apply for patents with the USPTO.[426] Sen. Hizuno has acknowledged that "[c]losing the information gap facing researchers alone will not solve the patent gap facing women, racial minorities, and so many others. But it is a critical first step." [427] Congress should take this first step and pass the IDEA Act.[428]

Conclusion

Addressing racial disparities in the USPTO to foster a more inclusive innovative ecosystem requires a multifaceted approach. The aforementioned initiatives and ongoing efforts by the USPTO are just the beginning. More comprehensive initiatives and policy reforms are needed to address and repair the historical damage done to Black and other minority inventors by centuries of racial violence and oppression. It cannot be repaired overnight. While the USPTO is currently taking steps to further this cause, ongoing efforts and continued commitment are essential. These reforms mark the beginning of a significant and transformative journey toward equity and inclusion in the American innovation ecosystem. HBCUs are at the forefront of this effort. They have been and will continue to play a critical role in paving the road to recovery from racial disparities in the USPTO.

423. Press Release, Thom Tillis, U.S. Senator, *Tillis Introduces Bipartisan, Bicameral Bill to Close the Patent Gap Faced by Women* (Mar. 9, 2021), https://www.tillis.senate.gov/2021/3/tillis-introduces-bipartisan-bicameral-bill-to-close-the-patent-gap-faced-by-women (quoting Dr. C. Nicole Mason, President and CEO of the Institute for Women's Policy Research) [hereinafter Tillis Press Release].

424. IDEA Act, S. 2281, 116th Cong. (2019).

425. 165 Cong. Rec. S5110-11 (daily ed. July 25, 2019).

426. Tillis Press Release, *supra* note 423.

427. 165 Cong. Rec. S5110-11 (daily ed. July 25, 2019).

428. *See* Bethea, *supra* note 112, at 33 (arguing that, as part of a program of patent reparations, the USPTO should "track the race and ethnicity of inventors").

The Eugenic History of Habitual Offender Laws

Daniel Loehr*

Habitual offender laws are widely understood to have emerged from the tough-on-crime movement in the late 1900s. That understanding is inaccurate. This Article argues that habitual offender laws did not emerge from the tough-on-crime movement in the late 1900s but instead from the eugenics movement in the early 1900s. Habitual offender laws were designed to prevent "habitual offenders" from reproducing and spreading their "type." They were sterilization by another means. This Article documents that history and in doing so corrects a longstanding misconception about the origin and intent of habitual offender laws — with implications for the habitual offender laws that are currently in force in 49 states.

Contents

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Introduction

In 1886 — a century before Bill Clinton struck his fist on the lectern in his 1994 State of the Union Address and declared "three strikes and you are out" — the first ever Dean of Yale Law School, Francis Wayland, traveled to Atlanta, Georgia to say something quite similar at the National Prison Congress.[1] Wayland's lecture was entitled, "The Incorrigible: Who He Is and What Shall Be Done with Him."[2] Wayland used vivid language to conjure the image of "habitual criminals" for the Atlanta audience.[3] As he told it: "They do not desire or design to earn an honest living . . . they revel in the fierce delight of dangerous enterprise. They are intoxicated with the excitement of their varying fortunes."[4] Most ominously, he warned, they are "growing steadily in numbers."[5]

At this point, Wayland turned to the question of "what shall be done with [them]."[6] His answer, like President Clinton's a century later, was life imprisonment. "I believe that there is but one cure for this great and growing evil," Wayland said, "and that this is to be found in the imprisonment for life of the criminal once pronounced 'incorrigible.'"[7] Wayland conceded that it might be hard to decide who should be pronounced incorrigible, but he suggested that one is surely incorrigible if they have committed multiple felonies.[8] In particular,

1. Francis Wayland, The Incorrigible—Who He Is, and What Shall Be Done with Him (1886), *in* Proc. Nat'l. Prison Cong., 1886, at 189–97; clintonlibary42, *The 1993 State of the Union (Address to a Joint Session of the Congress)*, YouTube (Apr. 10, 2012), https://www.youtube.com/watch?v=Qx2CdGFz558&list=PLC3062CE11B2833B2&index=4.
2. Francis Wayland, The Incorrigible–Who He Is, and What Shall Be Done With Him (1886) *in* Proc. Nat'l. Prison Cong., 1886, at 189–97.
3. *Id.* at 189–97.
4. *Id.* at 189–90.
5. *Id.* at 189.
6. *Id.* at 194.
7. *Id*.
8. *Id.*

he settled on three.[9] In other words, President Clinton's famous and seemingly novel proposal for a "three strikes law" in 1994 was in fact preceded by a strikingly similar proposal a century earlier.

A "three strikes law" is one version of a "habitual offender law," which is a law that significantly increases sentences based on prior convictions.[10] Forty-nine states currently have habitual offender laws in force.[11] In legal scholarship and popular discourse, habitual offender laws are widely described as originating in the late-1900s tough-on-crime era.[12] They tend to be associated with Nixon, Reagan, Clinton, and, most prominently, with the 1994 introduction of California's Three Strikes Law.[13] But if that narrative is correct, then what explains Dean Wayland's three-strikes proposal that he offered in Atlanta in 1886?

Dean Wayland's proposal was not a fluky anachronism. He was far from an outlier. Instead, he was just one voice in a growing eugenics chorus that advocated for and enacted habitual offender laws across the country. And this wave of habitual offender laws occurred 70 years earlier — and for very different reasons — than contemporary accounts of habitual offender laws acknowledge. This Article tells that deeper and more complicated story.

Part I documents the pervasive belief that habitual offender laws originated in the late 1900s as part of the tough-on-crime movement. Part II begins to describe the deeper history, starting with the intellectual movement in the late 1800s that popularized the theory of the habitual offender as someone who is genetically criminal and can spread criminality to their offspring. Part III shows how the eugenics movement translated that theory into habitual offender legislation that was designed to stop habitual offenders from reproducing. Thanks to that movement, habitual offender legislation passed in 42 states in the first half of the 19th century and was also adopted in Nazi Germany. Part IV uses three states — California, Vermont, and Colorado — as

9. *Id.*

10. Other terms that are used for these laws include habitual criminal laws, incorrigible offender laws, recidivist laws, persistent offender laws, repeat offender laws, prior conviction enhancement laws, career criminal laws, double punishment laws, and "bitch" laws (as in h*abit*ual), as they are called among practitioners in Colorado. In this Article, I use the terms "habitual offender law" and "habitual criminal law," and I use them interchangeably. I do not endorse the premises that are embedded in these terms, *see infra* Part II, but I use these two terms because they are the most commonly used terms to describe these laws and because they contain particular historical meaning that needs to be surfaced rather than buried with an alternative term. For discussion of that history, s*ee infra* Part II.

11. *See* Appendix (listing statutes by state).

12. *See infra* Part I.

13. *See infra* Part I.

case studies to reveal more granular detail about the role of the eugenics movement in the passage of habitual offender laws.

The conventional wisdom about the history of habitual offender laws is incorrect or at the very least incomplete. The false and shallow history is widely believed by judges, legislators, lawyers, incarcerated people, and the broader public. One's conception of the history of habitual offender laws shapes legislative and legal outcomes, as well as the experience of serving time under a habitual offender law. For these reasons, it is critical to correct the historical record and recognize the eugenic history of habitual offender laws.

I. The Shallow History

The belief that habitual offender laws originated in the late 1900s is evident across a range of literatures. Consider some examples. A 2013 American Civil Liberties Union report on habitual offender laws asserts that "Washington passed the first such law — the prototype for California's Three Strikes Law — in 1993, and dozens of other states passed similar laws throughout the 1990s."[14] Thus, according to this report, not a single habitual offender law existed before 1993. A more recent law review article paints a similar historical picture, asserting that "the emergence of three-strike and habitual offender laws was a response to public outcry over the growth of violent crime in the 1990s."[15] An academic book published in 2016 takes a broader historical view, but still suggests that the laws did not exist before the 1970s. The book describes career criminal sentencing in the 1970s as "an early form" of "three strikes laws," thus implying that three strikes laws came into existence *after* the 1970s.[16]

These sources are just some of the many that describe habitual offender laws as originating in the late 1900s, and they comport with conversations this author has had with practitioners, judges, and people serving sentences under habitual offender laws.[17] For one reason or

14. American Civil Liberties Union, A Living Death: Life Without Parole for Non-Violent Offenses 35 (2013), https://assets.aclu.org/live/uploads/publications/111813-lwop-complete-report.pdf.

15. Abigail A. Mcnelis, *Habitually Offending the Constitution: The Cruel and Unusual Consequences of Habitual Offender Laws and Mandatory Minimums*, 28 Geo. Mason U. Civ. Rts. L.J. 97, 106 (2017).

16. Elizabeth Hinton, From the War on Poverty to the War on Crime: The Making of Mass Incarceration in America 259 (2017).

17. For additional examples, *see, e.g.*, Jennifer E. Walsh, Historical Guides to Controversial Issues in America: Three Strikes Laws 3 (2007) (starting the history of habitual offender laws in the 1970s with the "get tough" movement and then describing the origin of three strikes law as the 1990s, and, omitting entirely in the book any mention of earlier habitual offender laws or the relationship between eugenics and habitual offender laws); United States

another, the idea that these laws originated in the late 1900s has become widespread.

Some sources do recognize a longer history of habitual offender laws, but these sources minimize the significance of that deeper history and overlook the role that eugenics played in it. For example, one author explains that although there is a "long history" of habitual offender laws, the laws were nonetheless "not widely used nor were they an important issue in the modern politics of law and order until the 1990s."[18] Another author accurately explains that some habitual offender laws were passed "during the years preceding WWII" but notes misleadingly that "most of the current habitual offender statutes requiring courts to impose enhanced sentences for repeat offenders 'did not appear until the 1970s.'"[19] Another author accounts for earlier habitual offender laws but seeks to distinguish them as less severe than contemporary habitual offender laws in order to argue that "three strikes and you're out laws are particularly dramatic evidence of a *new* style of American toughness."[20] These authors helpfully acknowledge that habitual offender laws were not born in the late 1900s, but they nonetheless minimize the significance of the earlier history and fail to engage with the role that eugenics played in that history.

Just as the literature on habitual offender laws overlooks eugenics, the literature on eugenics overlooks habitual offender laws. For example, Professor Daniel Kevles's book, *In the Name of Eugenics* — which has been described as "one of the most widely consulted books on the history of eugenics" — does not mention habitual offender laws.[21] The same is true with other works that are considered core to the literature on eugenics, such as Thomas Leonard's *Illiberal*

Department of Justice, National Institute of Justice, Career Criminal Program National Evaluation Final Report 4 (1981) (describing events in the 1970s as occurring "at the same time that the research community had begun to recognize the problems of repeat offenders," thus ignoring the prior century of scholarly interest in habitual offender laws and implying that they did not become of interest until the late 1900s.)

18. Franklin E. Zimrig, *Populism, Democratic Government, and the Decline of Expert Authority: Some Reflections on "Three Strikes" in California*, 28 Pac. L. J. 243, 244 (1996).

19. Ilene M. Shinbein, *Three-Strikes and You're Out: A Good Political Slogan to Reduce Crime, But a Failure in its Application*, 22 New Eng. J. on Crim. & Civ. Confinement 175, 179 (1996) (quoting Gary T. Lowenthal, *Mandatory Sentencing Laws: Undermining The Effectiveness of Determinate Sentencing Reform*, 81 Cal. L. Rev. 61, 69 (1993)).

20. James Q. Whitman, Harsh Justice: Criminal Punishment and the Widening Divide between America and Europe 57 (2005) (emphasis added) (describing the longer history of habitual offender laws, but arguing that the modern habitual offender laws are distinctly harsh because, unlike the earlier laws, they apply to minor crimes).

21. Daniel K. Kevles, In the Name of Eugenics: Genetics and the Uses of Human Heredity (1998); Mark A. Largent, *On Daniel J. Kevles's In the Name of Eugenics*, 44 Hist. Stud. Natural Science 514, 514 (2014).

Reformers and Paul Lombardo's *Three Generations, No Imbeciles*.[22] It is recognized that the eugenics movement pushed for racist immigration laws,[23] institutionalization of those deemed mentally unfit,[24] and for the sterilization of many groups, including people with physical and mental illness and with certain criminal convictions.[25] It is also recognized that the prison as an institution was changed and shaped by the eugenics movement.[26] But habitual offender sentencing laws themselves have been overlooked as a feature of the eugenics movement.[27]

Although the literature on habitual offender laws has yet to attribute them to the eugenics movement, and the literature on eugenics has not accounted for habitual offender laws as a recognized tool of eugenics, there is a growing body of scholarship that traces *other* features of the contemporary criminal legal system to eugenics specifically, and to the early 1900s progressive era more broadly. Laura Appleman, for example, argues that key features of modern mass incarceration can be attributed to the widespread institutionalization of people with mental and physical disabilities that occurred during the Progressive Era.[28] In a study of a California Youth Correctional Facility, Miroslava Chávez-García documents the evolution of eugenic ideas from explicit scientific theories of racial types in the early 1900s to risk-assessment

22. Thomas C. Leonard, Illiberal Reformers: Race, Eugenics & American Economics in the Progressive Era (2016); Paul A. Lombardo, Three Generations, No Imbeciles: Eugenics, the Supreme Court, and Buck v. Bell (2022).

23. *See, e.g.*, Eric S. Fish, *Race, History, and Immigration Crimes*, 107 Iowa L. Rev. 1051 (2022) (describing the eugenic history of immigration laws passed in 1929); United States v. Carillo-Lopez, 555 F. Supp. 3d 996 (D. Nev. 2021) (recognizing the eugenic history underlying illegal entry and re-entry laws and holding that in light of that history the laws violate the Equal Protection Clause of the Fifth Amendment), *rev'd*, 68 F.4th 1133 (9th Cir. 2023), *cert. denied*, 144 S. Ct. 703 (2024).

24. *See, e.g.*, David J. Rothman, Conscience and Convenience: The Asylum and Its Alternatives in Progressive America (2017) (describing the eugenically-motivated reform movement that resulted in the long-term confinement of people with mental illnesses).

25. *See, e.g.*, Adam Cohen, Imbeciles: The Supreme Court, American Eugenics, and the Sterilization of Carrie Buck (2016) (telling the story of *Buck v. Bell* and the national movement for eugenic sterilization).

26. *See, e.g.*, Jonathan Simon, *The Return of the Medical Model: Disease and the Meaning of Imprisonment from John Howard to* Brown v. Plata, 48 Harv. C.R.-C.L. L. Rev. 217, 229 (2013) (writing that in the early 1900s "[t]he prison became a kind of eugenic asylum, expected not to transform its inmates, but to sort those who should be incapacitated from committing crimes and reproducing."); David J. Rothman, Conscience and Convenience: The Asylum and Its Alternatives in Progressive America (2017).

27. To be precise, there is acknowledgement that advocates of eugenics sought to *sterilize* people deemed habitual offenders. Some of those laws are sometimes referred to as "habitual offender laws." Here, I am arguing that what is overlooked in the literature is the use of long-term sentencing as a tool of eugenics.

28. Laura I. Appleman, *Deviancy, Dependency, And Disability: The Forgotten History of Eugenics and Mass Incarceration*, 68 Duke. L.J. 417, 460–73 (2018).

tools used today.[29] And Khalil Gibran Muhammad provides a history of the idea of Black criminality that extends to the late 1800s when crime statistics were used to reinforce false theories of genetic superiority and inferiority.[30]

In his historical account of the British penal system, David Garland captures a key lesson from the literature on the relationship between eugenics and the contemporary criminal justice system. He writes that although "eugenics disappeared from respectable political discourse, it did not disappear without trace."[31] "Many of its strategies, techniques and proposals" he continues, "were in fact to become inscribed in the new complex of social and penal regulation, though usually without acknowledgement, and in terms which are less embarrassingly explicit."[32]

While he is specifically describing the British penal system, his words apply equally well to the American experience with habitual offender laws. Although the eugenics movement has declined, its trace can be seen in the habitual offender laws that exist across the country. While habitual offender laws were originally described in explicitly eugenic terms in the early 1900s, they are now described in less embarrassing terms — described as having emerged fairly recently during the tough-on-crime era for the purpose of incapacitation. The remainder of this Article pulls apart that sanguine re-packaging and reveals habitual offender laws for what they are: one of the most significant and longest-lasting legacies of the eugenics movement.

29. Miroslava Chávez-García, States of Delinquency: Race and Science in the Making of California's Juvenile Justice System (2012).

30. Khalil Gibran Muhammad, The Condemnation of Blackness: Race, Crime, and the Making of Modern Urban America (2019). For additional literature on the relationship between eugenics and the contemporary criminal justice system, *see, e.g.*, Jonathan Simon, "*The Criminal is To Go Free:" The Legacy of Eugenic Thought in Contemporary Judicial Realism About Criminal Justice*, 100 B.U. L. Rev. 787 (2020) (describing the eugenicist origins of exclusionary rule limitations); Michael H. Tonry, Sentencing Fragments: Penal Reform in America, 1975-2025, 51–63 (2016) ("The reliance on criminal history embedded into American sentencing systems is a legacy of rehabilitative ideology's emphasis on predictive capacitation and rehabilitative potential"); Michael Willrich, *The Two Percent Solution: Eugenic Jurisprudence and the Socialization of American Law, 1900-1930*, 16 L. & Hist. Rev. 63 (1998) (noting that "historians of criminal justice have had surprisingly little to say about eugenics," and offering an account of the rise and legacy of "eugenic jurisprudence" in which legal institutions are aggressively mobilized in pursuit of eugenic goals.)

31. David Garland, Punishment and Welfare: A History of Penal Strategies 102 (Gower 1985).

32. *Id.*

II. Deeper Theoretical Roots

A. Criminality as a Heritable Trait

Before there could be habitual offender *laws*, there had to be "habitual offenders." What is a habitual offender? When the term was used in the late 1800s and early 1900s, the word "habitual" had a different meaning than it does today. Today, "habitual" means "of the nature of a habit; fixed by habit; existing as a settled practice or condition; constantly repeated or continued; customary."[33] In other words, something becomes habitual if it is something that you *do*. If you take an action a sufficient number of times, you do that action habitually. But as late as 1951, the Oxford English Dictionary defined "habitual" as something that is "inherent or latent in the mental constitution."[34] Thus, for the first half of the 1900s, "habitual" did not describe your conduct, but instead your content. To be a habitual anything was to be inherently that. Thus, a habitual criminal, when the term was adopted, was a person who was inherently criminal, or someone whose criminality was "latent in their mental constitution."[35]

This conception of habitual offenders as criminal-to-the-core was advanced in the late 1800s by Cesare Lombroso, a medic from Turin, Italy, who gathered human skulls from battlefields and then measured them.[36] He then compared his measurements with crime records and concluded that people who had committed more crimes had certain identifiable cranial features.[37] Audaciously, he boasted that he could look at a skull and determine whether the person was a criminal during their lifetime. As he understood it, crime was in the body. It was your content, not your conduct.

Lombroso's theory was not the first biological theory of crime, as phrenologists had argued decades earlier that crime emerged from features of the brain.[38] But while phrenologists assumed that criminality

33. *Habitual*, Oxford English Dictionary (2d ed. 1989).
34. *Id.*
35. *Id.*
36. Cesare Lombroso, Criminal Man (Mary Gibson & Nicole Hahn Rafter trans., Duke Univ. Press 2006) (1876).
37. *Id.* at 45–48, 91–93.
38. *See, e.g.*, Johann K. Spurzhiem, The Physiognomical System of Drs. Gall and Spurzheim, Founded on An Anatomical And Physiological Examination of the Nervous System in General, and of the Brain in Particular, and Indicating the Dispositions and Manifestations of the Mind (Baldwin, Cradock, and Joy 1815); Franz J. Gall, On the Functions of the Brain and of Each of its Parts: With Observations on the Possibility of Determining the Instincts, Propensities, and Talents, Or the Moral and Intellectual Dispositions of Men and Animals, by the Configuration of the Brain and Head (Marsh, Capen & Lyon 1835).

could be cured by tinkering with one's head (leading to horrific and ill-fated surgeries), Lombroso's theory was distinct because he claimed that for at least 40 percent of criminals, criminality was inherited and incurable.[39] "How can one expect to reform that which has been created over several generations!" Lombroso exclaimed.[40] He then quoted English prison wardens who claimed that "it is easier to transform a dog into a wolf than a thief into a gentleman."[41] This analogy to dogs and wolves exemplifies Lombroso's conception of "gentleman" and "criminals" as distinct species. Indeed, he wrote that criminals were a subspecies that had failed to fully evolve.[42]

Lombroso's theory of the habitual offender was racialized. "I cannot avoid pointing out" he wrote, how cranial features of habitual criminals "correspond to characteristics observed in normal skulls of colored and inferior races."[43] The implication of this was that people of color and so-called habitual criminals were both part of an inferior race. Lombroso conducted his research in the post-Civil War era and used his theory of criminality to give commentary on racial dynamics in the United States. Writing about the United States, he wrote, "the great obstacle to the negro's progress [in America] is the fact that there remain latent within him the primitive instincts of the savage."[44] Lombroso then elaborated on his theorized inferiority of Black people:

> notwithstanding that the garb and the habits of the white man may have given [the Black man] a veneer of modern civilization, he is still too often indifferent to and careless of the lives of others, and he betrays that lack of the sentiment of purity, commonly observed among savage races.[45]

Lombroso's racialized vision of the habitual offender played into American notions of blackness and criminality. As Khalil Gibran Muhammad has documented, crime statistics were also marshaled

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For a thorough account of biological theories of crime, *see* NICOLE RAFTER, THE CRIMINAL BRAIN: UNDERSTANDING BIOLOGICAL THEORIES OF CRIME (2010).

39. LOMBROSO, *supra* note 36, at 108–09, 244.
40. *Id.* at 108.
41. *Id.* at 109.
42. *Id.* at 45–48, 91–93.
43. *Id.* at 45–48.
44. Cesare Lombroso, *Why Homicide Has Increased in the United States*, 165 N. AM. REV. 641 (1897), *reprinted in* DAVID M. HORTON & KATHERINE E. RICH, CRIMINAL ANTHROPOLOGICAL ARTICLES OF CESARE LOMBROSO PUBLISHED IN ENGLISH LANGUAGE PERIODICAL LITERATURE DURING THE LATE 19TH AND EARLY 20TH CENTURY 202–03 (2004).
45. *Id.*

during this era to link race and crime.[46] The release of the 1890 census showed that, although African Americans made up 12 percent of the population, they made up 30 percent of the prison population.[47] Muhammad notes that although these disproportionalities in the statistics were likely caused by racist policing, sentencing, substantive criminal law and other inputs, they were instead interpreted to imply Black criminality.[48]

Lombroso's work played right into this false narrative. He set forth a theory not just of the habitual criminal but further of Black genetic inferiority that was linked with criminality. During this post-Civil War era, as Thomas Gesset writes, "[m]any a racist awaited breathlessly some scheme of race classification which would withstand the testing methods of science."[49] In his racialized theory of the habitual criminal, Lombroso purported to provide just that. It was a flawed and harmful idea, but it had an eager, susceptible American audience.

B. Mainstream Adoption

Americans celebrated Lombroso's theory. As he put it, they were "almost fanatical" about it.[50] Evidence of this embrace is seen across American scholarship of the era. The first example is the speech of Yale Law School's first dean, Francis Wayland, in Atlanta, Georgia in 1887. In addition to calling for life imprisonment of habitual criminals, Wayland compared criminality to smallpox and described it as a "disease."[51] Simeon Baldwin, another Yale University professor as well as Connecticut's Governor and Supreme Court Chief Justice, published a paper that same year called "How to Deal with Habitual Criminals."[52] In the paper, he endorsed Lombroso's view that children are "bred" into crime.[53]

William Trumbull, a third Yale professor, made a similar argument when he quoted Dr. John Morris who wrote that there is "a crime

46. Khalil Gibran Muhammad, The Condemnation of Blackness: Race, Crime, and the Making of Modern Urban America 5 (2019).
47. *Id.* at 4.
48. *Id.*
49. Thomas F. Gossett, Race: The History of an Idea in America 82–83 (Oxford 1997) (1963).
50. Cesare Lombroso, *Introduction* to Gina Lombroso-Ferrero, Criminal Man According to the Classification of Cesare Lombroso xi (G.P. Putnam's Sons 1911).
51. Wayland, *supra* note 1, at 193.
52. Simeon Baldwin, *How to Deal with Habitual Criminals*, 22 J. Soc. Sci. 162 (1887).
53. *Id*. at 163.

diathesis, just as there is a disease diathesis."[54] "[T]hat is," Morris elaborated, "there are men born with crime predispositions, just as there are men born with an inheritance of struma, syphilis, or insanity."[55] Trumbull then endorsed Lombroso's conclusion that criminality could not be cured. "Cure," he wrote, "is almost hopeless; arrest of disease is all that we can hope to secure."[56] Charles Henderson, a Professor at the University of Chicago, endorsed Lombrosian theory when he concluded in 1901 that "the primary factor" in determining who will commit crime is "racial inheritance, physical and mental inferiority, barbarian and slave ancestry and culture."[57]

These works demonstrate that influential American academics accepted and promoted Lombroso's theory that criminality was a heritable trait. The same can be said for influential American judges. The Harvard Law School professor and would-be Supreme Court Justice Oliver Wendell Holmes aligned himself with Lombrosian theory in his oft-assigned 1897 speech "The Path of the Law" which was published by the Harvard Law Review.[58] He said: "If the typical criminal is a degenerate, bound to swindle or murder by as deep seated an *organic necessity* as that which makes the rattlesnake bite . . . he cannot be improved."[59] Thus, just as Lombroso compared thieves to dogs, who are incapable of changing their species status, Holmes analogized criminals to snakes who bite to demonstrate that criminality lives at the unchangeable core of genetic material.[60]

Justice Holmes's colleague Justice Benjamin Cardozo also adopted and spread Lombrosian theory. In a lecture in 1929 to an audience of New York doctors entitled "What Medicine Can Do for Law," Cardozo described criminals as a "class" of "defectives" and concluded that their "redemption is hopeless."[61] He explained that, "for a large proportion of criminals . . . the percentage has yet to be determined . . . punishment for a period of time and then letting him free is like imprisoning a

54. William Trumbull, The Problem of Cain: A Study in the Treatment of Criminals 65 (Tuttle, Morehouse & Taylor, 1890) (quoting "Dr. John Morris, of Maryland" without additional citation).

55. *Id.*

56. *Id.*

57. Charles R. Henderson, Introduction to the Study of the Dependent, Defective, and Delinquent Classes and of Their Social Treatment 247 (D.C. Heath & Co., 2d ed. 1909).

58. Oliver Wendell Holmes, *The Path of the Law*, 10 Harv. L. Rev. 457, 460 (1897).

59. *Id.* at 470 (emphasis added).

60. *Id.*

61. Benjamin Cardozo, *Anniversary Discourse: What Medicine Can Do for Law*, 5 Bull. N.Y. Acad. Med. 581, 591 (1929).

diphtheria-carrier for a while and then permitting him to commingle with his fellows and spread the germ of diphtheria."[62]

This medicalized conception of criminality as heritable and incurable was also embraced, and generated, by doctors. Dr. George Savage claimed that moral insanity is inherited, and that "it is almost impossible to draw a definite line between the criminal and the person who is more truly morally insane."[63] Dr. William Noyes, who had read a translation of Lombroso's *Criminal Man*, described "the criminal as a distinct type of the human species."[64] Along similar lines, Dr. Samuel Strahan wrote that "the instinctive criminal is an abnormal and degenerate type of humanity."[65] The writings of these doctors show that Lombroso's conception of the criminal as a subspecies was not just accepted among lawyers and judges but also within the medical community.

Popular publications told a similar story but did so with perhaps even more color and cruelty. One popular press book described "criminals" as "the imperfect, knotty, knurly, worm-eaten, half-rotten fruit of the race."[66] The book endorsed Lombroso's claim that "a large proportion" of prisoners "were born to be criminals."[67] The author, Henry Boies, was not a fringe figure but instead a prominent leader in Pennsylvania, serving as a member of the Board of Public Charities, the Lunacy Committee, and the Prison Discipline Society.[68] The authors of the textbook *A Civic Biology*, which was popularized by the Scopes trial, informed their readers that genetically defective people spread "disease, immorality, and crime to all parts of this country" and suggested that the country could only save itself by segregating these people to celibate asylums.[69]

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62. *Id.* at 591. Justice Cardozo puts this statement in quotations and attributes it to an "author." At the conclusion of the quotation, he cites three sources without specifying which is the author of which quotation. The sources are, as he states them, "S.W. Bandler, *The Endocrines*, p. 266; Berman, *The Glands Regulating Personality*, p. 310; Schlapp and Smith, *The New Criminology*, p. 270."

63. George Savage, *Moral Insanity*, 27 J. MENTAL SCI. 147, 152 (1881).

64. William Noyes, *The Criminal Type*, 24 J. SOC. SCI. 31, 31 (1887); *see also* NICOLE RAFTER, THE CRIMINAL BRAIN: UNDERSTANDING BIOLOGICAL THEORIES OF CRIME 97 (2010) (providing evidence that Dr. Noyes read Lombroso).

65. SAMUEL STRAHAN, MARRIAGE AND DISEASE: A STUDY OF HEREDITY AND THE MORE IMPORTANT FAMILY DEGENERATIONS 283 (Kegan Paul, Trench, Trubner, & Co. 1892).

66. HENRY BOIES, PRISONERS AND PAUPERS: A STUDY OF THE ABNORMAL INCREASE OF CRIMINALS, AND THE PUBLIC BURDEN OF PAUPERISM IN THE UNITED STATES, THE CAUSES AND REMEDIES 266 (1893).

67. *Id.* at 171–72.

68. Philip Jenkins, *Eugenics, Crime and Ideology: The Case of Progressive Pennsylvania*, 51 J. MID-ATLANTIC STUD. 64, 69 (1984).

69. GEORGE WILLIAM HUNTER, A CIVIC BIOLOGY 263 (1914).

These theories of the habitual offender as genetically tainted lasted well into the 1900s. An article published in a 1914 medical journal summarized the prevailing beliefs as follows: "That a criminal father should beget a child pre-destined to criminality is a foregone conclusion."[70] In a similar vein, the Cornell Law Review published an article in 1929 asserting that "the criminal is a special type of individual capable of an accurate description as a species."[71] These theories that germinated in books, law review articles, and medical journals would soon come to life in habitual offender legislation across the country.

III. From Eugenic Theory to Legislation

A. Proposals for Barring Reproduction

Eugenicists did not assert that every person who committed a crime was genetically a criminal. Rather, there was a distinction drawn between those who were genetically criminal and those who were not. A key diagnostic criterion that emerged to distinguish the two groups was the repeated commission of crime. Thus, someone who committed multiple crimes was, per this theory, very likely to be genetically criminal and therefore deemed a "habitual criminal." This meant, per the prevailing theory, that the individual would also continue committing crimes, and worse, spread this genetic affliction to their offspring.

This set of beliefs prompted calls to identify "habitual criminals" and prevent them from reproducing. "The extinction of the criminal class," wrote Charlton Lewis in the Yale Law Journal, "[is an] ideal[ ] to be kept in view, just as the elimination of disease must be the perpetual aim of medical science[s]."[72]

Eugenicists had more than one tool at their disposal to extinguish the criminal class. One method was preventing the mixing of the "species." In other words, preventing non-habitual criminals from marrying and reproducing with habitual criminals. The infamous anti-miscegenation scheme struck down in *Loving v. Virginia*, for example, also contained an often-overlooked prohibition on marrying habitual criminals. The application for a marriage license that was used under

70. W.S. Hall, *The Relation of Crime to Adolescence*, 15 BULL. AM. ACAD. MED. 86, 87 (1914).

71. J.A. Royce McCuaig, *Modern Tendencies in Habitual Criminal Legislation*, 15 CORNELL L. REV. 62, 82 (1929) (quoting Kenneth Gray, *Some Medical Studies of Persistent Criminality* (further citation not included)).

72. Charlton T. Lewis, *The Indeterminate Sentence*, 9 YALE L.J. 17, 29 (1899).

the Virginia scheme required grooms to declare that "neither is she nor am I a habitual criminal."[73]

But the primary tools for extinguishing the "criminal class" were found in criminal law. "*The penal code is a eugenic instrument*" wrote one author uncritically in the Journal of Criminal Law & Criminology.[74] Using the penal law as a eugenic instrument, however, still left a number of options available. One law review article published in 1914 described the top two tools available for eugenicists trying to stop reproduction as "1. Life segregation (or segregation during the reproduction period.) [and,] 2. Sterilization."[75] Given this choice, a debate ensued as to which was preferable.

1. Long Prison Sentences

From the beginning, Lombroso advocated for option 1 — long prison sentences. "Born criminals must be interned in special institutions" he wrote, "to gradually reduce that not inconsiderable proportion of criminality that stems from heredity factors."[76] This was a popular view. Pennsylvania prison administrators wrote in 1907 of "the desirability of restricting the liberty and power of degenerates to transmit their criminal propensities to unfortunate progeny."[77] In order to "protect society" by the "permanent imprisonment" of habitual criminals, the Ohio Board of Charities proposed in 1892 to use "indefinite sentences" for members "of the incorrigible class."[78]

Charles Darwin's son, Leonard Darwin, who used his father's theory of natural selection to underwrite and advance a program of eugenics, argued that long sentences were necessary because short sentences might even increase the reproduction of habitual offenders by giving them more sexual drive upon release. In his words: "The eugenist condemns our existing system whereby the habitual criminal is subjected to numerous short imprisonments, because not only does

73. *See* Application for Marriage License, Rockbridge County (Va.) Clerk's Correspondence, 1912–1943, (Local Government Records Collection, Rockbridge County Court Records, Library of Virginia).

74. Giulio Q. Battaglini, *Eugenics and the Criminal Law*, 5 J. Crim. L. & Criminology 12, 15 (1914) (emphasis in original).

75. Joel D. Hunter, *Sterilization of Criminals*, 5 J. Am. Inst. Crim. L. & Criminology 514, 526 (1914).

76. Lombroso, *supra* note 36, at 348.

77. Inspectors of the State Penitentiary for the Eastern District of Pennsylvania, 78th Ann. Rep. 5 (1908).

78. Anthony Grasso, Punishment And Privilege: The Politics of Class, Crime, And Corporations In America 71 (2018) (unpublished manuscript) (on file with author) (quoting Ohio State Board of Charities, Sixteenth Ann. Rep., 37–38, 49, 404).

it not tend to lessen the number of his progeny, but is, indeed, likely to increase his racial productivity by, from time to time giving him renewed vigour."[79]

Academics propelled such proposals. Harvard Law School instructor Bernard Glueck asserted that "incorrigibles have to be dealt with in only one way, and that is permanent segregation and isolation from society."[80] A 1923 textbook which included a chapter on "The Defective Criminal," put an altruistic spin on Glueck's punitive proposal, asserting that in addition to stopping habitual offenders from procreating, "permanent segregation . . . may be the kindest and most efficient form of treatment."[81]

Others, however, adopted a Mendelian view of genetics and suggested that once a criminal was cured during their lifetime, they could be allowed to reproduce because criminality would no longer spread to their offspring. Thus, the prison sentence need not be for life, but just long enough for cure. The prominent Pennsylvania figure Henry Boies, for example, argued that criminals should not reproduce *until they are rehabilitated* so that their children do not inherit criminal tendencies.[82] He nonetheless still argued that three convictions, regardless of severity, warranted life incarceration.[83]

Simeon Baldwin, the Yale professor turned Connecticut Governor and Connecticut Supreme Court Justice who embraced Lombroso's theory that children are "bred" into crime, argued merely for a sentence of life *supervision*, rather than imprisonment.[84] But his colleague Francis Wayland rejected that idea for fear of spreading the disease of criminality while individuals were out on supervision. "If again it be urged that police supervision, after release, would avert the danger," he wrote, referring to Baldwin's proposal without naming him specifically:

> I answer that it is far more easy, wise and safe, to exercise this supervision within prison walls. The authorities of a hospital might, with just as much show of reason, release a small-pox patient in the most contagious period of that dreaded disease, and then provide that, while the dangerous symptoms continued, he should remain under supervision . . . . I believe that there is but one cure for this great and

79. Leonard Darwin, *The Habitual Criminal*, 6 Eugenics Rev. 204, 212–13 (1914).

80. *See* David J. Rothman, Conscience and Convenience: The Asylum and Its Alternatives in Progressive America 71–72 (2017).

81. Ernest Bryant Hoag & Edward Huntington Williams, Crime Abnormal Minds and the Law 5–6 (1923).

82. Boies, *supra* note 66, at 179.

83. *Id*. at 186–90.

84. Baldwin, *supra* note 52, at 168.

> growing evil, and that is to be found in the imprisonment for life of the criminal once pronounced "incorrigible".[85]

This response by Dean Wayland reveals how the conception of criminality as contagious and incurable translated specifically to proposals for life imprisonment. If you truly believed that crime spread like a disease, and that it was not curable, then life imprisonment had a particular appeal to it. The same held true for those that believed that criminality was not just contagious and incurable, but also heritable. By imprisoning individuals for life you were not just protecting the current population, but also future populations by preventing reproduction. This is all to say that if you accept the premises that eugenicists proffered — which we do not — you can see fairly easily how they came to their proposed solution of life imprisonment. It seemed to solve all of their concerns. Sterilization, on the other hand, only solved the problem of genetic transmission.

2. Sterilization

In Dr. A.J. Oschner's paper *Surgical Treatment of Habitual Criminals*, he started with the premise that "[i]t has been demonstrated beyond a doubt that a very large proportion of all criminals, degenerates and perverts have come from parents similarly afflicted."[86] He then cited Lombroso: "It has also been shown, especially by Lombroso, that there are certain inherited anatomic defects which characterize criminals, so that there are undoubtedly born criminals."[87] Lastly, he claimed that "statistics show (E. Bleuler, Lombroso, etc.) that fully three-fourths of all crimes are committed by habitual criminals."[88]

This set of facts motivated Dr. Oschner to find a method to eradicate habitual offenders. "If it were possible to eliminate all habitual criminals from the possibility of having children," he wrote, "there would soon be a very marked decrease in this class, and naturally, also a consequent decrease in the number of criminals from contact."[89] His proposed method was a vasectomy, which he recommended not just

85. WAYLAND, *supra* note 1, at 193–94.
86. A.J. Ochsner, *Surgical Treatment of Habitual Criminals*, 32 J. AM. MED. ASS'N. 867, 867 (1899).
87. *Id*.
88. *Id*.
89. *Id.*

for criminals but also for "chronic inebriates, imbeciles, perverts and paupers".[90]

President Theodore Roosevelt also advocated for sterilizations of habitual criminals. "We have no business to permit the perpetuation of citizens of the wrong type," he wrote in 1913 in a letter to fellow eugenicist Charles Davenport.[91] He elaborated on this point in a published article a year later. "I wish very much," he wrote, "that the wrong people could be prevented entirely from breeding; and when the evil nature of these people is sufficiently flagrant, this should be done."[92] And finally, he offered his proposal for how they should be prevented from breeding: "[c]riminals should be sterilized and feeble-minded persons forbidden to leave offspring behind them."[93] Just as Supreme Court Justices had adopted the theory of the habitual offender, a President publicly endorsed the attendant policy proposals.

At the end of the day, eugenicists did not have to choose between sterilization and life sentences. For the most part, they took the belt and suspenders approach. A 1913 report concluded that "it is not a question of segregation *or* sterilization, but segregation *and* sterilization."[94] The prominent eugenicist Charles Davenport argued that either approach would work, writing that "incurable and dangerous criminals . . . may under appropriate restrictions be prevented from procreation — either by segregation during the reproductive period or even by sterilization."[95]

Earnest Hooton, an anthropology professor at Harvard University, agreed. He wrote that because criminals are "organically inferior," they can only be eliminated "by the extirpation of the physically, mentally and morally unfit, or by their complete segregation in a socially aseptic environment."[96] And in 1922, Chief Justice Harry Olson of the Chicago Municipal Court declared that "the two theories of segregation and sterilization are not antagonistic, but both may be invoked."[97] As the following section shows, eugenicists got their way — *both* their ways.

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90. *Id.* at 868.

91. Letter from Theodore Roosevelt, President of the United States of America, to Charles B. Davenport, Director, Cold Spring Harbor Laboratory, (Jan. 3, 1913) (on file with Am. Phil. Soc'y).

92. Theodore Roosevelt, *Twisted Eugenics*, 106 Outlook 30, 32 (1914).

93. *Id.*

94. Henry H. Goddard, Sterilization and Segregation 11 (1913) (emphasis in original).

95. C.B. Davenport, Eugenics: The Science of Human Improvement by Better Breeding 33–34 (1910).

96. Ernest A. Hooton, The American Criminal: An Anthropological Study 309 (1939).

97. Harry Olson, *Introduction* to Harry Hamilton Laughlin, Eugenical Sterilization in the United States vi (1922).

B. Proliferation of Habitual Offender Laws

In the first half of the 1900s, habitual offender laws and sterilization laws passed rapidly across the country. Indiana passed the first sterilization law in 1907,[98] and California passed the second in 1909.[99] In 1911, Governor Woodrow Wilson signed New Jersey's sterilization bill, which reportedly acknowledged the "power of heredity in criminals" and targeted at "the hopelessly defective and criminal classes."[100] By 1933, twenty-seven states had sterilization laws.[101] Many of these laws targeted "habitual criminals" or "confirmed criminals,"[102] such as Iowa's law which required sterilization upon a second felony conviction.[103]

The passage of habitual criminal laws followed a similar trajectory, and often states tried to pass both sterilization laws and habitual criminal laws at the same time. New York passed a habitual criminal law in 1907 that required a life sentence upon a fourth conviction.[104] Among the supporters of the law was the New York State Board of Charities, which advocated for it on eugenic grounds. In their publications, they described habitual criminals as a "distinct class" in need of permanent segregation, and they cited to Lombroso for that proposition.[105] They celebrated that the habitual criminal law would provide "permanent detention" to "those who by defect of character or constitution" required containment.[106] Most directly, they wrote that "incorrigible offenders should be permanently segregated by the state."[107]

Connecticut — where Yale University professors had been sounding the alarms about "incorrigible offenders" for decades — passed a habitual offender law in 1918, called The Incorrigible Act of Connecticut.[108] The act imposed, for a third felony conviction, an additional sentence of 25 years after the individual concluded the original sentence for the third crime.[109] In 1923, California passed a habitual offender law that mandated that "every person convicted . . . of any felony who shall previously have been *three times* convicted . . .

98. Hunter, *supra* note 75, at 515.
99. Act of April 26, 1909, ch. 720, 1909 Calif. Sess. Laws 1093.
100. *Gov. Wilson Signs the Sterilization Bill*, N.Y. Trib., May 4, 1911, at 1.
101. E.S. Gosney, *Eugenics in California*, N.Y. Times, Jan. 14, 1934, at E5.
102. Hunter, *supra* note 75, at 514–15.
103. *Id.* at 515.
104. Act of July 19, 1907, ch. 645, 1907 N.Y. Sess. Laws 1494–95.
105. Grasso, *supra* note 78, at 330–31.
106. *Id.* at 330.
107. *Id.*
108. Conn. Pub. Acts § 6502 (1930).
109. *Id.*

of robbery, burglary, rape with force and violence, arson or any of them, shall be punished by imprisonment in the state penitentiary for not less than life."[110]

The momentum continued to build throughout the first half of the century. Twenty-three states adopted habitual criminal laws between 1920 and 130 and by mid century, 42 states had them.[111] Professor Anthony Grasso has categorized the habitual offender laws in force at that time. According to his count, 13 states gave life sentences for three felonies, 15 states gave life sentences for 4 felonies, 1 state gave life sentences for a fifth felony, and three states allowed for life sentences on a second felony.[112] The remaining 11 states had increased terms of confinement but did not allow for life sentences for repeat convictions.[113]

The most famous of these habitual offender laws was New York's "Baumes Law," which was the 1927-update to its original 1907 habitual offender law.[114] While the original law left open the possibility for parole, the Baumes Law removed that provision, and also removed judicial discretion.[115] Thus, the law mandated life sentences for any individual already convicted of three felonies.[116] And, for reference, stealing more than 50 dollars was a felony at the time.[117]

The law was named after its primary legislative proponent, New York State Senator Caleb Baumes. His views on the law underscore the link between eugenic theory and the passage of the law. As he told it, the law targeted individuals who were "incurable" and "non-reformable."[118] "When a man has been convicted of four serious crimes," he elaborated "he has furnished abundant-yes, positive proof that he is incurable; . . . He is an habitual criminal, a menace to society, and as such we say should be segregated from society for the benefit of society and it may be for his own benefit as well."[119] In addition to echoing eugenic language about "incurable" habitual criminals, this quote from

110. Act of May 5, 1923, ch. 111, sec. 1 1923 Calif. Sess. Laws 237 (emphasis added).
111. George K. Brown, *The Treatment of Recidivists in the United States*, 23 Can. B. Rev. 640, 642 (1945); Grasso, *supra* note 78, at 333 fig.6.4.
112. *Id.*
113. *Id.*
114. Luther S. Cressman, *New York's Bludgeon Law*, 127 Am. Rev. Revs. 77, 77 (1928).
115. *Id.*
116. *Id.*
117. *Id*. at 79.
118. Caleb J. Stevens, *Nomos and Nullification: A Coverian View of New York's Habitual Offender Law*, 1926 to 1936, 45 Am. Crim. L. Rev. 427, 443 (2019) (quoting Caleb H. Baumes, *Baumes Laws and Legislative Program in New York*, *in* The Reference Shelf: The Baumes Laws, 95, 99 (Julia E. Johnson ed., 1929)).
119. Harry R. Posner, *Recent Criminal Cases*, 21 Am. Inst. Crim. L. & Criminology 607, 615 (1930) (quoting Caleb H. Baumes 53 Reports of N. Y. Bar Assn. 91 (1930)).

Senator Baumes also illuminates the way that convictions were used diagnostically to identify habitual criminals, such that the punishment was not for the conduct, per se, but rather for the innate criminality that the conduct revealed.

Senator Baumes also gave explicit credit to the intellectual movement that preceded him, noting that the law was simply "carrying into effect what criminologists, social workers, [and others] . . . have been urging for some years, namely, that our laws and our punishments should be made to suit the criminal, not the crime."[120] Lombroso, in 1886, attributed criminality to the core of personhood, rather than to the act of committing crime. In Senator Baumes' use of that same conception in 1927, we can see how Lombroso's theory spread in the intervening 50 years and ultimately became instantiated in law.

C. Judicial Support

Courts routinely upheld habitual offender laws, and they used eugenic terminology and theory when they did so. Though habitual offender laws would eventually be challenged under the Eighth Amendment (unsuccessfully), the Eighth Amendment was not incorporated against the States during this earlier wave of habitual offender legislation.[121] The most common challenge, instead, was a double jeopardy challenge. The argument was that by being sentenced to more prison time on the basis of a previous conviction, the defendant was being punished twice for the same conduct.

The United States Supreme Court rejected this double jeopardy argument, and it therefore gained little traction. In *Carlesi v. People of the State of New York*, the Court faulted the plaintiff, who was challenging his habitual offender sentence on double jeopardy grounds, for assuming that the habitual offender punishment amounted to "additional punishment on crimes for which he had already been convicted."[122] According to the Court, the statute "does no such

120. Victoria Nourse, *Rethinking Crime Legislation: History and Harshness*, 39 TULSA L. REV. 925, 931–32 (2004) (quoting *The Baumes Laws* 89 (Ref. Shelf Vol. 6, Series No. 3, Julia E. Johnsen compiler, H.W. Wilson Co. 1929)).

121. *See, e.g.*, Harmelin v. Michigan, 501 U.S. 957 (1991) (holding that the Eighth Amendment's Cruel and Unusual Punishment Clause did not prohibit a sentence of life without the possibility of parole for the possession of cocaine); Robinson v. California, 370 U.S. 660 (1962) (holding that the Eighth Amendment was incorporated against the states and that it prohibited the criminalization of drug addiction).

122. Carlesi v. New York, 233 U.S. 51, 58 (1914) (quoting McDonald v. Massachusetts, 180 U.S. 311 (1901)).

thing."[123] Instead, as the Court framed it, under habitual offender laws, "the punishment is for the new crime only, but is heavier if he is an habitual offender."[124] If you read that sentence a few times, it reveals itself to be self-contradictory. In essence, as we would read it today, the Court is saying that the punishment is for the new crime only, but is heavier if the individual committed previous crimes. It seems hard to maintain then that the punishment is for the new crime only.

We can only make sense of the Court's words if we remember that at the time, a habitual criminal was not somebody who committed multiple crimes, but rather someone who was *innately criminal*. Under those terms, the Court is saying that they are not being punished for past crimes, but for who they are, as a genetically infected habitual criminal.

Thus, the Court denied the double jeopardy claims by relying on its characterization of the punishment as one against status — the status of being a habitual criminal.[125] Indeed, the Court directly stated that one was being punished not for previous conduct, but for *being* a habitual criminal. And that meant further that being a habitual criminal was not committing multiple crimes, but something else. Crime, as the Court framed it, was merely a way to reveal or diagnose one's deeper, criminal self. The Court therefore embraced the eugenic theory of the habitual offender as someone who is criminal to their core, rather than someone who has committed three crimes. The Court also affirmed the idea that status could be punished. Fifty years later the Court banned the criminalization of status in *Robinson v. California*, but it has not revisited habitual offender laws on those grounds.[126]

State courts also affirmed habitual offender laws using eugenic logic. In 1928, Evelyn Rosencrantz passed four bad checks and was sentenced to life without parole under California's habitual offender law.[127] Ms. Rosencrantz raised a double jeopardy claim and in reviewing it, the Supreme Court of California launched into a gratuitous justification of habitual offender laws. "Society is not only entitled to be protected from the depravity of those *criminally inclined*," the Court wrote, "but it is the first and highest duty of government to secure to its citizens the enjoyment of their lives and property against the unlawful

123. *Id.*
124. *Id.*
125. *Id.* at 58–59.
126. Robinson v. California, 370 U.S. 660 (1962) (holding that the Eighth Amendment was incorporated against the states and that it prohibited the criminalization of drug addiction); *cf.* Grants Pass v. Johnson, 144 S. Ct. 2202, 2226 (2024) (permitting the criminalization of homelessness).
127. Ex Parte Rosencrantz, 271 P. 902, 903 (Cal. 1928).

aggression of the *criminal class*, who, if unrestrained, would despoil the law abiding both of life and property."[128] In this sentence, the language "criminally inclined" and "criminal class" — which mirrors Lombrosian terminology — implies that the Court understands criminality to be a trait, as opposed to viewing crime as an act.

In the next sentence, the Court writes, "when a person has proven himself *immune* to the ordinary modes of punishment, then it becomes the duty of the government to seek some other method to curb his criminal *propensities*."[129] The medical language "immune" and "propensities" suggests once more that the Court viewed habitual offenders as medically, biologically criminal — rather than as people who had committed criminal acts. It is no surprise, then, that the Court rejected Ms. Rosencrantz's argument, leaving her sentence of life imprisonment intact.[130] She died in San Quentin Prison on November 18, 1965.

Although courts largely upheld habitual offender laws, there is evidence that at least some lamented them. One New York county judge — William Allen — reportedly apologized to a man whom he just sentenced to life imprisonment for stealing a ride in a taxi. "You may be what is termed an habitual criminal," said the Judge, "but you do not seem to be of vicious nature."[131] "You are not a holdup man," he continued, "I am sorry I am compelled at this time to revoke the previous sentence I imposed and resentence you under sections 1942 and 1943 of the penal law known as the Baumes Laws."[132]

Another New York judge — Cornelius Collins — expressed outrage with the Baumes Law when he was forced to sentence a twenty-seven-year-old to life in prison. "I am asked to do a thing unconscionable from the standpoint of sociology," he wrote, "but the law is mandatory upon me."[133] "The only sentence I can impose under the Baumes Laws is to send this young man to prison for the rest of his natural life."[134] Two other judges reportedly decided to evade the law rather than sentence people to life, one of whom declaring that he was "unwilling to believe that the Baumes Laws should be interpreted to defeat their own purpose by substituting injustice for justice."[135]

128. *Id.* at 904 (emphasis added).
129. *Id.*
130. *Id.* at 905.
131. Cressman, *supra* note 114, at 77, 79 (1928).
132. *Id.*
133. *Id.*
134. *Id.*
135. *Id.* at 79.

Sterilization laws also faced legal challenges, the results of which are now well-known and often recounted. The most well-known case is *Buck v. Bell*, in which the United States Supreme Court held, in 1927, that sterilization was constitutional.[136] Justice Oliver Wendell Holmes wrote the 8-1 majority opinion, arguing that, "It is better for all the world, if instead of waiting to execute degenerate offspring for crime, or to let them starve for their imbecility, society can prevent those who are manifestly unfit from continuing their kind."[137] The opinion concluded as follows: "The principle that sustains compulsory vaccination is broad enough to cover cutting the Fallopian tubes. Three generations of imbeciles are enough."[138]

The Court did eventually strike down a sterilization law in *Skinner v. Oklahoma* in 1942, but it did not do so because of its eugenic logic.[139] Indeed, all nine justices agreed that certain bad traits, such as criminality, were heritable, and all but Justice Jackson were approving of some form of sterilization for people afflicted with these bad traits.[140] The basis for striking the legislation was that it applied unequally — only to individuals convicted of crimes involving moral turpitude, but not to individuals convicted of other crimes.[141] Thus, though the case left one sterilization law invalid, it affirmed the eugenic logic underlying them.

D. Nazi Adoption

The rise of Adolf Hitler in Germany was an inflection point for the American eugenics movement. This reality is revealed by a letter from one eugenicist to another in 1931. Henry Perkins, an advocate of eugenics from Vermont and the President of the American Eugenics Society, wrote to a famous eugenicist author, Henry Goddard, seeking support for the society. Goddard's reply reveals the influence that the rise of Hitler was anticipated to have American eugenics:

> I have your appeal for the Eugenics Society. Why not drop the whole works? I am getting tired of helping people who do not want to be helped. We have carried on now for several years and what have we accomplished? It was good fun as long as we could afford it, but now it is a different matter. If Hitler succeeds in his wholesale

136. Buck v. Bell, 274 U.S. 200, 205–08 (1927).
137. *Id.*
138. *Id.*
139. Skinner v. Oklahoma, 316 U.S. 535, 545 (1942).
140. *Id.* at 546–47 (Jackson, J., concurring).
141. *Id.* at 536–43.

> sterilization, it will be a demonstration that will carry eugenics farther than a hundred Eugenics Societies could. If he makes a fiasco of it, it will set the movement back where a hundred eugenic societies can never resurrect it.[142]

Two years after that letter was sent, the Nazi party rose to power in January of 1933. Within a year they passed the "Law Against Dangerous Habitual Criminals" which mirrored the American versions in substance.[143] The law allowed for life imprisonment for people deemed "incorrigible," which meant anyone convicted of three offenses.[144] The Nazi party argued for the law in explicitly eugenic terms, stating that it would advance the "eradication of permanently worthless human material from the national community."[145] In Nazi thought, criminals were but one group of many deemed genetically unworthy — including people that were Jewish, Gypsy, disabled, or gay.[146]

By 1942, thousands of Germans had been sentenced under Germany's habitual offender provision. One of these individuals was Franziska K. In 1936, she wrote to her family: "My dear ones, I am totally embittered, sitting here and not knowing why and for how long a[nd] still be treated as a convict. I will lose my mind if this goes on like that . . . alone a[nd] forsaken I have to sit here a[nd] waste away, this is a slow suicide."[147] Across the ocean, Evelyn Rosencrantz was suffering a similar fate under a similar law in California. And just like Ms. Rosencrantz, Franziska K. was never released.[148]

After World War II, Germany repealed its habitual offender law.[149] In the United States, however, that never happened. While eugenics fell into disrepute as a matter of theory, and while certain programs of eugenics have been repealed and repudiated and even apologized for, habitual criminal laws have endured and remain in force in 49 states.[150]

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142. Letter from Henry H. Goddard, Professor, Ohio State University, to Henry F. Perkins, Professor, University of Vermont (Jan. 27, 1934) (on file with University of Vermont Eugenics Survey of Vermont Papers).

143. *See* Nikolaus Wachsmann, *From Indefinite Confinement to Extermination "Habitual Criminals" in the Third Reich*, *in* Social Outsiders in Nazi Germany, 166 (Robert Gellately & Nathan Stoltzfus, eds., 2018).

144. *Id*. at 166, 168.

145. *Id*. at 168.

146. *Id*. at 171–82.

147. *See id.* at 170.

148. *Id*. at 169–70.

149. *Id*. at 182–83 (describing the repeal in Germany of the habitual criminal law sentencing system).

150. *See* Appendix (listing statutes by state).

IV. State Histories

When told at the national and international level, the story of habitual offender laws in the early 1900s reveals intellectual support for the theory of the habitual criminal as well as policy support for the resulting habitual offender legislation. What we cannot see when we look that broadly are the local political dynamics and motivations that enabled state-by-state legislative success. Offering that granular picture is the goal of this Part, which provides state-specific histories for California, Vermont, and Colorado. While research into all states is warranted to get a full picture of how and why these laws were passed across the country, for now these three states stand in as illustrative examples.

A. California

California enacted its first habitual criminal law in 1923.[151] At the time, habitual criminal laws were passing across the country and the eugenics movement was thriving in California. Central to the eugenics movement in California was the well-funded Human Betterment Foundation, which was founded in Pasadena and advocated for eugenic practices and conducted research on their efficacy.[152] Broadly speaking, the organization advocated for stopping the reproduction of individuals deemed undesirable. Among its members were Stanford's first president, David Starr; a Nobel Prize-winning physicist from Caltech, Robert Millikan; University of Southern California President Rufus von KleinSmid, and Stanford psychologist Lewis Terman.[153] In other words, the organization had the backing of some of the most influential people in California.

One of the key objectives of the Human Betterment Foundation was gathering information about California's eugenic practices to pass to other jurisdictions.[154] Dr. Fritz Lens, a Nazi eugenicist, corresponded with the founder of the Human Betterment Foundation, Ezra Gosney. At one point in their correspondence, Lens thanked Gosney for the

151. Act of May 5, 1923, ch. 111, §1 1923 Calif. Sess. Laws 237.

152. Kristen Spicer, *"A Nation of Imbeciles:" The Human Betterment Foundation's Propaganda for Eugenics Practices in California*, 7 Voces Novae 109,109 (2015).

153. Justin Ray, *California's Central Role in the Eugenics Movement*, L.A. Times (July 20, 2021, 5:30 AM), https://www.latimes.com/california/newsletter/2021-07-20/california-eugenics-reparations-sterilization-essential-california.

154. Spicer, *supra* note 152, at 109.

"new information about the sterilization particulars of California."[155] He added that, "these practical experiences are also very valuable for us in Germany."[156]

The eugenics scholar Paul Lombardo has described California's central role in eugenics nationally, as well the Human Betterment Foundation's central role in California's eugenics movement. "California is an enormous story in the history of eugenics," he writes, because of "the work of the Human Betterment Foundation, how it shaped public policy, and the links between major players in the private sector and state officials who carried out the work."[157]

Though the people at the Human Betterment Foundation were central to the eugenics movement in California, they were not alone in their beliefs and efforts. This is made evident from academic literature, speeches, and popular press from the era. For example, in 1921, University of California, Berkeley Professor Samuel Holmes embraced Lombroso's claim that "the born criminal is a brute or savage living among human beings who have advanced beyond his stage of development."[158] A 1924 opinion piece in a Los Angeles newspaper made a similar claim, arguing that, "[t]here is a type of habitual criminal devoid of the slightest desire to reform, and perhaps the capacity, even could the desire be awakened."[159] For habitual criminals, this author wrote, "there is no hope of reform."[160]

A practicing District Attorney from Humboldt County, California cast these views in extreme and explicitly Lombrosian terms, writing in 1929 that "the greatest number of criminals with whom the prosecutor has to deal, is born a criminal; he is a congenital criminal, he is defective from the day that he is delivered, and he will remain a criminal all of his life."[161] This makes clear that in less than 50 years, Lombroso's theories and terminology had successfully made the trip from his academic writings in Italy to scholars, the public, and people in positions of power in California, among other states. And just like Lombroso, a California Superior Court judge concluded in 1928 that "the only sensible and

155. Ray, *supra* note 153.
156. *Id*.
157. *Id*.
158. Samuel J. Holmes, The Trend of the Race: A Study of Present Tendencies in the Biological Development of Civilized Mankind 76 (1921).
159. *Id*.
160. *Combatting Crime*, San Pedro Daily News, (Nov. 13, 1925).
161. Anthony Grasso, Punishment And Privilege: The Politics of Class, Crime, And Corporations In America 314 (2018) (unpublished manuscript) (on file with author) (citing S.E. Metzler, "Records of the National Commission on Law Observance and Enforcement," October 26, 1929, RG 10, Box 66, National Archives II, College Park, MD).

proper way in the case of habitual criminals is to check the succession of the type" — *e.g.*, stop them from reproducing.[162]

As in the rest of the country, California had an internal debate about how to "check the succession of the type."[163] Some wanted sterilization, some wanted long sentences, and some wanted both (not to mention those who also pursued marriage restrictions). In California, the voices in favor of life sentences won out. Stanford alum Paul Popenoe was one of those voices. He was a board member of the American Eugenics Society and a researcher for the Human Betterment Foundation.[164] In 1920 he concluded that "habitual criminals" require "institutional care throughout life."[165] And he was clear about why habitual criminals required life sentences: "The essential element in segregation is not so much isolation from society, but separation of the two sexes."[166] For him, therefore, the explicit goal of habitual offender laws was barring reproduction.

California newspapers gave voice to similar concerns. In one article in the *San Pedro Daily News*, an author concluded that "events day by day lay emphasis on the need of the habitual criminal law."[167] The author elaborated that "society is infested by numerous individuals unfit to be at large, and so utterly dead to moral perception that there is no hope of reforming them."[168] Finally, the author lamented: "Los Angeles is over-run with miscreants deserving of life sentences."[169]

One reason for preferring life sentences to sterilization was the legal uncertainty facing sterilization laws. In the early 1920s, the United States Supreme Court had yet to affirm the constitutionality of sterilization laws, and state practitioners had their doubts. At least two courts had held that sterilization was unconstitutional when it was inflicted as punishment for a crime.[170] In light of these rulings, Ulysses Webb, the California Attorney General from 1902 to 1939, advised that sterilization was only lawful when used as a "health measure" as opposed to a punitive measure.[171]

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162. *Jurist Urges Sterilization of Criminals*, Press Democrat, Mar. 2, 1928.
163. *Id*.
164. Spicer, *supra* note 152, at 112.
165. Paul Popenoe & Roswell Hill Johnson, Applied Eugenics 190 (1920).
166. *Id*.
167. *Habitual Criminal Law*, San Pedro Daily News, April 4, 1927.
168. *Id*.
169. *Id*.
170. *See, e.g.*, Davis v. Berry, 216 F. 413 (S.D. Iowa 1914); Mickle v. Henrichs, 262 F. 687 (D. Nev. 1918).
171. Mark Galt, From Prevention to Protection: Policy, Practice and the Pitfalls of Surgical Sterilization in California, 1910–Present 39 (July 2019) (unpublished manuscript) (on file with author),

The concerns with sterilization and the eventual preference for life sentences can be observed in the trajectory of the state's legislative decisions. California started with a sterilization law in 1909. Under the "Asexualization Act," any "recidivist" who had been committed to California state prison "at least three times" could be sterilized.[172] Because sterilization was triggered by three convictions, it would be fair to call this California's original three strikes law.

But within a decade, the concerns about sterilization started to grow, as did the corresponding preference for life sentences. Popenoe wrote in 1920 that "it is desirable to restrict the reproduction of certain classes of gross defectives, and criminals, *by the method of segregation*."[173] "Sterilization," he wrote, "should be looked upon only as an adjunct, to be used in special cases."[174] Thus, for Popenoe, life sentences were the first choice, and sterilization was an acceptable back up or supplement. A newspaper article published in January of 1923 made a similar point and quoted the views of Chief Justice Harry Olson of the Chicago Municipal Court, who asserted that "the habitual criminal . . . should be barred from the production of offspring" and that "segregation [i]s a first step toward sterilization."[175]

California enacted its habitual criminal law four months later, in May of 1923.[176] The legislative body that voted for the bill is noteworthy because it was elected when the California Ku Klux Klan was in its heyday and was particularly active in electoral politics. At the time, the Klan had a symbiotic relationship with the eugenics movement. "As eugenics gained a foothold in the United States at the turn of the twentieth century," writes Jacqueline Antonovich, "the Ku Klux Klan embraced the latest in scientific racism to lend legitimacy to their cultural, political, and economic goals of white supremacy."[177]

For its part, the eugenics movement benefited from the energy and political organization of the KKK. To an extent, the legislators who passed California's habitual offender bill in 1923 were elected thanks to the KKK. Dennis von Brauchitsh, who studied the period, notes

available at https://radar.brookes.ac.uk/radar/items/1f881fbb-d34a-47b4-8e3e-e21c380adf84/1/ (citing "The Attorney General's Opinion on the Asexualization Law," California State Board of Health Monthly Bulletin 6 611–617 (1911)).

172. Act of April 26, 1909, ch. 720, sec. 2, 1909 Calif. Sess. Laws 1093.

173. Popenoe & Johnson, *supra* note 165, at 169.

174. *Id*. at 191.

175. *Sterilize Criminals Plea of Chicago Chief Justice*, Modesto Bee, Jan. 4, 1923.

176. Act of May 5, 1923, ch. 111, § 1, 1923 Calif. Sess. Laws 237.

177. Jacqueline Antonovich, *White Coats, White Hoods: The Medical Politics of the Ku Klux Klan in 1920s America*, 95 Bull. Hist. Medicine, 437, 462 (2021).

that "the Ku Klux Klan was heavily involved in the 1922 California elections."[178] In addition, one scholar has concluded that the political influence of the Klan was a "significant factor" in the 1922 election of Governor Friend William Richardson, who signed the habitual criminal law.[179]

Governor Richardson was himself alleged to be a Klan member. A Sacramento KKK leader claimed that Richardson was a Klansmen in the run up to the 1922 election.[180] Richardson neither confirmed nor denied the claim during the election, but once elected, he denied it.[181] Whether or not he was a member, the Klan did endorse him and rally for him. [182] "The election of Richardson is imperative if we are to remove the Jews, Catholics, and Negroes from public life in California," implored one member of the KKK at an Oakland rally.[183] Once elected, Richardson vetoed half of the bills sent to him. But when the habitual offender bill came to his desk, he signed it.[184]

California's habitual offender law was typical of the times: it permitted a life sentence upon conviction of a third felony, and required a life sentence upon conviction of a fourth felony.[185] The law was amended in 1927 to make it harsher, requiring a life sentence for a third conviction and life without parole for a fourth conviction.[186] California's habitual criminal law thus accomplished the stated goals of California's leading eugenicists: barring the reproduction of people deemed to be "habitual criminals." California's 1994 three strikes law — which is often described as the dawn of habitual offender laws — was merely a modification to the three strikes scheme that came into being from the eugenics movement 70 years earlier.

178. Dennis M. von Brauchitsch, The Ku Klux Klan in California: 1921 to 1924, 227 (1961) (unpublished manuscript) (on file with author).

179. *Id.*

180. David M. Chalmers, Hooded Americanism 124 (1965).

181. *Id.*

182. Chris Rhomberg, No There There: Race, Class, and Political Community in Oakland 59 (2004).

183. *Id.*

184. Robert Slayton, *White Collars and White Hoods: On "The Second Coming of the KKK"*, L.A. Rev. Books (Feb. 1, 2018), https://lareviewofbooks.org/article/white-collars-and-white-hoods-on-the-second-coming-of-the-kkk/.

185. Act of May 5, 1923, ch. 111, § 1 1923 Calif. Sess. Laws 237.

186. Act of May 19, 1927, ch. 634, § 1 1927 Calif. Sess. Laws 1066.

B. Vermont

Vermont passed its first habitual offender law on March 16, 1927.[187] Eugenics rose to prominence in Vermont 15 years earlier, in 1912, when then-Governor John A. Mead advocated for its use during his farewell address.[188] He first warned that a "degenerate" class was growing "out of all proportion to the normal class of the population."[189] The cause, he explained, was that "if a defective marry a defective" then "the offspring will inherit the taints of both parents."[190] "Many of the confirmed inebriates, prostitutes, tramps, and criminals that [fill Vermont's] penitentiaries, jails, asylums, and poor farms" he continued, "are the results of these defective parents."[191] He lamented that these individuals have "little or no hope of permanent recovery."[192]

The situation, as Governor Mead described it, presented two questions: "how best to restrain this defective class and how best to restrict the propagation of defective children."[193] He offered three solutions, which should by now be familiar to the reader: restrictive marriage legislation, long terms of incarceration, and a "surgical operation known as vasectomy."[194] As to incarceration, he conceded that it was necessary even though it would, in many cases, result in life-imprisonment of "unfortunates who are in no way responsible for their plight."[195] This empathy and absolution of guilt was characteristic of many eugenicists, who truly believed that habitual criminals inherited criminality and therefore bore no fault for their conduct. Nevertheless, they had to be quarantined and controlled.

Another Vermont leader, Don D. Grout, Superintendent of the Vermont State Hospital for the Insane, warned that "there are hundreds, probably thousands, in Vermont, who are simply breeding like rats and whose progeny are, intellectually, morally, and socially, worse than rats."[196] In so writing, he joined the ranks of Lombroso,

187. Act of March 16, 1927, Act. No. 128, 1927 Vermont Sess. Laws.
188. John A. Mead, Governor of Vermont, Farewell Address (Oct. 3, 1912).
189. *Id*.
190. *Id.*
191. *Id.*
192. *Id.*
193. *Id.*
194. *Id.*
195. *Id.*
196. Mercedes De Guardiola, *Segregation or Sterilization: Eugenics in the 1912 Vermont State Legislative Session*, Vermont Historical Society (Jan. 12, 2005, 1:11 PM) (citing MERCEDES DE GUARDIOLA, "VERMONT FOR THE VERMONTERS:" THE HISTORY OF EUGENICS IN THE GREEN MOUNTAIN STATE (2023)), https://vermonthistory.org/journal/87/VH8701SegregationOrSterilization.pdf

Justice Holmes, and others who compared criminals to animals. To deal with the problem as he imagined it, he urged "proper and intelligent selection" and concluded that "segregation or sterilization, whichever seems best in a given case — is the only remedy to prevent this, and the other states in the union, from becoming burdened and disgraced by these unfortunates."[197]

These were the seeds of Vermont's eugenics movement, which had fully flourished by the 1920s. The central figure in the growth of the Vermont eugenics movement was Henry F. Perkins, a University of Vermont professor who taught zoology and eugenics.[198] He also led Vermont's primary eugenics organization, the Eugenics Survey of Vermont, which studied and promoted eugenics.[199] The organization's first annual report included a multi-generational study of families deemed to be degenerate in Vermont. "Without making too positive an assertion," Perkins ventured at the end of the report, "I think we can safely say that in the sixty-two families that we have studied at any rate, 'blood has told,' and there is every reason to believe that it will *keep right on 'telling'* in future generations."[200] "Running water purifies itself" he concluded, but "[t]he stream of germ-plasm does not seem to."[201]

Putting these viewpoints into practice, Vermont legislators made two attempts at a sterilization bill. In 1912, just after Governor Mead's farewell address, the legislature passed a bill to sterilize "confirmed criminals," but the newly arrived Governor Allen Fletcher vetoed it due to concerns about its constitutionality.[202] During the 1927 legislative session, the Senate passed a sterilization bill but the bill did not gather sufficient votes in the House.[203] It is possible that the issue of constitutionality remained an obstacle because *Buck v. Bell* was not decided until after the House adjourned for the 1927 session.[204]

197. *Id.*

198. Vermont Public Records Division, The Papers of the Eugenics Survey of Vermont and the Vermont Commission on County Life 1 (March 1998) (on file with author).

199. *Id.*

200. Henry F. Perkins, Director of the Eugenics Survey of Vermont, Lessons from A Eugenical Survey of Vermont (Jan. 1927).

201. *Id.*

202. Nancy Gallagher, Breeding Better Vermonters: The Eugenics Project in the Green Mountain State 53 (1999).

203. *Id.*

204. *Compare* 274 U.S. 200 (1927) (date of decision listed as May 2, 1927), *with* Rawson C. Myrick, Sec'y of State, Vermont Legislative Directory Biennial Session 1929 197 (1929) (listing date of session adjournment of 1927 legislative session as March 25, 1927).

The Legislature did succeed, however, in passing a habitual offender sentencing bill in 1927. The law mandated life imprisonment for a fourth felony offense.[205] The legislative record is sparse as to how and why it was passed. But from the little that can be gleaned, it appears to be motivated by eugenics. The Senate Judiciary Committee minutes provide the most information, but that is merely a note that the bill was considered on January 25, 1927, and that "Senator Dana and Commissioner Dyer [were] heard."[206]

While there is no record of Senator Dana and his viewpoints, the record does show that Commissioner William H. Dyer was, at the time of his testimony in favor of the habitual criminal law, on the Eugenics Survey Advisory Committee.[207] Commissioner Dyer also vocally supported a sterilization law and, once it passed years later, oversaw its operation.[208] The Governor at the time, John E. Weeks, signed the habitual criminal bill into law on March 16, 1927.[209] Earlier in his career, when he was a judge, he urged the passage of the sterilization law for "confirmed criminals."[210] There is thus evidence to suggest that Vermont's eugenics movement advocated for and helped pass the state's habitual criminal law.

That 1927 version of the habitual criminal law remains in force in Vermont, close to one hundred years later. Small textual changes were made in 1971 and 1995, which are easiest to see tracked in the current statute below. The underlining represents words that have been added by amendment, and the strike through represents words that have been deleted by amendment:

> A person who, after having been three times convicted within this state, of felonies or attempts to commit felonies, or under the law of any other state, government or country, of crimes which if committed within this state would be felonious, commits a felony other than murder within this state, ~~shall~~ may be sentenced upon conviction of such fourth, or subsequent offense to imprisonment ~~in the state prison for the term of his natural~~ up to and including life.[211]

205. Act of March 16, 1927, Act. No. 128, 1927 Vermont Sess. Laws.

206. State of Vermont, Senate Judiciary Committee, Record of Committee Meetings (Jan. 13, 1927) (on file with author) (available at the Vermont State Archives, Box 3, Folder 133).

207. *The Eugenic Survey of Vermont: Participants & Partner*, Univ. of Vermont, https://www.uvm.edu/~eugenics/partnersf.html (last visited Feb. 25, 2025).

208. *Id.*

209. Journal of the Senate of the State of Vermont, Biennial Session 322 (1927) (on file with author) (available from the Vermont State Archives).

210. *Sterilization Bill Coming*, Bennington Evening Banner, Nov. 2, 1912.

211. *Compare* Act of March 16, 1927, Act. No. 128, 1927 Vermont Sess. Laws, *with* Crimes and Criminal Procedure Code, Vt. Stat. Ann. tit.13, § 11 (1995).

The takeaway is that there is very little textual change. Vermont's habitual criminal bill, which we can reasonably argue was motivated by eugenics, remains on the books, and remarkably, nobody seems aware of this or concerned about it. Although the Vermont General Assembly apologized for "eugenics" in 2021, the resolution only apologized for sterilization and made no mention of the state's eugenically motivated habitual offender law, which remains in force.[212]

C. Colorado

Colorado enacted its first habitual criminal law in 1929. For the decade prior, the state had tried but failed to pass a sterilization law. The first attempt at a sterilization law came in 1921, with a bill entitled "An Act to Prevent the Procreation of Confirmed Criminals, Idiots, Imbeciles, and Rapists."[213] Dr. Minnie Love, the "Excellent Commander" of the women of the Ku Klux Klan in Colorado and a State Representative, drafted the bill.[214]

The 1921 sterilization bill did not make it out of the House, and a similar effort failed in 1924. The General Assembly did get a sterilization bill through both chambers in 1927, but Governor William Herbert Adams vetoed it. [215] In his note accompanying the veto, he argued that segregation was preferable to sterilization. In his words, because the state had "facilities for segregation" readily available, "the end sought to be reached by the [sterilization] legislation can be obtained by the exercise of careful supervision of the inmates, without invoking the drastic and perhaps unconstitutional provisions of the act."[216] To translate that, Governor Adams suggested that "the end sought" — barring habitual criminals from reproducing — was better achieved with imprisonment than sterilization. Governor Adams thus concluded, as California had, that sterilization was unnecessarily "drastic" and even possibly unconstitutional.

One Colorado State Representative, Annah G. Pettee, viewed the Governor's veto of the sterilization bill as "the tragedy of the session."[217]

212. H.R.J. Res. 2, 116th Cong. (2021) (enacted). *Joint resolution sincerely apologizing and expressing sorrow and regret to all individual Vermonters and their families and descendants who were harmed as a result of State-sanctioned eugenics policies and practices* (Vt. 2021).

213. Michala Tate Whitmore, "Immediate Preservation of the Public Peace, Health and Safety": Colorado's History of Eugenic Sterilization 29 (Apr. 2020) (unpublished manuscript) (on file with author).

214. *Id.* at 27.

215. *Gov. Adams Vetoes Sterilization Bill*, Daily Times, Apr. 12, 1927, at 1.

216. *Id.*

217. *Legislative Council Plans Annual Luncheon*, Rocky Mountain News, Apr. 29, 1928, at 21.

She told supporters that this was a tragedy in light of the "rapid increase of the insane, feeble-minded and habitual criminal classes" throughout the state.[218] In lieu of a sterilization bill, she proposed the obvious alternative: a habitual offender sentencing bill. And the legislature succeeded in passing one two years later, in 1929.[219] The bill was modeled off of New York's Baumes Law.[220] As such, the bill imposed an exponentially longer sentence for individuals convicted of a third felony, and a mandatory life sentence upon conviction of a fourth felony.[221] The eugenic objective of stopping reproduction of habitual offenders was therefore achieved, and it was achieved without having to rely on the constitutionally-dubious method of sterilization, just as Governor Adams had wanted. When the bill came to his desk on April 18, 1929, he signed it.[222]

Conclusion

For the past 30 years, habitual offender laws have been understood as a product of the late 1900s tough-on-crime movement. This Article has put forth evidence suggesting instead that they are predominately a product of the early 1900s eugenics movement. A lingering, unanswered question, remains. Who cares? What is at stake in the origin story of habitual offender laws?

The amendment to the historical record could give rise to a number of political and legal arguments. Politically, some may argue that the eugenic history of habitual offender laws renders them intolerable and worthy of legislative repeal. One could imagine some legislators becoming uncomfortable supporting habitual offender laws once they recognize the history and intent of the laws. Beyond simply repeal, some might also argue that the eugenic history warrants state apologies and reparations for people serving sentences under habitual offender laws.

The deeper history of habitual offender laws could also prompt advocates to call on prosecutors to refrain from enforcing habitual offender laws in light of their eugenic past. Prosecutors have been fired for pursuing other practices associated with eugenics, but that

218. *Id.* at 21.
219. Act of Apr. 18, 1929, ch. 85, 1929 Colo. Sess. Laws 310.
220. *House Favors Crime Measure, 'Habitual Criminal' Proposal Modeled on Baumes Law in New York*, Rocky Mountain News, Mar. 3, 1927.
221. Act of Apr. 18, 1929, ch. 85, 1929 Colo. Sess. Laws 310.
222. *Id.*

same scorn is notably absent when prosecutors pursue sentences under habitual offender laws.[223]

Some advocates might use the eugenic *intent* of early habitual offender laws to highlight the eugenic *effect* of contemporary habitual offender laws. Data suggest that current habitual offender laws disproportionately prevent people of color from reproducing, an outcome that would have been viewed as a victory by the proponents of early habitual offender laws.[224]

Legally and constitutionally, it might be argued persuasively that the original purpose of habitual offender laws was racially discriminatory, and thus that current habitual offender laws violate the Equal Protection Clause.[225] Or that by targeting individuals deemed to be genetically criminal, the laws run afoul of the prohibition on status crimes.[226] Recognizing that the laws bar reproduction — in intent and effect — might also give rise to a claim that the laws infringe on a right to bodily autonomy and procreation. Some might argue that they are unconstitutional insofar as they can best be understood as sterilization by another means. Others might make non-constitutional legal arguments, and simply use this history at the trial level to ask prosecutors and judges to decline to apply habitual offender statutes.

This Article does not weigh in on these arguments because their strength depends on a number of contingent factors that cannot be known at this time. Some jurisdictions will have stronger evidence of eugenic intent than others. Some jurisdictions will have amended their habitual offender laws over the years more than others. State constitutional doctrines will also vary, as will the political environment and the tolerance for allowing eugenically-motivated laws to endure. And the strength of these arguments will of course depend on when they are made.

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223. Sheila Burke, *Prosecutor Fired Among Reports of Sterilization in Plea Deals*, AP News (April 1, 2015), https://apnews.com/article/tennessee-nashville-6d0939ec8bf3499a9a258338d7c0db4f.

224. A recent study of Washington State's habitual offender law found that Black people "are represented in the three strikes population at a rate more than 8 times greater than their population in the state." Melissa Lee & Jessica Levin, Justice is Not a Game: The Devastating Racial Inequity of Washington's Three Strikes Law 5 (2024).

225. For an example of an analogous argument, *see* United States v. Carillo-Lopez, 555 F. Supp. 3d 996 (D. Nev. 2021) (recognizing the eugenic history underlying illegal entry and re-entry laws and holding that in light of that history the laws violate the Equal Protection Clause of the Fifth Amendment), *rev'd*, 68 F. 4th 1133 (9th Cir. 2023), *cert. denied*, 144 S. Ct. 703 (2024).

226. *See* Robinson v. California, 370 U.S. 660 (1962) (holding that the Eighth Amendment prohibits the criminalization of drug addiction, and by implication the criminalization of status).

The history offered in this Article could also give rise to a number of scholarly projects. Most urgent would be careful research into the political and legislative history of each state where habitual offender laws were passed. It would then be useful to trace those laws forward through time to see how they have changed over the years and whether the legislators who made the changes were aware of or acknowledged the eugenic history. Finally, we will need more theoretical frameworks to make sense of how and why the history matters, and what consequences that may have on the political desirability and constitutionality of habitual offender laws.[227]

Lastly, the history offered in this Article provides a more honest explanation of habitual offender laws to those that have served habitual offender sentences or are currently doing so, and to their family and friends. It is natural when serving such a sentence to yearn for an explanation as to how it came to be that the state decided such a long sentence was warranted. This Article provides an answer. An unsettling one to be sure, but one that at least explains how we got here.

Whatever the future implications may be, this Article's contribution is a correction of the historical record. Habitual offender laws did not originate in the late 1900s as part of the tough-on-crime movement. They were alive and well in the early 1900s thanks to the theory and advocacy of the eugenics movement.

227. There is a lively theoretical literature on the relevance of history to contemporary constitutional questions. Reva Siegel offered a foundational account of how originally discriminatory law can develop a façade of new rules and rhetoric over time while still enforcing the same, original discriminatory status-regime. Reva B. Siegel, *"The Rule of Love": Wife Beating as Prerogative and Privacy,* 105 YALE L.J. 2117, 2178–80 (1996). Professor Jessica Clarke surveyed "lock-in" arguments, in which courts argue that they cannot strike legislation due to past discrimination for fear of locking the legislature into a permanent bar on that type of law. Jessica A. Clarke, *Explicit Bias*, 113 NW. U. L. REV. 505, 560–71 (2018). Melissa Murray has described and critiqued Justice Thomas's use of the history of eugenics to undermine the right to an abortion. Melissa Murray, *Race-ing* Roe*: Reproductive Justice, Racial Justice, and the Battle for Roe v. Wade*, 134 HARV. L. REV. 2025, 2062, 2086 (2021). David Super has offered a theory of "temporal equal protection" that would empower courts to consider the relationship between past treatment and present treatment when evaluating claims of discrimination. David A. Super, *Temporal Equal Protection*, 98 N.C. L. REV. 59, 61–64 (2019). Most recently, Professor Kerrell Murray has offered a broad framework for evaluating historical discriminatory taint and the strength of its relevance to today's constitutional and political questions. Kerrell Murray, *Discriminatory Taint*, 135 HARV. L. REV. 1190 (2022). All of these works, and others, will help answer the question of how this eugenic history matters for law and policy.

Appendix: Current Habitual Offender Laws

1. Alabama

Alabama's code has one section that implements a habitual offender scheme: Habitual felony offenders – Additional penalties, ALA. CODE § 13A-5-9.

2. Alaska

Alaska's code has one section that implements a habitual offender scheme: Prior convictions, AK. STAT. ANN. § 12.55.145.

3. Arizona

Arizona's code has three sections that implement habitual offender schemes: Repetitive offenders; sentencing, ARIZ. REV. STAT. ANN. § 13-703, Dangerous offenders; sentencing, ARIZ. REV. STAT. ANN. § 13-704, and Serious, violent or aggravated offenders; sentencing; life imprisonment, ARIZ. REV. STAT. ANN. § 13-706.

4. Arkansas

Arkansas's code has one section that implements habitual offender schemes: Habitual offenders—Sentencing for felony, ARK. CODE. ANN. § 5-4-501.

5. California

California's code has one section that implements a habitual offender scheme: Habitual criminals; enhancement of sentence, CAL. PENAL CODE § 667.

6. Colorado

Colorado's code has two sections that implement habitual offender schemes Habitual Burglary Offenders—punishment—legislative declaration, COLO. REV. STAT. ANN. § 18-1.3-804, and Punishment for habitual criminals, COLO. REV. STAT. ANN. § 18-1.3-801.

7. Connecticut

Connecticut's code has four sections that implement habitual offender schemes: Definitions; defense; authorized sentences; procedure, CONN. GEN. STAT. ANN. § 53a-40; Persistent offenders of crimes involving bigotry or bias. Authorized sentences, CONN. GEN. STAT. ANN. § 53a-40a; Persistent offenders of crimes involving assault, stalking, trespass, threatening, harassment, criminal violation of a protective order, criminal violation of a standing criminal protective

order or criminal violation of a restraining order. Authorized sentences, CONN. GEN. STAT. ANN. § 53a-40d; and Persistent operating while under the influence felony offender. Authorized sentences, CONN. GEN. STAT. ANN. § 53a-40f.

8. Delaware

Delaware's code has one section that implements a habitual offender scheme: Habitual criminal; life sentence, DEL. CODE. ANN. tit. 11, § 4214. (West).

9. District of Columbia

The District of Columbia's code has two sections that implement habitual offender schemes: Second conviction, D.C. CODE. ANN. § 22-1804 and Penalty for felony after at least 2 prior felony convictions, D.C. CODE. ANN. § 22-1804a.

10. Florida

Florida's code has one section that implements a habitual offender scheme: Violent career criminals; habitual felony offenders and habitual violent felony offenders; three-time violent felony offenders; definitions; procedure; enhanced penalties or mandatory minimum prison terms, FLA. STAT. ANN. § 775.084.

11. Georgia

Georgia's code has three sections that implement habitual offender schemes: Repeat offenders, GA. CODE. ANN. § 17-10-7; Possession, manufacturing, etc., of certain controlled substances or marijuana, GA. CODE. ANN. § 16-13-30, and Possession of machine guns, sawed-off rifles, sawed-off shotguns, or firearms equipped with silencers during commission of certain offenses; penalties, GA. CODE. ANN. § 16-11-160.

12. Hawaii

Hawaii's code has one section that implements a habitual offender scheme: Criteria for Extended Terms of Imprisonment, HAW. REV. STAT. ANN. § 706-662.

13. Idaho

Idaho's code has one section that implements a habitual offender scheme: Persistent violator—Sentence on third conviction for felony, IDAHO CODE. ANN. § 19-2514.

14. Illinois

Illinois's code has two sections that implement habitual offender schemes: General Recidivism Provisions, ILL. COMP. STAT. ANN. § 5-4.5-95 and Sentencing Guidelines for Individuals with Prior Felony Firearm-related or other Specified Conviction, ILL. COMP. STAT. ANN. § 5-4.5-110.

15. Indiana

Indiana's code has two sections that implement habitual offender schemes: Habitual offenders, IND. CODE § 35-50-2-8 and Repeat sexual offender, IND. CODE § 35-50-2-14.

16. Iowa

Iowa's code has two sections that implement habitual offender schemes: Minimum sentence—habitual offender, IOWA CODE § 902.8 and Enhanced sentencing, IOWA CODE § 901A.2.

17. Kansas

Kansas's code has two sections that implement habitual offender schemes: Aggravated habitual sex offender; sentence to imprisonment for life without the possibility of parole, KAN. STAT. ANN. § 21-6626 and Mandatory term of imprisonment of 25 or 40 years for certain offenders; exceptions, KAN. STAT. ANN. § 21-6627.

18. Kentucky

Kentucky's code has one section that implements a habitual offender scheme: Persistent Felony Offender Sentencing, KY. REV. STAT. ANN. § 532.080.

19. Louisiana

Louisiana's code has one section that implements a habitual offender scheme: Sentences for second and subsequent offenses, LA. STAT. ANN. § 529.1.

20. Maine

Maine does not have a habitual offender scheme.

21. Maryland

Maryland's code has one section that implements a habitual offender scheme: Mandatory Sentences for Crimes of Violence, MD. CODE. ANN. § 14-101.

22. Massachusetts

Massachusetts's code has one section that implements a habitual offender scheme: Punishment of Habitual Criminals, MASS. GEN. LAWS § 279-25.

23. Michigan

Michigan's code has three sections that implement habitual offender schemes: Subsequent felony, MICH. COMP. LAWS § 769.10; Punishment for subsequent felony of person convicted of 2 or more felonies; sentence for term of years as indeterminate sentence; restrictions upon use of conviction to enhance sentence, MICH. COMP. LAWS. § 769.11; and Punishment for subsequent felony of person convicted of 3 or more felonies; sentence for term of years as indeterminate sentence; restrictions upon use of conviction to enhance sentence; eligibility for parole; imposition of consecutive sentence for subsequent felony, MICH. COMP. LAWS. § 769.12.

24. Minnesota

Minnesota's code has two sections that implement habitual offender schemes: Increased sentences for certain dangerous and repeat felony offenders, MINN. STAT. § 609.1095, and Dangerous sex offenders; life sentences; conditional release, MINN. STAT. § 609.3455.

25. Mississippi

Mississippi's code has two sections that implement habitual offender schemes: MISS. CODE ANN. § 99-19-81 and MISS. CODE ANN. § 99-19-83.

26. Missouri

Missouri's code has one section that implements a habitual offender scheme: Prior felony convictions, minimum prison terms—prison commitment defined—dangerous felony, minimum term prison term, how calculated—sentencing commission created, members, duties—expenses—cooperation with commission—restorative justice methods—restitution fund, MO. REV. STAT. § 558.019.

27. Montana

Montana's code has two sections that implement habitual offender schemes: Life sentence without possibility of release, MONT. CODE. ANN. § 46-18-219 and Sentencing of persistent felony offenders, MONT. CODE. ANN. § 46-18-502.

28. Nebraska

Nebraska's code has one section that implements a habitual offender scheme: Habitual criminal, defined; procedure for determination; hearing; penalties; effect of pardon, NEB. REV. STAT. § 29-2221.

29. Nevada

Nevada's code has 3 sections that implement habitual offender schemes: Habitual criminals: Definition; punishment; exception, NEV. REV. STAT. § 207.010, Habitual felons: Definition; punishment, NEV. REV. STAT. § 207.012, and Habitually fraudulent felons: Definition; punishment, NEV. REV. STAT. § 207.014.

30. New Hampshire

New Hampshire's code has one section that implements a habitual offender scheme: Extended Term of Imprisonment, N.H. REV. STAT. ANN. § 651:6.

31. New Jersey

New Jersey's code has two sections that implement habitual offender schemes: Persistent offenders; sentencing, N.J. STAT. ANN. § 2C:43-7.1 and Criteria for sentence of extended term of imprisonment, N.J. STAT. ANN. § 2C:44-3.

32. New Mexico

New Mexico's code has three sections that implement habitual offender schemes: Habitual offenders; alteration of basic sentence, N.M. STAT. ANN. § 31-18-17, Three violent felony convictions; mandatory life imprisonment; exception, N.M. STAT. ANN. § 31-18-23, and Two violent sexual offense convictions; mandatory life imprisonment; exception, N.M. STAT. ANN. § 31-18-25.

33. New York

New York's code has three sections that implement habitual offender schemes: Sentence of imprisonment for second felony offender, N.Y. PENAL LAW § 70.06, Sentence of imprisonment for persistent violent felony offender; criteria N.Y. PENAL LAW § 70.08, and Sentence of imprisonment for persistent felony offender, N.Y. PENAL LAW § 70.10.

34. North Carolina

North Carolina's code has two sections that implement habitual offender schemes: Sentencing of Habitual Felons, N.C. GEN. STAT. § 14-7.6

and Life imprisonment without parole for a second or subsequent conviction of a Class B1 felony if the victim was 13 years of age or younger and there are no mitigating factors, N.C. GEN. STAT. § 15A-1340.16B.

35. North Dakota

North Dakota's code has one section that implements a habitual offender scheme: Dangerous special offenders—Habitual offenders—Extended sentences—Procedure, N.D. CENT. CODE. § 12.1-32-09.

36. Ohio

Ohio's code has two section that implement habitual offender schemes: Prison terms, OHIO REV. CODE ANN. § 2929.14, and Definitions, OHIO REV. CODE ANN. § 2929.01.

37. Oklahoma

Oklahoma's code has two sections that implement habitual offender schemes: Second and subsequent offenses after conviction of a felony, OKLA. STAT. § 51.1 and Second offense of rape in the first degree, forcible sodomy, lewd molestation or sexual abuse of a child, OKLA. STAT. § 51.1a.

38. Oregon

Oregon's code has one section that implements a habitual offender scheme: Presumptive sentences; additional offenses, OR. REV. STAT. § 137.717.

39. Pennsylvania

Pennsylvania's code has one section that implements a habitual offender scheme: PA. CODE. STAT. § 42-9714.

40. Rhode Island

Rhode Island's code has one section that implements a habitual offender scheme: Habitual criminals, R.I. GEN. LAWS § 12-19-21.

41. South Carolina

South Carolina's code has one section that implements a habitual offender scheme: Life sentence for person convicted for certain crimes, S.C. CODE ANN. § 17-25-45.

42. South Dakota

South Dakota's code has three sections that implement habitual offender schemes: One or two prior felony convictions—Sentence increased—Limitation—Felony determination, S.D. CODIFIED LAWS § 22-7-7, Three or more additional felony convictions including one or more crimes of violence—Enhancement of sentence, S.D. CODIFIED LAWS § 22-7-8, and Three or more additional felony convictions not including a crime of violence—Enhancement of sentence—Limitation—Parole, S.D. CODIFIED LAWS § 22-7-8.1.

43. Tennessee

Tennessee's code has one section that implements a habitual offender scheme: Repeat violent offenders; sentencing; appeals, TENN. CODE. ANN. § 40-35-120.

44. Texas

Texas's code has three sections that implement habitual offender schemes: Penalties for Repeat and Habitual Felony Offenders on Trial for First, Second, or Third Degree Felony, TEX. CODE. ANN. § 12.42, Penalties for Repeat and Habitual Felony Offenders on Trial for State Jail Felony, TEX. CODE. ANN. § 12.425, and Penalties for Repeat and Habitual Misdemeanor Offenders, TEX. CODE. ANN. § 12.43.

45. Utah

Utah's code has one section that implements a habitual offender scheme: Habitual violent offender—Definition—Procedure—Penalty, UTAH. CODE. ANN. § 76-3-203.5.

46. Vermont

Vermont's code has one section that implements a habitual offender scheme: VT. STAT. ANN. § 13-11.

47. Virginia

Virginia's code has one section that implements a habitual offender scheme: Sentence of person twice previously convicted of certain violent felonies, VA. CODE. ANN. § 19.2-297.1.

48. Washington

Washington's code has one section that implements a habitual offender scheme: Persistent offenders, WASH. REV. CODE § 9.94A.570.

49. West Virginia

West Virginia's code has one section that implements a habitual offender scheme: Punishment for second or third offense of felony, W. VA. CODE. § 61-11-18.

50. Wisconsin

Wisconsin's code has four sections that implement habitual offender schemes: Mandatory minimum sentence for repeat serious sex crimes, Wis. Stat. § 939.618, Mandatory minimum sentence for repeat serious violent crimes, Wis. Stat. § 939.619, Mandatory minimum sentence for repeat firearm crimes, Wis. Stat. § 939.6195, and Increased penalty for habitual criminality, Wis. Stat. § 939.62.

51. Wyoming

Wyoming's code has one section that implements a habitual offender scheme: "Habitual criminal" defined; penalties, WYO. STAT. ANN. § 6-10-201.

The Over-Policing of UK Drill: Human Rights Violations, Criminal Behaviour Orders, and Artistic Suppression

Noah Kreger*

Abstract

UK Drill, a Rap subgenre rooted in the lived experiences of marginalized communities, provides a raw and unfiltered portrayal of system inequalities, violence, and social struggle. The suppression of Drill music by London's Metropolitan Police ("the Met") reflects a broader trend of racialized policing and censorship targeting Black artistic expression. This Note examines the suppression of Drill and argues that such censorship constitutes a violation of free expression under Article 10 of the European Convention on Human Rights. This Note contextualizes Drill within a long history of censored Black artistic expression, demonstrating how law enforcement disproportionately targets Drill artists under the guise of public safety. Through an analysis of Criminal Behaviour Orders and content removal strategies, this Note highlights the legal and ethical deficiencies in the Met's approach. It further contends that the suppression of Drill fails to meet the required legal standards for limiting free expression. In addition to challenging the legality of these restrictions, this Note proposes alternative policy solutions as more effective methods of addressing concerns related to crime prevention. Ultimately, this Note advocates for a legal challenge to the Met's policies, emphasizing the importance of protecting Drill as a form of artistic and political expression.

* Noah Kreger is a 2025 graduate of Howard University School of Law. This Note honors the legacy of Black artists worldwide, whose resilience and enduring creativity continue to defy oppression and inspire generations. A sincere thank you is owed to Summer Durant, the Executive Solicitations & Submissions Editor, who inspired me to publish my work, and to the *Howard Law Journal* editors and Executive Board who contributed to editing this Note. All mistakes belong to the author.

Contents

Introduction

In January 2019, the London-based Drill duo Skengdo x AM received a nine-month suspended prison sentence.[1] What was their crime? Performing their own song.[2] The London Metropolitan Police ("the Met") justified this controversial punishment by deeming the performance a breach of a pre-existing criminal injunction prohibiting any music mentioning other local rappers.[3] At the time of the alleged breach, this injunction was already challenged as an illegal abuse of

1. Jonathan Ilan, *Digital Street Culture Decoded: Why Criminalizing Drill Music is Street Illiterate and Counterproductive,* 60 Brit. J. Criminology 994 (2020).
2. *Id.*
3. David Renshaw, *Skengdo x AM Given Suspended Jail Sentences for Performing Drill Music in London*, Fader (Jan. 21, 2019), https://www.thefader.com/2019/01/21/skengdo-x-am-jail-drill-london.

police power.[4] Skengdo x AM's case exemplifies a broader issue in London: the criminalization of Drill music through censorship and over-policing. This suppression not only imposes unjust restrictions on free expression but also reinforces racial stereotypes that are perpetuated through the criminalization of Black artists' work.

Drill, which hails from Chicago, is a subgenre of Rap that was created to highlight the harsh realities of gang members turned rappers.[5] Defined by its distinctive sound — marked by hard-hitting basslines, eerie synths, and lyrics addressing violence, street life, and systemic struggles[6] — Drill gained prominence in the United Kingdon (UK), particularly in London, during the mid-to-late 2010s.[7] The London Drill scene is predominantly compiled of Black men who, through their music, convey dramatized accounts of life in impoverished socio-economic areas.[8] This raw depiction of reality — touching on gang conflicts, drug dealing, and violence — is at the heart of Drill's controversial existence in London.[9] Despite its contentious nature, Drill serves as a beacon of hope for many, providing a voice to marginalized communities through the reflection of injustices in London's society.[10] Moreover, the grassroots nature of Drill helps inspire hope in artists by offering an alternative path to financial well-being in an industry often dictated by wealth and connections.[11]

However, blinded by the prejudicial assumption that Drill is a causal factor in serious violence, the Met has sought to stifle Drill's rise through the issuance of Criminal Behaviour Orders (CBOs) and the censorship of online content.[12] Yet, analyses of Drill lyrics and their alleged connection to violence fail to establish a causal link between the genre and public safety threats.[13] Because Black artists dominate

4. Ian McQuaid, *The Real Story Behind Skengdo x AM's Public Controversies*, Vice (Mar. 8, 2019), https://www.vice.com/en/article/bjq3ev/skengdo-am-interview-uk-drill-police-injunction.

5. Ben Lim, *An Introduction to UK Drill*, Medium (Oct. 30, 2020), https://ben-lim.medium.com/an-introduction-to-uk-drill-c72d6ea09e04.

6. S.Y., *Drill Rap is One of Hip-Hop's Most Misunderstood Genres*, Bleu Mag. (Aug. 1, 2023, 6:22 PM), https://bleumag.com/music/what-is-a-drill-rap/.

7. *See* Ilan, *supra* note 1, at 994.

8. *See* Lim, *supra* note 5.

9. *Id*.

10. Nadine Refaat, *Stereotypes Drilled In – How The Police Are Using Drill Music to Compound Racialised Narratives*, Hodge Jones & Allen (Nov. 12, 2021), https://www.hja.net/expert-comments/opinion/civil-liberties-human-rights/stereotypes-drilled-in-how-the-police-are-using-drill-music-to-compound-racialised-narratives/.

11. *Id*.

12. Beth Hall, Roxanne Khan & Mike Eslea, *Criminalising Black Trauma: Grime and Drill Lyrics as a Form of Ethnographic Data to Understand "Gangs" and Serious Youth Violence*, 7 Genealogy 1 (2022).

13. *Id*. at 15.

the London Drill scene and are already disproportionately perceived by authorities as criminals or gang affiliates, the criminalization of Drill only exacerbates these biases.[14] Furthermore, the suppression of Drill music infringes upon artists' rights to free expression as protected under Article 10 of the European Convention of Human Rights.[15]

The over-policing of Drill rappers in London represents a grave injustice, undermining the balance between law enforcement and the preservation of free artistic expression. This Note argues that the current approach to policing Drill in London fails to address the root causes of violence, stifles legally protected artistic expression, and reinforces racist ideologies.

Part II of this Note will examine the discriminatory application of CBOs, a relatively new mechanism used by the Met and the judiciary to censor Drill artists. Part III will explore the damaging effects police-sponsored media censorship has on Drill. Part IV will demonstrate how the attack on Drill fails to address the root causes of violence and gang activity and propose an alternative approach that focuses on community wellbeing. Part V will detail the evolution of free expression rights under English law and relevant legal precedents that may afford protection to Drill artists. Finally, Part VI will outline the legal framework for a free expression challenge against the censorship of Drill.

I. Criminal Behaviour Orders

A Criminal Behaviour Order (CBO) is a judicially imposed constraint that may be placed on individuals convicted of an offense before a criminal court pursuant to the Anti-social Behaviour, Crime and Policing Act of 2014.[16] Introduced as a replacement for Anti-social Behaviour Orders, CBOs lowered the evidentiary threshold for imposing restrictions and allowed courts to mandate both prohibitive and corrective measures.[17]

For a CBO to be issued: (1) the court must be satisfied, beyond a reasonable doubt, that the offender has engaged in behavior that caused, or was likely to cause, harassment, alarm or distress to any person; and (2) the court must determine that issuing the order would

14. Adam Dunbar & Charis E. Kurbin, *Imagining violent criminals: an experimental investigation of music stereotypes and character judgments*, 14 J. Experimental Criminology 507, 519–21 (2018).

15. Human Rights Act, 1998, c. 42, § 10 (UK).

16. *Criminal Behaviour Orders*, Crown Prosecution Serv., https://www.cps.gov.uk/legal-guidance/criminal-behaviour-orders (last visited on Jan. 7, 2025).

17. *Id.*

prevent further engagement in such behavior.[18] Typically, police and local authorities request CBOs, presenting evidence accordingly.[19] For minors, CBOs can last between one and three years, whereas for adults, the minimum duration is two years, with the possibility of an indefinite term.[20] Moreover, breaching a CBO constitutes a criminal offense, carrying a maximum sentence of five years imprisonment for adults.[21]

A. Racial Disparities in the Justice System

The disparities in the issuance of CBOs are among the litany of racially unbalanced practices in London's policing, reflecting a racial prejudice that is inclined to target Drill's core demographic of young, Black men. While white officers comprise 85% of the Met's force,[22] London's white population accounts for only 58% of the city's residents.[23] Moreover, nearly 93% of judges in England and Wales are white.[24] The Met is also three times more likely to arrest a Black individual compared to individuals of other racial backgrounds, and in 2023, one-third of police stops involved Black people.[25] Moreover, in 2022, the Met conceded, under threat of legal challenge, that Black people were disproportionately represented on its unlawful Gangs Matrix database.[26] Thus, an array of statistical analyses leads to the clear conclusion that Black people are overrepresented in London's criminal justice system and are overpoliced by the Met.[27]

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18. *Id.*
19. *Id.*
20. Elena Papamichael, *Criminal Behaviour Order (CBO) Preventing People Making "Drill" Music*, Hodge Jones & Allen (Jun. 11, 2018), https://www.hja.net/expert-comments/opinion/general-crime/criminal-behaviour-order-cbo-preventing-people-making-drill-music/#:~:text=The%20proposal%20is%20to%20include,them%20before%20the%20criminal%20courts.
21. *Punishments for antisocial behaviour*, UK Gov., https://www.gov.uk/civil-injunctions-criminal-behaviour-orders (last visited Jan. 7, 2025).
22. *Workforce Diversity in Metropolitan Police Service*, Metro. Police Serv. (2021), https://www.police.uk/pu/your-area/metropolitan-police-service/performance/workforce-diversity/ (last visited on Jan. 7, 2025).
23. *Population Estimates by Ethnic Group and Religion, England and Wales: 2019*, Off. for Nat'l Stats. (last visited on Jan. 7, 2025), https://www.ons.gov.uk/peoplepopulationandcommunity/populationandmigration/populationestimates/articles/populationestimatesbyethnicgroupandreligionenglandandwales/2019.
24. *Criminal justice system statistics*, Inst. Race Rel. (last updated Sep. 27, 2024), https://irr.org.uk/research/statistics/criminal-justice/.
25. *Id.*
26. *Id.*
27. *Id.*

B. The Prejudicial Application of Criminal Behaviour Orders on Drill Artists

The Met now increasingly employs CBOs to censor Drill, placing restrictions on artists under the pretext that their music incites violence and gang affiliation.[28] However, empirical studies of Drill lyrics disprove the claim that Drill provokes criminal activity.[29] In practice, CBOs imposed on Drill rappers often disrupt music production even when their musical content is unrelated to the offense that justified the order.[30] Notably, no other musical genre has faced such restrictions, underscoring the discriminatory nature of these measures.[31]

For instance, London Drill rapper Rico Racks was issued a five-year CBO alongside his prison sentence for drug offenses.[32] The order prohibited Rico Racks from using words such as "bando," "trapping," "connect," and "whipping" — all deemed potential slang references to drug dealing.[33]

Similarly, in 2018, one of the most prolific CBOs was imposed on Digga D, a high-charting British-Caribbean artist whose career ascended from London's Drill scene.[34] This now infamous example of judicial overreach was one of the *first* times an artist was handed a CBO that restricted their agency as a musician.[35] Following his 2018 conviction for conspiracy to commit violent disorder, a case in which music videos portraying a masked Digga D were presented as evidence, authorities imposed a three-year CBO on the Drill sensation.[36] Digga D's CBO restricted the artist's location and friendships, forbade him from rapping about any alleged gang activity, and required his lyrics to be submitted to authorities within twenty-four hours of a song release.[37] Digga D was also prohibited from publicly discussing an attack on his

28. *See* Papamichael, *supra* note 20.
29. *See* Hall, *supra* note 12, at 15.
30. *Id*.
31. *Id*.
32. *See* Ilan, *supra* note 1, at 995.
33. *Id*.
34. James Keith, *Digga D Lays Out The Fine Print of His Oppressive Criminal Behaviour Order in New Documentary*, Complex (Nov. 25, 2020), https://www.complex.com/music/a/james-keith/defending-digga-d.
35. *Id*.
36. *Id*.; *see also* James Keith, *Digga D Lays Out The Fine Print of His Oppressive Criminal Behaviour Order in New Documentary*, Complex (Nov. 25, 2020), https://www.complex.com/music/a/james-keith/defending-digga-d (discussing the use of music videos as evidence in Digga D's trial).
37. Ciaran Thapar, *Digga D on Rap Stardom Amid Police Restrictions*, Guardian (June 30, 2023), https://www.theguardian.com/music/2023/jun/30/digga-d-back-to-square-one-interview.

life in prison that left him nearly blind in one eye.[38] The Met justified these extreme constraints as necessary to combat music that "glorifies violence," despite the lack of evidence supporting this claim.[39]

II. Attacking Drill Music Through Social Media

A. Historical Attacks on Black Music

The UK has a long history of censoring Black artists, and the intense surveillance and constraints placed upon Drill artists today are merely a continuation of past efforts under a new guise. Before Drill music, there was Grime — a genre pioneered by Black British Londoners in in the early 2000s that fuses elements of British and global sounds while inspiring the mobilization of young Black people around various societal issues.[40] At the peak of Grime's popularity, the Met introduced the Promoted Event Risk Assessment Form 696 ("Form 696") following violent incidents at London nightclubs.[41] Form 696 required promoters to disclose the names, private addresses, and phone numbers of performers at events featuring DJs or MCs using recorded backing tracks — criteria that disproportionately targeted Black and Asian artists.[42] Though ostensibly voluntary, promoters who failed to submit the form within fourteen days of an event often faced license denials, and those who did submit were often refused licenses anyways for inadequate or unexplained reasons.[43] Form 696's "preemptive policing" measures disproportionately affected grime artists, leading to an onslaught of cancelled performances which disproportionately hindered Black artists.[44] Although Form 696 has been discontinued, the Met's broader agenda of censoring Black art persists.

38. Ed Clowes, *For British Drill Stars, The Police Are Listening Closely*, N.Y. Times (Jan. 11, 2021), https://www.nytimes.com/2021/01/11/arts/music/digga-d-drill-music.html.

39. Ian Cobain, *London Drill Rap Group Banned From Making Music Due to Threat of Violence*, Guardian (June 15, 2018), https://www.theguardian.com/uk-news/2018/jun/15/london-drill-rap-gang-banned-from-making-music-due-to-threat-of-violence.

40. Parise Carmichael-Murphy, Shanique Harris & Dhillon Khushalbhai, *Grime and Black British Identity Reading and Materials List*, Decolonise Geography (July 7, 2021), https://decolonisegeography.com/blog/2021/07/grime-and-black-british-identity-reading-and-materials-list/.

41. Vincent Olutayo, *Form 696 and Why Grime is Not the Enemy*, Independent (Apr. 6, 2017), https://www.independent.co.uk/arts-entertainment/music/features/form-696-police-uk-music-venues-grime-music-discrimination-comment-a7670436.html.

42. Matt Broomfiled, '*Form 696' Sums Up Everything Wrong with the Police*, Vice (Mar. 31, 2017), https://www.vice.com/en/article/gve38b/form-696-sums-up-everything-wrong-with-the-police,

43. Sian Brett, *What Was Form 696?*, Horniman Museum & Gardens (Nov. 5, 2021), https://www.horniman.ac.uk/story/what-was-form-696/.

44. Olutayo, *supra* note 39.

Grime and Drill are not the only forms of Black art that have been under attack. When Black American soldiers introduced Jazz to the UK, which sparked widespread popularity in the 1910s and 20s, its fame prompted panic, leading to its prohibition in schools and dances across the country due to jazz being deemed "morally corrupt."[45] With technological advancements altering how music is consumed, authorities have simply adopted new strategies to continue censoring Black music.

B. The Removal of Online Content and Its Importance

Another tool the Met deploys to suppress Drill is the widespread removal of content from popular online platforms.[46] Before Drill artists received music industry backing, their primary means of reaching audiences was through music videos.[47] The grassroots essence of Drill made it ideally suited to low-budget yet visually engaging videos that provided viewers with a stylized portrayal of the artist's world.[48] Early Drill videos were an instant success in the UK, racking up millions of views and cementing a cultural footprint for Drill that lasts today.[49] Drill music videos not only help to spur the artists into fame, but also support the careers of music video producers.[50] The prominence of Drill music videos in the UK sparked a booming creative community of rappers, filmmakers, content creators, and YouTube channels, all with massive followings.[51] Consequently, the visibility and preservation of Drill music videos are crucial to the genre's survival.

In 2018, the Met created an enhanced partnership with YouTube as part of a task force dubbed "Project Alpha."[52] This task force established a system for monitoring and moderating online Drill content, significantly augmenting the Met's capacity to control music distribution.[53] Through this collaboration, YouTube granted Met

45. Baraka Meena, How the Criminalisation of Drill Music Perpetuates the Historical Marginalisation of Black People, (June 8, 2021), (LLB research project, The University of Sheffield), https://ssrn.com/abstract=4038029, at 15.

46. Ethan Herlock, *How UK Drill's Filmmakers Are Driving Its Thriving Scene*, DJ MAG, (May 1, 2020), https://djmag.com/longreads/how-uk-drill%E2%80%99s-filmmakers-are-driving-its-thriving-scene.

47. *Id.*

48. *Id.*

49. *Id.*

50. *Id.*

51. *Id.*

52. Paige Collins, *How YouTube's Partnership With London's Police Force is Censoring UK Drill Music*, EFF (Aug. 25, 2022), https://www.eff.org/deeplinks/2022/08/how-youtubes-partnership-londons-police-force-censoring-uks-drill-music.

53. *Id.*

officers a "trusted flagger" status, allowing them to expedite content removal without any third-party verification.[54] As a result, YouTube has effectively ceded all discretion over Drill music censorship to the Met, which is a deeply concerning arrangement given the Met's well-documented bias against Black artists.

Unsurprisingly, the Met has exploited its authority under Project Alpha. Between 2016 to 2022, the Met referred 579 videos for removal on the grounds of "potentially harmful content."[55] Of these referrals, 510 were Drill videos — representing a staggering 96.7% of referrals that were ultimately removed by YouTube.[56] In 2020 alone, 319 Drill videos were taken down at the Met's request, contributing a total of 635 removals from 2020 to 2022.[57]

Clearly, authorities are closely monitoring Drill artists' uploads. Moreover, the Met is interpreting online Drill content as evidence of gang affiliation and bad character, even deeming such music videos as confessions to committed offenses or motives and intents to commit crimes.[58] Although, Drill lyrics, just as any other art form, contains a well-established use of fictional dramatizations and hyperbolic storytelling.[59]

The Met's online surveillance extends beyond YouTube, where authorities surveil the internet at large.[60] In 2019, the Met pressured Meta to remove all Instagram content featuring the Drill track "Secrets Not Safe" by the artist Chinx (OS), arguing that it could incite retaliatory violence.[61] Meta complied, removing content associated with the track in 112 separate instances.[62] The case was later reviewed by Meta's Oversight Board, which found insufficient evidence to justify the song's removal under Meta's own Community Standards.[63] Moreover, the Oversight Board found that the song's removal violated Meta's human rights responsibilities.[64] This case revealed deep concerns about

54. *See* Collins, *supra* note 52.
55. *Id.*
56. *Id.*
57. Jonathan Kanengoni, *Why the Met are Drilling Down on Drill Music*, STANDARD (Nov. 13, 2023), https://www.standard.co.uk/culture/music/met-police-drill-music-b1119500.html.
58. Tilman Schwarze & Lambros Fatsis, *Copping the Blame: The Role of YouTube Videos in the Criminalisation of UK Drill Music*, 41 POPULAR MUSIC 463, 468 (2022).
59. *See* Part V, Section C.
60. *Id.*
61. *UK Drill Music*, OVERSIGHT BD., https://www.oversightboard.com/decision/IG-PT5WRTLW (last updated Jan. 2023).
62. *Id.*
63. *Id.*
64. *Id.*

Meta's relationship with the Met and its disproportionate targeting of young Black British artists. A freedom of information request later disclosed that between June 2021 and May 2022, all 286 of the Met's content removal requests to Meta involved Drill music and many of the removals that occurred were done without respect to due process.[65]

The case of Chinx (OS) unveiled the authoritarian-style control employed by the Met to censor artists. Content vital to an artist's career is routinely erased without due process or consideration for the artistic context of the lyrics.[66] Instead, the Met leverages social media platforms — often willing accomplices — to further its campaign against Drill. [67]

C. The Oversurveillance of Online Content

Beyond outright removal, the Met also imposes direct restrictions on Drill artists' creative expression. Digga D and Skengdo x AM, for example, were both subjected to CBOs that required them to obtain Met approval before releasing music videos.[68] This level of surveillance was documented in the BBC film "Defending Digga D," which illustrates the extent of the Met's control over the artist's output.[69] In one scene, Digga D prepares to film the video for his hit song "Woi," only to be informed that he cannot include several of his longtime friends because the Met has designated them as gang members.[70] Moreover, Digga D's entire production process is meticulously monitored, from lyric clearance to video production, to ensure that no elements of his music could be construed as threatening to public safety.[71]

D. The Met's Hypocrisy

The Met's justification for its extensive policing of Drill music is both flawed and hypocritical. Moreover, it undermines the artistic freedom that Drill rappers ought to be granted. Authorities claim that Drill poses a public safety risk, yet they ignore other media forms that depict violence. Take, for example, one of the UK's most popular television shows, "Top Boy," which, in September 2023, ranked second

65. *Id*.
66. *See* Kanengoni, *supra* note 57.
67. *Id*.
68. *See supra* Part II, Section C; *see also* Part I.
69. Defending Digga D (Lambent Productions 2020); *see also Defending Digga D*, BBC Three, (Nov. 24, 2020), https://www.bbc.co.uk/iplayer/episode/p08xkspf/defending-digga-d.
70. *See Defending Digga D*, *supra* note 69.
71. *Id*.

in popularity — with 5.8 million viewers.[72] The show, which portrays the brutal lives of London drug dealers, features graphic violence in nearly every episode.[73] By the Met's own logic, "Top Boy" should be subject to state-sponsored censorship given its glorification of violence and gang activity. However, no such intense scrutiny is applied to television and film. Instead, the Met selectively targets Drill music, reinforcing racial biases under the pretext of public safety.

III. An Alternative Approach to the Attack on Drill Music

The attack on Drill music has been framed as an attempt to ensure community safety, curb violence, and safeguard impressionable youth. However, the Met, and relevant authorities, have misallocated their resources by attacking Drill artists instead of addressing the root causes of such issues. Numerous alternative strategies exist that would more effectively improve community well-being without resorting to the scapegoating of musicians. This section examines the policy failures underlying the current approach and outlines constructive alternatives.

A. Youth Violence Prevention

The Met attributes the rise in youth violence to the popularity of Drill music, yet empirical evidence contradicts this assertion.[74] In reality, current governmental policies have contributed to the increase in violent crime.[75] Since 2013 — before Drill's mainstream emergence — violent crimes among young people aged ten to twenty-four, particularly knife-related offenses, have steadily increased.[76] Notably, research has found no correlation between ethnicity and youth violence, where instead, studies identify adverse childhood experiences, mental health struggles, and socio-economic deprivation as the most

72. Julia Stoll, *Ranking of TV Shows on Netflix in the United Kingdom in September 2023*, Statista (Oct. 10, 2023), https://www.statista.com/statistics/1314962/leading-netflix-tv-shows-unique-viewers-uk/.

73. *See Top Boy Parents Guide*, IMDb, https://www.imdb.com/title/tt1830379/parentalguide (last visited on Jan. 7, 2025); *see also Who Is Erin Carter? Parents guide*, IMDb, https://www.imdb.com/title/tt18075020/parentalguide (last visited Jan. 7, 2025).

74. Cobain, *supra* note 36; *see also* Hall, *supra* note 12, at 15 (discussing how Drill music fails to incite violence). *See* Hodge Jones & Allen, *supra* note 20 (discussing the Met's concern about Drill and youth violence).

75. *See* discussion *infra* Part IV, Sections A–C.

76. Sara Haylock, Talia Boshari, Emma C. Alexander, Ameeta Kumar, Logan Manikam & Richard Pinder, *Risk Factors Associated with Knife Crime in United Kingdom Among Young People Aged 10-24 Years: A Systematic Review*, BMC Public Health, (2020), at 1, https://bmcpublichealth.biomedcentral.com/articles/10.1186/s12889-020-09498-4.

significant factors.[77] Furthermore, positive factors such as self-esteem, academic achievement, positive peer groups, community involvement, and access to social support have all been linked to the prevention of youth violence.[78]

The rise in youth violence also coincides with drastic policy shifts throughout London. As of February 2023, nearly half of London's youth centers — safe spaces where young Londoners can receive mentorship and positive engagement — had closed within the last ten years.[79] Consequently, areas that experienced the largest cuts in youth service funding have also seen the highest increases in knife crime.[80] Between 2010 and 2021, the UK government reduced youth services spending by £1.1 billion while simultaneously slashing funding for welfare, education, and substance abuse treatment.[81] In contrast, government expenditures on building prison construction and law enforcement recruitment has surged.[82]

Increased police spending has led to the permanent deployment of nearly 1,000 police officers in schools, most of whom are stationed in low-income, predominantly Black communities.[83] Moreover, data from the Met shows that officers conduct at least five strip searches per week on minors, the majority of whom are Black and are searched without an adult present.[84] Consequently, the increase of policing became so serious where The Independent Office for Police Conduct declared that Black and minority ethnic students needed protection in school from the police.[85] Research further indicates that policing in schools disproportionately criminalizes minor behavioral infractions, funneling Black and Brown youth into the criminal justice system, thereby increasing their likelihood of committing violent offenses later in life. [86]

77. *Id*. at 11.

78. Divya Vinnakota, Q M Rahman, Brijesh Sathian, Ancy Chandrababu Mercy Bai, Nikulin Deividas, Maneesha-Varghese Pellissery, Sajna Kitzhackanaly Abdul Kareem, Md Rakibul Hasan, Ali Davod Parsa & Russell Kabir. *Exploring UK Knife Crime and its Associated Factors: A Content Analysis of Online Newspapers*, Nepal J. Epidemiology (2022), https://pmc.ncbi.nlm.nih.gov/articles/PMC9886559/pdf/nje-12-1242.pdf.

79. Euan Ward, *After Gutting Youth Services, Can the U.K. Still Cut Youth Crime?*, N.Y. Times (Feb. 4, 2023), https://www.nytimes.com/2023/02/04/world/europe/london-austerity-youth-violence.html.

80. *Id*.

81. *Id*.

82. *Id*.

83. Francis Webber, *Policing Rights in the UK 2022: An Audit*, 64(4) Race & Class 101, 102 (2023).

84. *Id*. at 102.

85. *Id*. at 103.

86. *Holding Our Own: A Guide to Non-Policing Solutions to Serious Youth Violence*, Liberty, at 44 (Apr. 24, 2023), https://www.libertyhumanrights.org.uk/wp-content/uploads/2023/04/

Public opinion demonstrates growing skepticism toward the government's approach, where polling revealed 69% of people believe that policymakers should address the root cause of youth violence rather than relying on its current tactics.[87] The current policy of enhanced police power has failed to prevent youth violence and instead exacerbated the cycle of systemic marginalization and criminalization faced by Black children.[88]

B. Gang Affiliation

Another core justification of the Met's crackdown on Drill is its alleged glorification of gang culture and violence.[89] However, the primary reasons young people in the UK join gangs are social in nature — reputation and friendship.[90] These two factors stem from broader systemic inequalities, including limited opportunities, discrimination, and a feeling of inferiority.[91]

Former London gang member Qadar Stewart has attested to these realties, citing childhood neglect, trauma, poverty, and the absence of a support system as primary reasons for gang involvement.[92] Once young people become entangled in gang culture, escaping it becomes increasingly difficult.[93] Younger gang members feel a sense of helplessness due to a lack of opportunity and accessible resources, leading many to continue the lifestyle.[94] Rather than addressing these root issues, the Met's approach to policing Drill perpetuates the criminalization of young, marginalized individuals.

HoldingOurOwn_Digital-DoubleSpreads.pdf [hereinafter *Holding Our Own*].

87. Mabel Banfield-Nwachi, *Community-led Approach Needed to Tackle Youth Violence in UK*, Guardian (Apr. 24, 2023), https://www.theguardian.com/society/2023/apr/25/community-tackle-youth-violence-uk-report-mental-health.

88. *See* Holding Our Own, *supra* note 86, at 12.

89. *See* Renshaw, *supra* note 3.

90. Jonathan James Bendall, Young People's Perceptions and Motivations for Joining Gangs in Norwich and Colorado Springs: Exploring the Implications for the Policy Response (2018) (D.C.J.S. thesis, Univ. of Portsmouth) (on file with University of Portsmouth).

91. *Id.* at 131.

92. Kang Hyun-kyung, *Former UK Gang Member Shares Hard-Learned Lessons to Prevent Youth Violence*, Korea Times, (May 28, 2023), https://www.koreatimes.co.kr/www/nation/2024/02/113_351767.html.

93. *Shining a Light On the Experiences of Children Involved in Gangs in England,* Children's Comm'r (Nov. 7, 2017), https://www.childrenscommissioner.gov.uk/blog/shining-a-light-on-the-experiences-of-children-involved-in-gangs-in-england/.

94. *Id.*

C. Poverty, Education, and Housing

The rise in youth violence and gang affiliation is inextricably linked to economic disparities, particularly in Black communities in London. Over half of the Black children in the UK now live in poverty — double the rate of white children.[95] Consequently, children raised under poverty are likely to perform significantly worse in schools.[96] Moreover, research indicates that students who remain in school beyond the compulsory minimum age of sixteen have significantly lower rates of criminal conviction during adolescence.[97]

Government policies have further exacerbated educational inequalities, as cuts to educational funding and youth services have disproportionately impacted lower-income communities, worsening disparities in academic performance.[98] Furthermore, labor market discrimination and hostile immigration policies have limited access to stable, high-quality housing for Black and ethnic minority populations, compounding systemic disadvantages.[99]

D. Alternative Policies

The Met's rationales for policing Drill music are more akin to propagandized "dangers" than actual, constructive reform.[100] The Met contends that its attack on Drill music will help prevent youth crime and gang affiliation.[101] However, evidence indicates that youth involvement in crime and gangs is driven by structural inequities rather than musical influences.[102] In contrast, Drill music has been shown to help adolescents cope with social, emotional, and behavioral difficulties

95. Andrew Sparrow, *More Than Half of UK's Black Children Live in Poverty, Analysis Shows*, GUARDIAN (Jan. 2, 2022), https://www.theguardian.com/world/2022/jan/02/more-than-half-of-uks-black-children-live-in-poverty-analysis-shows.

96. Ian Thompson & Gabrielle Invinson, *Poverty in Education Across the UK: A Comparative Analysis of Policy and Place Research Summary*, CHARTERED COLL. TEACHING, https://my.chartered.college/research-hub/poverty-in-education-across-the-uk-a-comparative-analysis-of-policy-and-place/ (last visited on Jan. 7, 2025).

97. Matt Dickson, *The Effect of Education Participation on Youth Custody: Causal Evidence from England*, UNIV. BATH (Mar. 2023), https://www.bath.ac.uk/publications/the-effect-of-education-participation-on-youth-custody-causal-evidence-from-england/attachments/Dickson_RPA.pdf.

98. *Id.*

99. Khem Rogaly, Joseph Elliott & Darren Baxter, *What's Causing Structural Racism in Housing?*, JOSEPH ROWNTREE FOUND. (Sept. 14, 2021), https://www.jrf.org.uk/housing/whats-causing-structural-racism-in-housing.

100. *See* Papamichael, *supra* note 20.

101. *Id*.

102. *See supra* Part IV.

by resonating with the emotions expressed throughout lyrics, which may reflect the violence in their own lives.[103]

The neglect of the communities purportedly at risk of Drill's "influence" is a far more significant factor contributing to youth violence.[104] Current policies have resulted in severe funding cuts for initiatives designed to improve youth wellbeing — such as education, welfare, and mental health services — while increasing investments in policing and incarceration[105] Consequently, government policies have played a direct role in fostering the very conditions they blame on Drill music.[106]

Rather than continuing its misguided focus on Drill artists, the government should redirect resources toward initiatives that have been proven to mitigate youth violence. This Note proposes a foundational shift in policy: reallocating funds from enhanced policing efforts toward community-based wellness programs in areas most affected by violent crime and gang affiliation.

A comprehensive "community wellness" approach would include policy measures that are proven to combat the root causes of youth involvement in violent crime and gangs, and would include:

1. Increased funding for education, youth services, welfare, and substance abuse treatment — all of which have experienced budget cuts in the past decade.[107]
2. Expanded access to mental health resources within vulnerable communities.
3. Greater investment in affordable and secure housing to alleviate economic instability.
4. The reduction of police presence in schools to prevent the unnecessary criminalization of minor infractions.

The proposed "community wellness" initiatives, while rudimentary, share a common foundation: they are evidence-based solutions with a demonstrated track record of reducing youth violence and gang affiliation. Conversely, the ongoing attack on Drill music lacks any empirical support and represents a fundamental misallocation of

103. Steve Cobbett, *Including the Excluded: Music Therapy with Adolescents with Social, Emotional and Behavioural Difficulties*, 23 Brit. J. Music Therapy 15, 21 (2009).
104. Papamichael, *supra* note 20.
105. *See* discussion *supra* Part IV, Sections A-C.
106. *See supra* Part IV.
107. *See* discussion *supra* Part IV, Sections A-C.

resources.[108] Addressing the structural causes of violence — rather than criminalizing artistic expression — offers a more viable path towards systemic change.

IV. Freedom of Expression Under The Human Rights Act

A. Brief History of the Human Rights Act

Historically, freedom of speech (or expression) was unrecognized in English common law.[109] As late as 1885, the concept of free expression remained "quite unknown" to English courts.[110] By the 1950s, English law heavily restricted speech that conflicted with laws on treason, sedition, libel, obscenity, blasphemy, perjury, or official secrets.[111] However, in October 2000, Article 10 of the Human Rights Act of 1998 came into effect, aligning the UK with the right to free expression established in Article 10 of the European Convention on Human Rights (ECHR).[112] This legislation formally codified the right to free expression under English law and required UK courts to interpret common law in conformity with the ECHR and take into account the judgments of the European Court of Human Rights (the court).[113]

B. Article 10(2) and The Necessity Test

While Article 10 grants the freedom of expression, it also permits restrictions under specific conditions.[114] Under the court's analysis of Article10(2), an interference with free expression is permissible if it is (1) "prescribed by law," (2) in pursuit of a "legitimate aim" such as national security or public safety, and (3) "necessary in a democratic society."[115] Among these criteria, the third prong — whether the

108. Maeve Keenan, *JUSTICE Report: Report Finds Misunderstanding of Drill Music is Leading to Unfair Conversations*, Youth Just. Legal Ctr. (Mar. 11, 2021), https://yjlc.uk/resources/legal-updates/justice-report-report-finds-misunderstanding-drill-music-leading-unfair.

109. *See* Eric Barendt, *Freedom of Expression in the United Kingdom Under the Human Rights Act 1998*, 84 Ind. L.J. 851 (2009) ("A right to free speech (or expression) was not generally recognized by [English] common law.").

110. A.V. Dicey, Introduction to the Study of the Law of the Constitution 239 (10th ed. 1964).

111. Ivan Jennings, The Law and the Constitution 263 (5th ed. 1959).

112. Human Rights Act, 1998, c. 42, § 10 (UK), incorporating European Convention on Human Rights art. 10.

113. Human Rights Act, 1998, c. 42, § 6(1) (UK); Human Rights Act, 1998, c. 42, § 2 (UK).

114. Human Rights Act, 1998, c. 42, § 10(2) (UK).

115. *Id.*; *see also* European Court of Human Rights, *Guide on Article 10 of the European Convention on Human Rights*, European Court of Human Rights, (Aug. 31, 2022), at 19–21, https://rm.coe.int/guide-on-article-10-freedom-of-expression-eng/native/1680ad61d6 (explaining

interference is "necessary in a democratic society" — is often the decisive factor.[116] In *Sunday Times v. United Kingdom*, the court established the "necessity test," expanding the analysis of Article 10's third prong by requiring state actors to further justify free expression restraints by proving its interference (1) corresponds to a pressing social need, (2) is proportionate to the legitimate aim pursued, and (3) is justified by a relevant and sufficient reason from the national authorities.[117]

C. Artistic Freedom of Expression

Article 10 extends protection to artistic expression, which the court regards as fundamental to democratic society.[118] Artists retain free expression rights even when their work is deemed offensive, shocking, or disturbing.[119] In a key ruling, the court protected poetry advocating insurrection in Turkey where it found that even artistic works with violent themes warrant protection when their impact is limited and they serve as expressions of distress rather than direct incitements to violence.[120]

Drill is the only genre in the UK that is routinely denied recognition as a protected form of artistic expression under Article 10(2) of the ECHR.[121] A challenge to the Met's suppression of Drill under Article 10(2) is therefore essential to safeguarding the free expression rights of Drill artists. Like poetry or fiction, Drill employs storytelling and hyperbolic personas to depict the realities of life in marginalized communities.[122] Violence is a recurring motif in Drill, serving as a narrative device that articulates the lived experiences of many artists.[123]

Despite its artistic nature as a genre of music, Drill is frequently misconstrued by law enforcement, prosecutors, and judges as a literal

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the court's statutory interpretation of Article 10(2) that led to the implementation of the "legitimate aim" standard).

116. *See Guide on Article 10 of the European Convention on Human Rights*, *supra* note 115 at 19.

117. Sunday Times v. United Kingdom, 30 Eur. Ct. H.R. (ser. A) at 31 (1979).

118. Dominika Bychawska-Siniarska, Protecting the Right to Freedom of Expression Under the European Convention on Human Rights 14 (2017).

119. İ.A. v. Turkey, App. No. 42571/98, ¶ 23 (Dec. 13, 2005), https://hudoc.echr.coe.int/eng?i=001-70113.

120. Karatas v. Turkey, App. No. 23168/94, ¶ 52 (Jul. 8, 1999), https://hudoc.echr.coe.int/eng?i=001-58274.

121. Colette Allen, *The Criminalisation of Drill Music and Article 10 of the European Convention on Human Rights*, Inform (Mar. 5, 2021), https://inforrm.org/2021/03/05/the-criminalisation-of-drill-music-and-article-10-of-the-european-convention-on-human-rights-colette-allen/.

122. *Id.*

123. *Id.*

and direct expression of criminal intent rather than a form of artistic expression.[124] Moreover, over 90% of judges in England and Wales are white, creating a pronounced cultural disconnect between those adjudicating these cases and the predominantly Black artists producing Drill music.[125] This misinterpretation results in unjust criminalization and punitive restrictions on Drill artists.[126]

Addressing this disconnect is critical in a legal challenge under Article 10(2). Courts must understand the artistic conventions of Drill and the broader socio-political context in which it operates. Only then can the legal system duly assess whether the suppression of Drill constitutes an unjustified infringement on the right to free expression as enshrined in the ECHR.

V. A Challenge Under Article 10

An Article 10 challenge of the Met's prohibitions on Drill rappers' free expression is a crucial component in the fight to protect Drill. Article 10 of the ECHR explicitly safeguards artistic expression, even in instances where it shocks, offends, or disturbs its viewer.[127] The court has held that any measure constituting a "formality, condition, restriction, or penalty" imposed on speech qualifies as an interference with the right to free expression.[128] The prohibition on Drill music through content removal and legal restrictions clearly falls within this definition and thus warrants judicial scrutiny.[129]

First, Drill music is indisputably a form of artistic expression.[130] However, the Met has persistently interfered with Drill artists' ability to publish their work through CBOs and online censorship.[131] To mount a successful challenge under Article 10(2), it must be demonstrated that Drill lyrics do not fall within the category of unprotected threats that justify police intervention.[132] The Met often justifies its suppression of Drill by claiming that its lyrics pose direct threats to artist's rivals.[133]

124. *Id.*
125. *See supra* Part II, Section B.
126. Ilan, *supra* note 1.
127. *See supra* Part V, Section C.
128. Willie v. Liechtenstein, App. No. 28396/95, ¶ 43 (Oct. 29, 1999), https://hudoc.echr.coe.int/eng?i=001-58338.
129. Cumhuriyet Vakfı v. Turkey, App. No. 28255/07, ¶ 47 (Oct. 8, 2013), https://hudoc.echr.coe.int/eng?i=001-126797.
130. *See*, Part IV, Section C.
131. *See generally* Part II and III.
132. *See* Allen, *supra* note 121.
133. *Id*.

Under relevant law, a threat to kill requires that an individual "without lawful excuse makes to another a threat, intending that, that other would fear it would be carried out."[134] This legal threshold underscores the necessity of addressing the cultural disconnect that leads law enforcement to misconstrue Drill's artistic conventions, and an ideal plaintiff in an Article 10(2) should come equipped with vast evidence pointing out the exaggerated and hyperbolic depictions of violence in their music. Courts must recognize that, like films or other violent art forms, Drill artists employ dramatization to engage audiences and reflect their lived realities. Therefore, a well-argued case should clearly establish that the suppression of Drill music constitutes an impermissible interference with free expression under Article 10(2).

Under an Article 10(2) analysis, the court evaluates the legality of state interference by applying a three-pronged test: (1) whether the restriction is "prescribed by law," (2) whether it pursues a "legitimate aim," and (3) whether it is "necessary in a democratic society."[135] In the majority of cases, the last element determines the court's conclusion in a given case.[136] Moreover, the burden of proof rests on the state actor — in this case, the Met — to satisfy all three elements.[137] Failure to meet any of these requirements results in a violation of free expression under Article 10.[138]

The first prong requires that the restriction be "prescribed by law."[139] The court's role in this analysis is to determine whether the national authorities' interpretation of the law is compatible with the right to free expression.[140] Drill rappers frequently have their free expression curtailed through CBOs, which are often imposed for offenses unrelated to their music.[141] In a case that involves a controversial CBO, the Met would need to prove that its restrictions on Drill music are legally justified under existing legislation. However, the Anti-social Behaviour, Crime and Policing Act of 2014, which governs the issuance of CBOs, contains only broad provisions that do not explicitly authorize the suppression of free expression.[142] Additionally, the Met's collaboration

134. Offences Against the Person Act, 1861,24 and 25 Vict. c. 16 (Eng.).

135. Human Rights Act, 1998, c. 42, § 10(2); *see also Guide on Article 10 of the European Convention on Human Rights*, *supra* note 115 at 19–21 (explaining the court's statutory interpretation of Article 10(2) that led to the implementation of the "legitimate aim" standard).

136. *See* European Court of Human Rights, *supra* note 116, at 19.

137. *See* Allen, *supra* note 121.

138. Cangi and Others v. Turkey, App No. 65087/19, 2021 Eur. Ct. H.R.

139. *Id*.

140. *Id*.

141. *See* Papamichael, *supra* note 20.

142. *See generally* Part III. Anti-social Behaviour, Crime and Policing Act, 2014, c. 22.

with YouTube under "Project Alpha" further complicates this analysis where a petitioner alleges such an interference on their free expression. This partnership, established to facilitate the removal of online content, operates independently of statutory legal frameworks and thus may fail to satisfy the "prescribed by law" requirement.[143]

The second prong requires that the restrictions pursue a "legitimate aim." The Met will likely argue that its suppression of Drill music is justified on the grounds of crime prevention and public safety. A court may halt its examination and find the Met has violated Article 10 at this stage but will likely continue its examination as the protection of public safety has been deemed a legitimate aim by the court.[144]

The final and most dispositive prong will address whether the Met's restriction is "necessary in a democratic society," and will require a further analysis where the court implements the factors described in the necessity test.[145] Under this final prong, the Met must prove that its restrictions on Drill music (1) address a pressing social need, (2) are proportionate to the legitimate aim of public safety, and (3) are supported by relevant and sufficient reasoning to justify its interference.[146] Importantly, the court has ruled that in order for a measure to satisfy the final prong, the state actor must have applied the least restrictive means on free expression.[147] Moreover, recent court rulings have emphasized the importance of affording broad protection to artistic expression under this final prong, particularly when it shocks its audience.[148] Lastly, the court evaluates artistic expression within its genre-specific context.[149]

A French appellate court, applying Article 10, acquitted rapper Orelsan of incitement charges related to lyrics that referenced the killing of a well-known actress.[150] Of the lyrics cited for Orelsan's charge was a threat towards an anonymous woman that read, "shut your mouth or you'll end up as Marie Trintignant"[151]—a famous French actress who

143. Will Crisp & Vikram Dodd, *Met Police Profiling Children On a Large Scale*, GUARDIAN (Jun. 6, 2022), https://www.theguardian.com/uk-news/2022/jun/03/met-police-project-alpha-profiling-children-documents-show.

144. Bayev v. Russ., App. No 67667/09, at 26 (June 20, 2017), https://hudoc.echr.coe.int/fre?i=001-174422. Leroy v. Fr., App. No. 36109/03, at 2 (Oct. 2008), https://hudoc.echr.coe.int/eng?i=002-1888.

145. *See* Part IV, Section B

146. *Id*.

147. Glor v. Switzerland, App No. 13444/04 2009, Eur. Ct. H.R.

148. Allen, *supra* note 121.

149. *See Karatas v. Turkey*, *supra* note 120.

150. Cour d'appel [CA] [regional court of appeals] Versailles, 8th ch., Feb. 18, 2016, 15/02687.

151. *Id*.

was beaten to death.[152] The court reasoned that rap lyrics should be analyzed within the broader artistic framework of the genre, recognizing its tendency toward hyperbolic expressions and societal critiques.[153] The rationale behind this French ruling, which appropriately contextualizes the artist's genre, should be considered when analyzing Drill.

UK Drill, like other forms of artistic expression, must be afforded similar protections under the final prong of an Article 10 challenge. Unlike mainstream pop music, Drill explores themes of systemic oppression, racialized policing, and socio-economic disenfranchisement in a manner meant to shock and entertain its listener.[154] Therefore, a court determining whether Drill's suppression satisfies the third prong must view its lyrical content as specific to the genre when considering the severity of the Met's restrictions. Moreover, it is paramount that a court deploys its analysis in the appropriate socio-political context — where the Met champions its protection of the public from Black artists who detail violence, over-policing, and institutional neglect, despite such issues being exacerbated by the criminalization of their genre.[155] When such considerations are accounted for, it should become clear to a court that the Met's continued suppression of Drill through CBOs and online censorship is far too restrictive and disproportionate to the objectives the Met purports.

Thus, a legal challenge under Article 10 is essential to safeguarding the free expression rights of Drill artists. Courts must acknowledge the artistic and political significance of Drill and recognize that its suppression constitutes an unjustified and disproportionate infringement on fundamental human rights.

VI. Conclusion

The essence of Drill lies in its reflection of society and the circumstances that shape the lives of its artists.[156] It is an art form deeply rooted in political critique, exposing inequalities that impact young Black Britons.[157] Drill provides an unfiltered lens into both the struggles and triumphs of the artists' communities, resonating with listeners who

152. Cour d'appel, *supra* note 149. Reuters Paris, *Blows to Head Killed French Star*, GUARDIAN (Aug. 4, 2003), https://www.theguardian.com/world/2003/aug/04/filmnews.arts.

153. *See* Bayev, *supra* note 144.

154. *See* Allen, *supra* note 121.

155. *See* Papamichael, *supra* note 20.

156. Sam Davies, *The Controversial Music That is the Sound of Global Youth*, BBC (June 7, 2021), https://www.bbc.com/culture/article/20210607-the-controversial-music-that-is-the-sound-of-global-youth.

157. *See* Allen, *supra* note 121.

find parallels between the music and their own experience.[158] As one artist aptly described, "if you like it, then you relate to it, in some way, somehow."[159]

The UK's crackdown on Drill is more than an attack on a genre — it is a racially charged suppression of free expression. By silencing Drill artists, the government is effectively stifling crucial narratives that highlight the effects of social exclusion, economic disparity, and institutional racism. This suppression does not address the root causes of inequality; rather, it perpetuates them by marginalizing the voices that seek to bring these issues to light. The censorship of Drill reinforces the very cycle of oppression that the genre seeks to expose, making its protection under Article 10 not only a legal necessity but a moral imperative.

158. *See* Davies, *supra* note 158.
159. *Id.*

From the Seas to the Stars: Utilizing the Ocean Floor Treaty to Reshape Harmful Space Policy

DARRYL KLUGH*

"The traders' proposal forced America to choose between its material salvation and the moral imperative of protecting a vulnerable population. Predictably, material interests won out."

Derrick Bell, *The Space Traders*

Contents

* Darryl Klugh, *Howard Law Journal* and Class of 2025. I extend special thanks to my classmates and professors for their inspiration, and to the *Howard Law Journal* editors for their substantive and technical edits. Any errors are my own.

I. Introduction

There is little global consensus on space governance so national legislatures have adopted their own laws in anticipation of the race to space.[1] This circumstance has led to a conundrum because historically, when humans discover new resources, the initial response is not preservation, conservation, and protection.[2] For example, the expansion of human activity into Earth's oceans has led to harmful environmental impacts.[3] These impacts include pollution from waste, loss of biodiversity, habitat destruction, and climate change from the release of greenhouse gases.[4] Because these impacts significantly affect people across the globe, numerous scientists, environmental organizations, government

1. Brian R. Israel, *Space Resources in the Evolutionary Course of Space Lawmaking*, 113 AJIL Unbound 113, 116 (2019).

2. *See* Catherine Brahic, *The Five Oldest Acts of Environmental Destruction*, New Scientist (Nov. 3, 2008), https://www.newscientist.com/article/dn15102-the-five-oldest-acts-of-environmental-destruction/.

3. Philip J. Landrigan, John J. Stegeman, Lora E. Fleming, Denis Allemand, Donald M. Anderson, Lorraine C. Backer, Françoise Brucker-Davis, Nicolas Chevalier, Lilian Corra, Dorota Czerucka, Marie-Yasmine Dechraoui Bottein, Barbara Demeneix, Michael Depledge, Dimitri D. Deheyn, Charles J. Dorman, Patrick Fénichel, Samantha Fisher, Françoise Gaill, François Galgani, William H. Gaze, Laura Giuliano, Philippe Grandjean, Mark E. Hahn, Amro Hamdoun, Philipp Hess, Bret Judson, Amalia Laborde, Jacqueline McGlade, Jenna Mu, Adetoun Mustapha, Maria Neira, Rachel T. Noble, Maria Luiza Pedrotti, Christopher Reddy, Joacim Rocklöv, Ursula M Scharler, Hariharan Shanmugam, Gabriella Taghian, Jeroen A.J.M. van de Water, Luigi Vezzulli, Pál Weihe, Ariana Zeka, Hervé Raps & Patrick Rampal, *Human Health and Ocean Pollution*, Annals of Global Health, Dec. 2020, at 1, 3–6.

4. *See id.*

agencies, and academic institutions conducted copious research on these issues.[5] From that research, the world reacted by creating the Agreement Under the United Nations Convention on the Law of the Sea on the Conservation and Sustainable Use of Marine Biological Diversity of Areas Beyond National Jurisdiction (BBNJ), which consolidates the fragmented and incomplete framework governing Earth's oceans.[6]

Similar to human expansion into the ocean, human activity is rapidly expanding into space.[7] This expansion has spawned several industries related to space, including mining, tourism, communications, and scientific exploration.[8] These industries are likely to cause environmental impacts such as pollution from space debris, habitat disruption, potential loss of biodiversity from introducing Earth's microorganisms to other celestial bodies, and climate change from the greenhouse gases released by powerful rockets that shuttle payloads into space.[9] These grand challenges are foreseeable.[10]

Many of the potential issues related to the space race have been researched and documented.[11] The world can proactively address these foreseeable issues, which are similar to the issues that arose from human expansion into the oceans, by implementing similar solutions. Namely, rather than waiting for the impending calamity to materialize, the world can apply some of the BBNJ's concepts to the genre of space law, policy, and governance.

Part II of this note will explain the history and inspect the future of human expansion into the ocean. It will then look at the history and

5. *Id.*

6. U.N. Convention on the Law of the Sea, Dec. 10, 1982, 1833 U.N.T.S. 347. (U.N. Ocean Treaty), https://www.un.org/depts/los/convention_agreements/texts/unclos/unclos_e.pdf; *accord* Agreement Under the United Nations Convention on the Law of the Sea on the Conservation and Sustainable Use of Marine Biological Diversity of Areas Beyond National Jurisdiction, UN Doc. A/CONF/232/2023/4 (June 19, 2023) [hereinafter BBNJ], https://documents.un.org/doc/undoc/ltd/n23/177/28/pdf/n2317728.pdf. This treaty focuses on areas beyond national jurisdiction (ABNJ) extending beyond 200 nautical miles from coastal baselines and includes the deep seabed.

7. *See* Our Common Agenda Policy Brief 7: For All Humanity - The Future of Out of Space Governance 4 (2023), https://www.unoosa.org/res/oosadoc/data/documents/2023/a77/a77crp_1add_6_0_html/our-common-agenda-policy-brief-outer-space-en.pdf.

8. *See* Michael Byers & Aaron Boley, Who Owns Outer Space?: International Law, Astrophysics, and the Sustainable Development of Space 3–11 (Cambridge University Press ed., 2023).

9. *See* Kevin J. Gaston, Karen Anderson, Jamie D. Shutler, Robert J.W. Brewin & Xiaoyu Yan, *Environmental Impacts of Increasing Numbers of Artificial Space Objects*, 21 Frontiers in Ecology & Environment 289, 289–96 (2023); *see also Projected Increase in Space Travel May Damage Ozone Layer*, NOAA (Nov. 22, 2022), https://research.noaa.gov/projected-increase-in-space-travel-may-damage-ozone-layer; *Planetary Protection*, NASA, https://sma.nasa.gov/sma-disciplines/planetary-protection (last visited Feb. 11, 2025).

10. Byers & Boley, *supra* note 8, at 5.

11. *Id.*

future of the space race and make appropriate connections between human expansion into the ocean and space. Part III of this note will analyze the current legal framework for outer space and engage in proposed solutions by adapting parts of the BBNJ to proactively address similar issues related to human expansion into space and the ocean. Part IV of this note will then discuss the value propositions from the new legal and policy perspective.

The regulatory environment of the ocean and space reveals a certain irony. We live much closer to the bottom of the ocean[12] and have a well-established legal framework. Travel to the ocean's depths is infrequent,[13] and much of it is unexplored.[14] In contrast, though we live much farther from space,[15] travel there is more frequent[16] with little consensus on a legal framework.

II. Background

A. Human Expansion into Earth's Oceans

Human expansion into the ocean is a fascinating tale of exploration, innovation, and adaptation that spans thousands of years. Throughout history, humans have been drawn to the ocean, seeking resources and knowledge beyond the horizon. It has been a continuous and multifaceted journey driven by various factors, including the pursuit of sustenance, scientific curiosity and the quest for adventure, imperialistic ideas of colonialism, and capitalistic opportunism.[17]

12. The Mariana Trench is considered the deepest part of the ocean at 35,876 feet (7 miles) deep. *See Mariana Trench* (photograph), *in* Smithsonian National Museum of Natural History, https://ocean.si.edu/planet-ocean/seafloor/mariana-trench.

13. Only 3 people have traveled to the deepest parts of the ocean. *See* Katie Lang, *Hitting Bottom: Submariner Explored Deepest Parts of the Ocean*, U.S. Dep't of Def. (Jan. 23, 2019), https://www.defense.gov/News/Feature-Stories/story/Article/1737193/hitting-bottom-submariner-explored-deepest-part-of-ocean/.

14. *See* Marta Fava, *How Much of the Ocean has Been Explored?*, Ocean Literacy Portal (May 9, 2022), https://oceanliteracy.unesco.org/ocean-exploration/.

15. The point where scientists consider spacecrafts and astronauts to have entered space, known as the Von Karman Line, is 62 miles (100 kilometers) above sea level. *See* Lyle Tavernier, *How Far Away is Space?*, NASA Jet Propulsion Lab'y (Oct. 21, 2024), https://www.jpl.nasa.gov/edu/teach/activity/how-far-away-is-space/.

16. 676 people have entered space. *See* Zoe Hobbs, *How Many People Have Gone to Space?*, Firecrown Media (Nov. 8, 2023), https://www.astronomy.com/space-exploration/how-many-people-have-gone-to-space/.

17. Jean-Baptiste Jouffray, Robert Blaslak, Albert V. Norström, Herink öserblom, & Magnus Nyström, *The Blue Acceleration: The Trajectory of Human Expansion into the Ocean*, 2 One Earth 43, 43–50 (2020).

1. Ocean Nourishment

Fishing in the ocean likely predates recorded history, and even before formal civilizations, early humans likely practiced various forms of coastal and deep-sea fishing for sustenance.[18] Excavations of early ancient Egyptian civilizations near the Merimda Beni Salama revealed bones and fishing tools dating back to 4800 BCE.[19] Similarly, the Sumerians in ancient Mesopotamia were known to fish in the Persian Gulf as early as 3000 BCE.[20] This shows that humans have a long history of benefitting from the abundance of ocean resources, including fish, shellfish, marine mammals, seaweed, and salt.[21] The earliest civilizations had combinations of simple nets and sophisticated traps that afforded them a constant supply of a fresh seafood diet.[22]

In addition to fish and meat, early humans harvested seaweed and marine plants that were rich in vitamins, minerals, and antioxidants.[23] There is evidence that they used seaweed and marine plants as natural fertilizers in their fields to enrich the soil with nutrients and improve crop yields.[24] Marine plants were also known to have medicinal benefits and were often used in herbal remedies and poultices.[25] Sea sponges were collected and used for bathing or as wound dressings due to their absorbent and antiseptic qualities.[26]

Humans eventually learned how to use natural evaporation methods to produce sea salt, which became a valuable commodity for preserving food.[27] By packing fish in salt or soaking them in a saltwater

18. Harry Baker, *Ancient Fish Hooks Suggests Sharks Were Hunted Off Israel's Coast 6,000 Years Ago*, Live Sci. (Mar. 31, 2023), https://www.livescience.com/ancient-fish-hook-suggests-sharks-were-hunted-off-israels-coast-6000-years-ago.

19. Zahi Hawass, Fekri A. Hassan, & Achilles Gautier, *Chronology, Sediments, and Subsistence at Merimda Beni Salam*, 74 J. Egyptian Archaeology 31, 36 (1988).

20. *See* Richard N. Frye & Dietz O. Edzard, *Sumerian Civilization*, Encyc. Britannica, https://www.britannica.com/place/Mesopotamia-historical-region-Asia/Sumerian-civilization#ref55467 (last visited Jan. 27, 2025).

21. *Id.*

22. *History of Fishing: In Prehistoric, Ancient, Medial and Modern Eras*, Facts & Details, https://ioa.factsanddetails.com/article/entry-204.html (last visited Jan. 27, 2025).

23. Sarah Kuta, *Early Europeans Ate Seaweed for Thousands of Years*, Smithsonian Mag. (Oct. 18, 2023), https://www.smithsonianmag.com/smart-news/early-europeans-ate-seaweed-and-aquatic-plants-180983102/.

24. *See* The Seaweed Company, *The History of Seaweed Farming*, Medium (Jun. 23, 2022), https://medium.com/@theseaweedcompany/the-history-of-seaweed-farming-747fead1be12; *see also* Omar Ali, Adesh Ramsubhag, & Jayaraji Jayaraman, *Biostimulant Properties of Seaweed Extracts in Plants: Implications towards Sustainable Crop Production*, 10 Plants 531 (2021).

25. *Id.*

26. Susie Romaine, *Sea Sponges: A Brief History*, Sea Sponge Below (Dec. 15, 2023), https://www.seaspongebelow.com/sea-sponges-a-brief-history/.

27. *The History of Salt in Ancient Civilizations*, Hist. Coop. (Aug. 25, 2023), https://historycooperative.org/the-history-of-salt-in-ancient-civilizations/.

brine, ancient societies could preserve their catch for long journeys and times when fresh fish was not readily available.[28]

The Industrial Revolution significantly changed how humans approached using the nourishment provided by the ocean.[29] Fishing and trapping were no longer about sustenance as steam-powered ships and advanced fishing gear enabled larger-scale commercial fishing.[30] Fishing fleets arose that could travel farther from shore to access untapped fishing grounds.[31] Ships were equipped with mechanized winches and improved netting, allowing fishermen to harvest larger quantities.[32]

Many global cultures continue to embrace the therapeutic properties of seaweed through thalassotherapy, and marine-derived drugs are becoming more popular.[33] This has all led to the rise of the modern fishing industry and the industrial-sized harvesting of seaweed and other ocean minerals.[34] Today, advancements in refrigeration and transportation have further transformed the seafood and marine medicine industries; millions of people worldwide now have access to a diverse range of seafood and the medicinal benefits derived from Earth's oceans.[35]

These advancements are not without downsides and risks. Overfishing has led to the depletion of fish stocks, threatening the livelihoods of millions of people and endangering ocean ecosystems.[36] Unsustainable seaweed harvesting practices also damage the ocean ecosystem by disrupting habitats. For example, giant kelp forests serve as critical habitats for a wide range of marine life in California.[37] Kelp is a type of algae that has various applications, including food processing, pharmaceuticals, and soil fertilizer. It is in high demand but also provides

28. *Id.*

29. Stephen A. Murawski, *A Brief History of the Groundfishing Industry of New England*, NOAA Fisheries (May 13, 2024), https://www.fisheries.noaa.gov/new-england-mid-atlantic/commercial-fishing/brief-history-groundfishing-industry-new-england.

30. *Id.*

31. *Id.*

32. *Id.*

33. Jina Rachel Anup & Godwin Christopher J, *Marine Products and Methods of Thalassotherapy: A Review*, Int'l J. Adv. Eng'g & Mgmt. 126, 126 (2020).

34. *Id.*

35. *See* Philip Christiani, Julien Claes, Elin Sandnes, & Antoine Stevens, *Precision Fisheries: Navigating a Sea of Troubles with Advanced Analytics*, McKinsey & Co., https://www.mckinsey.com/industries/agriculture/our-insights/precision-fisheries-navigating-a-sea-of-troubles-with-advanced-analytics (last visited Jan. 7, 2024).

36. *Overfishing*, World Wildlife Fund, https://www.worldwildlife.org/threats/overfishing (last visited Jan. 7, 2024).

37. *See* Catherine Zuckerman, *The Vanishing Forest*, Nature Conservancy (May 26, 2023), https://www.nature.org/en-us/magazine/magazine-articles/kelp-forest/.

an essential habitat for numerous marine species.[38] Intensified kelp harvesting led to population declines in species that depend on kelp forests. The California sea otter, which relies on kelp forests for food and shelter, declined due to habitat loss and reduced prey availability.[39] It is essential to highlight that when ambitious entrepreneurs identify a market demand, they will go to any lengths to meet it and capitalize on the profits, even at the expense of others or the environment.

Addressing these challenges requires a concerted effort from governments, industries, and communities to ensure the future viability of ocean fishing, seaweed harvesting, and medicinal extraction while preserving marine ecosystems for future generations.[40] Fortunately, California recognized the impacts of unregulated kelp harvesting and implemented protective regulations.[41]

2. Human Curiosity

The oceans cover over 70% of the Earth's surface, yet they remain largely unexplored and mysterious.[42] Humans have an innate desire to understand the unknown, and the ocean is one of the biggest mysteries of them all.[43] As early humans settled near coastlines, they naturally became curious about what lay beyond the horizon.[44]

One of the earliest documented seafaring civilizations was the ancient Egyptians around 3200 BCE.[45] They initially used their sailing vessels to venture up and down the Nile River but eventually explored the Mediterranean and Red Seas.[46] The Pharaoh Sahure of the Fifth Dynasty is known to have sent a naval expedition to the Land of Punt (thought to be somewhere in the Horn of Africa or along the Red Sea coast), which is one of the earliest recorded long-distance sea voyages in African history.[47]

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38. *See* Emma Loewe, *The Kelp Business is Booming. How Big is Too Big?*, Mod. Farmer (Aug. 15, 2023), https://modernfarmer.com/2023/08/kelp-business-booming/.

39. *See* Daniela M. Carranza, Gisela C. Stotz, Julio A. Vasquez, & Wolfgang B. Stotz, *Trends in the effects of kelp removal on kelp populations, herbivores, and understory algae*, Glob. Ecology & Conservation, Jan. 2024, at 10.

40. Loewe, *supra* note, at 38.

41. *Id.*

42. *See How Much of the Ocean has Been Explored?*, Ocean Expl., https://oceanexplorer.noaa.gov/facts/explored.html (last visited Jan. 27, 2025).

43. *World Archaeology, Early Seafaring: Beyond the Blue Horizon*, World Archaeology (Dec. 24, 2012), https://www.world-archaeology.com/features/early-seafaring-beyond-the-blue-horizon/.

44. *Id.*

45. Peter Tyson, *Where is Punt?*, Pub. Broad. Serv., https://www.pbs.org/wgbh/nova/pharaoh/punt.html (last visited Nov. 7, 2024).

46. *Id.*

47. *Id.*

The Austronesians, originating from what is now Taiwan, were also among the first to explore the vast blue ocean.[48] They navigated the open seas to populate many islands in the Pacific Ocean.[49] Their journeys began around 3000 BCE, with simple boats and a deep understanding of the stars, wind patterns, bird behaviors; they set out on the water, drawn by the promise of undiscovered lands and the secrets of the sea.[50] Their descendants, the Polynesians, developed sophisticated navigation techniques to traverse thousands of miles of open ocean with remarkable precision around 1000 BCE.[51] Their double-hulled canoes were crafted to endure the unpredictable challenges of the Pacific.[52] The spread of humanity across the Pacific islands was not just a migration, it was an exploration driven by the desire to understand the breadth of the world and the potential of human capability.[53] As these ancient navigators looked to the horizon, their curiosity did not see a boundary but a pathway to new adventures, knowledge, and connections.

Emperor Abu Bakr II, who ruled Mali in the early 14th century, was intrigued by what lay across the Atlantic Ocean.[54] Historians believe he abdicated his throne to the famous Mansa Musa to lead an expedition into the Atlantic.[55] Mansa Musa later described a vast expedition of 2,000 ships that his predecessor sent to explore the ocean.[56] Ivan Van Sertima, a Guyanese historian, was a prominent proponent of the theory that Africans sailed to the Americas before Columbus.[57] In his book *They Came Before Columbus*, he argues that there was a significant African presence in the Americas centuries before Europeans arrived.[58] He cites linguistic patterns, cultural exchanges, and botanical evidence,

48. *See* Ed Yong, *Bacteria and Languages Reveal How People Spread Through the Pacific*, Nat'l Geographic (Jan. 22, 2009), https://www.nationalgeographic.com/science/article/bacteria-and-languages-reveal-how-people-spread-through-the-pacific.

49. *Id.*

50. *See The Art of Polynesian Navigation: Stars, Waves, and Island Voyaging, Far and Away Adventures*, https://farandawayadventures.com/the-art-of-polynesian-navigation-stars-waves-and-island-voyaging (last visited Nov. 7, 2024).

51. *Id.*

52. *Id.*

53. See *Pacific Realm Historical Geography I*, Western World: Daily Readings on Geography, at 66. https://cod.pressbooks.pub/westernworlddailyreadingsgeography/chapter/pacific-realm-historical-geography-i/ (last updated Nov. 14, 2024).

54. Kristine De Abreu, Exploration Mysteries: An Early African Voyage to the *Americas?*, https://explorersweb.com/exploration-mysteries-an-early-african-voyage-to-the-americas/ (last visited Feb. 10, 2024).

55. *Id.*

56. *Id.*

57. Ivan Van Sertima, They Came Before Columbus: The African Presence In Ancient America 24–44 (2003).

58. *Id.*

like the presence of African crops in pre-Columbian America, to support his claims.[59]

The Challenger expedition in the late 19th century paved the way for systematic ocean exploration, increasing human understanding of the ocean's depth and bathymetry.[60] It marked a monumental shift in humanity's relationship with the ocean's abyss. Over four years, the Challenger covered approximately 70,000 nautical miles, meticulously charting the depths of the world's oceans.[61] It was a pioneering endeavor that employed the use of precision depth measurements to reveal the complex topography of the ocean floor.[62] The discovery of the Challenger Deep, the deepest point in the Mariana Trench, underscored the expedition's significant contributions to oceanography.[63]

Human curiosity continued to drive exploration and expansion into the ocean in the 20th century but with an even more focus on scientific exploration. Jacques Cousteau's pioneering work brought the ocean's wonders to a global audience, kindling curiosity about the deep sea's diverse life forms and ecosystems.[64] Countries collaborated on international expeditions and marine research, recognizing that the ocean holds answers to pressing questions about climate change, biodiversity, and the Earth's geological history.[65]

As human expansion into the ocean continued in the 21st century, a growing awareness of environmental challenges became the focus.[66] Technological innovation played a pivotal role, with increasingly sophisticated underwater vehicles, robotics, and sensors, enabling humans to explore the ocean's depths with unprecedented precision.[67]

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59. *Id*. at 182–87.

60. Jodi Heckel, *Exploring the Deep with the HMS Challenger*, Univ. Ill. Urbana-Champaign Coll. Liberal Arts & Sciences, https://las.illinois.edu/news/2023-02-10/exploring-deep-hms-challenger (last visited Feb. 10, 2024).

61. Kate Golembiewski, *H.M.S. Challenger: Humanity's First Real Glimpse of the Deep Oceans,* Discover Mag., https://www.discovermagazine.com/planet-earth/hms-challenger-humanitys-first-real-glimpse-of-the-deep-oceans (last visited Feb. 10, 2024).

62. *Id.*

63. *Id.*

64. *See Cousteau's Aqua Lung*, Cousteau, https://www.cousteau.org/legacy/technology/aqua-lung/ (last visited Feb. 10, 2024).

65. *See NOS Int'l Pol'y*, Nat'l Oceanic & Atmospheric Admin., https://oceanservice.noaa.gov/international/nos-international-policy.html (last visited Feb. 10, 2024).

66. *See* Francesca Santoro, Selvaggia, Gail Scowcroft, Géraldine Fauville, Peter Tuddenham (eds.) (2017) 15–16, Ocean Literacy for All – A Toolkit, IOC/UNESCO & UNESCO Venice Office, Paris (IOC Manuals and Guides, 80 revised in 2018) [hereinafter Santoro].

67. *Id.*

Submersibles allowed scientists and researchers to venture into extreme ocean environments and conduct in-depth studies.[68]

Human curiosity about the ocean continues to drive discoveries, shaping our understanding of the natural world and our place in it.[69] From the development of sophisticated autonomous underwater vehicles to deep-diving submersibles, we are on the brink of a new age of discovery that mirrors the great space race. Curiosity about ocean conservation has become a driving force behind today's marine research and policy-making.

3. Scientific Discovery

Ocean exploration is also motivated by the potential for scientific discovery.[70] As we face global challenges such as climate change and biodiversity loss, the oceans are crucial in providing answers and solutions.[71] The deep sea, with its extreme conditions, is home to unique ecosystems that can teach us a lot about resilience and adaptation.[72] Marine scientists harness our curiosity to develop new ways to study and protect these environments.[73]

Because of climate change, scientists are keen to study ocean currents, temperature gradients, and the complex interactions between the sea and the atmosphere.[74] These studies are crucial for improving climate models and developing more accurate predictions about future climate patterns.[75] The seafloor and sub-seafloor contain records of the Earth's past climate changes, plate tectonics, and even extraterrestrial impacts.[76] Thus, scientific exploration can illuminate the history of the Earth and guide our understanding of geological processes, which can also be critical for natural disaster prediction and mitigation.[77]

The ocean's biological diversity is also a treasure trove for scientific discovery.[78] The adaptation of life in extreme marine environments, such as deep-sea hydrothermal vents and the abyssal plains, can offer

68. *See HOV Alvin*, Woods Hole Oceanographic Inst., https://www.whoi.edu/what-we-do/explore/underwater-vehicles/hov-alvin/ (last visited Feb. 10, 2024).
69. *See* Santoro, *supra* note 66, at 87.
70. *Id.* at 16.
71. *See id.* at 42–48.
72. *Id.*
73. *Id.*
74. *Id.*
75. *Id.*
76. *Id.* at 30–34.
77. *Id.*
78. *Id.* at 15–16.

insights into the limits of life on Earth and inform the search for life on other planets and their moons.[79]

4. Capitalist Opportunism

Capitalist opportunism is a potent driver of human expansion into Earth's oceans, as the pursuit of profit propels technology investments.[80] The vast, unclaimed, and unexploited expanses of the ocean floor are replete with resources. The deep seabed is rich in metals such as cobalt, nickel, and rare earth elements that are crucial for modern electronics and green technologies.[81] The emerging deep-sea mining industry, though in its infancy, is accelerated by the capitalist lure of high returns on these essential materials.[82] This is spurred by dwindling terrestrial sources and the increasing demand for high-tech consumer goods and renewable energy infrastructure.[83] Multinational corporations, backed by national interests, are investing in the technology required to extract these resources from extreme depths.[84] Again, when ambitious entrepreneurs identify a market demand, they will go to any lengths to meet it and capitalize on the profits, even at the expense of others or the environment. Environmental groups often contest these initiatives, but the potential economic gains reinforce the push to explore and exploit ocean floor resources.

B. Human Expansion into Space

Human expansion into space is a story of innovation and gumption that is every bit as intriguing as the story of human expansion into the oceans.[85] Although the physical exploration of space has a relatively brief history, humans are drawn to the frontier of the unknown night sky.[86]

79. See *Why Europa*, Europa NASA, https://europa.nasa.gov/why-europa/ingredients-for-life/ (last visited Feb. 22, 2024).

80. Brett Clark & Rebecca Clausen, *The Oceanic Crisis: Capitalism and the Degradation of Marine Ecosystem*, Monthly Rev., https://monthlyreview.org/2008/07/01/the-oceanic-crisis-capitalism-and-the-degradation-of-marine-ecosystem/ (last visited Feb. 22, 2024).

81. Oliver Ashford, Jonathan Baines, Melissa Barbanell & Ke Wang, *What We Know About Deep-sea Mining – and What We Don't*, World Res. Inst., https://www.wri.org/insights/deep-sea-mining-explained# (last visited Feb. 22, 2024).

82. *Id.*

83. *Id.*

84. *Id.*

85. Stephanie Condon, *The New Space Race Will Drive Innovation. Here's Where It Goes Next*, ZDnet (Dec. 7, 2022) https://www.zdnet.com/article/the-new-space-race-will-drive-innovation-heres-where-it-goes-next/.

86. *Id.*

Space exploration is spawned by human curiosity, scientific discovery, capitalistic opportunism, and, for some, the survival of humanity.

1. Ancient Space Curiosity

Theories and conceptualizations of space travel date back centuries, with humans harboring dreams of exploring the cosmos long before the technology to achieve it was developed.[87] Ancient Egyptians had a masterful understanding of astronomy, and their knowledge of the heavens was closely tied to their religious and agricultural practices.[88] Egyptian pyramids and temples were often meticulously aligned with celestial events with magnificent detail.[89] Egyptian mythology included the concept of a journey through the soul of the cosmos but only in the afterlife.[90] The Dogon people of Mali are renowned for their understanding of the Sirius star system, which still bewilders present-day astronomers.[91] The Fulani people of West and Central Africa have a remarkable technique for nocturnal cattle migrations using the position of the stars.[92] These African cultures have passed down their cosmologies by word of mouth over centuries.[93]

Ancient Chinese culture also speculated about the nature of celestial bodies and their place in the universe.[94] Central to ancient Chinese cosmology is the concept of "yin" and "yang," which represent dualistic and complementary forces or principles that exist in all aspects of the universe.[95] However, the Chinese's most significant role in space exploration's historical progression was in their invention of gunpowder, which laid the groundwork for later developments in rocketry needed for space exploration.[96] During the 16th century's Ming Dynasty,

87. John M. Logsdon, *Space Exploration*, Encyc. Britannica, https://www.britannica.com/science/space-exploration (last visited Mar. 10, 2024).

88. *Ancient Egyptian Astronomy: A Journey Through the Stars*, SchoolTube, https://www.schooltube.com/ancient-egyptian-astronomy-a-journey-through-the-stars/ (last visited Mar. 10, 2024).

89. *Id.*

90. *Id.*

91. *See* Efstratios Theodossiou, *Siren in Art and Astronomy of Dogon*, 1st Int'l Symposium Sci. & Art, https://www.docdroid.net/YkYTp4m/sirius-in-art-and-astronomy-of-dogon-pdf (last visited Jan. 27, 2025).

92. *See* Clare Oxby, *A Review of African Ethno-Astronomy: With Particular Reference to Saharan Livestock-Keepers*, 40 La Ricerca Folklorica 55, 55–64 (1999).

93. *Id.*

94. *See The Chinese Cosmos*, Asia for Educators, https://afe.easia.columbia.edu/cosmos/bgov/cosmos.htm (Mar. 15, 2024).

95. *Id.*

96. *See* Cliff Lethbridge, *The History of Rocketry*, Spaceline, https://www.spaceline.org/history-cape-canaveral/history-of-rocketry/history-of-rocketry-chapter-1/ (last visited Mar. 15, 2024).

military strategist and scholar Wan Hu is said to have attempted a rocket-powered flight using a chair and 47 rockets.[97]

2. Scientific Discoveries in Space

While space curiosity fueled the dreams of human expansion into space, potential scientific discoveries have been one of the actual driving forces in getting humans into space. Pursuing scientific knowledge, understanding, and discovery has shaped the goals, missions, and advancements in space exploration.

a. Scientific Motivations

One of the aims of space exploration is to expand our understanding of the universe, its origins, and its fundamental processes. By sending spacecraft and telescopes into space, scientists can observe distant celestial bodies, study cosmic phenomena, and gather data that contributes to our knowledge of the cosmos.[98] Space telescopes like Hubble and James Webb have provided breathtaking images of distant galaxies, stars, and planets, advancing our understanding of the universe's vastness and complexity.[99] Space missions are often equipped with specialized scientific instruments to conduct experiments designed to answer specific research questions.[100] These experiments can cover a wide range of scientific disciplines, from astronomy and astrophysics to planetary science, geology, and biology.[101]

Humans are intent on better understanding our planet, and space exploration enhances our understanding of Earth. Satellites in orbit provide essential data for monitoring the planet's climate, weather patterns, environmental changes, and natural disasters.[102] Space-based observations help scientists track global phenomena such as sea-level rise, deforestation, and the impact of human activities on the environment.[103]

97. *Rockets as Weapons*, NASA, https://www.grc.nasa.gov/www/k-12/rocket/BottleRocket/13thru16.htm (last visited Mar. 15, 2024).

98. *Why Have a Telescope in Space?* NASA, https://science.nasa.gov/mission/hubble/overview/why-have-a-telescope-in-space/ (last visited Mar. 16, 2024).

99. *Id.*; *see also* James Webb Space Telescope, https://webbtelescope.org/home (last visited Mar. 16, 2024).

100. *Mars Exploration Science Goals*, NASA, https://science.nasa.gov/planetary-science/programs/mars-exploration/science-goals/ (last visited Mar. 16, 2024).

101. *Id.*

102. *Surface Biology and Geology Study*, NASA Jet Propulsion Lab'y, https://sbg.jpl.nasa.gov (last visited Mar. 26, 2024).

103. *Id.*

The challenges of space exploration drive innovations in technology and engineering.[104] The development of spacecraft, propulsion systems, communication technologies, and materials science often leads to spin-off technologies that benefit various industries on Earth.[105] This can inspire the next generation of scientists, engineers, and explorers.[106] It showcases the excitement and wonder of science and encourages young people to pursue careers in STEM (science, technology, engineering, and mathematics).[107]

b. Human Expansion into Space Timeline

In the late 19th and early 20th centuries, Konstantin Tsiolkovsky, a Russian scientist often considered one of the pioneers of astronautics, formulated the basic principles of rocket propulsion and space travel.[108] His famous rocket formula laid out the mathematical basis for rocket science and established the concept that a rocket could escape Earth's gravitational pull using exhaust gases expelled from the rear.[109] Continuing in the early 20th century, a German physicist and engineer, Hermann Oberth, independently developed rocket theory in his book *Die Rakete zu den Planetenräumen* (The Rocket into Planetary Space) that outlined the principles of space travel using rockets.[110] Also in the early 20th century, an American physicist and engineer, Robert Goddard, is credited with launching the first liquid-fueled rocket. His research and experiments were instrumental in advancing rocket technology.[111]

During World War II, Wernher von Braun's development of the German V-2 rocket marked significant progress in rocket technology.[112] After the war, the United States recruited von Braun and many of his colleagues as part of Operation Paperclip, laying the foundation for the American space program.[113]

104. Eli Dourado, *Why Go To Space?*, Ctr. for Growth & Opportunity Utah State Univ., https://www.thecgo.org/wp-content/uploads/2022/06/Why-go-to-space.pdf (last visited Jan. 5, 2025).
105. *Id.*
106. *Id.*
107. *Id.*
108. *Konstantin E. Tsiolkovsky* '*The Father of Astronautics and Rocket Dynamics*', N.M. Museum Space Hist., https://www.nmspacemuseum.org/inductee/konstantin-e-tsiolkovsky/ (last visited Mar. 27, 2024).
109. *Id.*
110. Nola Taylor Tillman, *Hermann Oberth: German Father of Rocketry*, Space (Mar. 4, 2013), https://www.space.com/20063-hermann-oberth.html.
111. *Id.*
112. *Id.*
113. Michael Neufeld, *Project Paperclip and American Rocketry After World War II*, Smithsonian Nat'l Air & Space Museum (Mar. 31, 2023), https://airandspace.si.edu/stories/

The Cold War rivalry between the United States and the Soviet Union in the mid-20th century led to rapid advancements in space technology.[114] The launch of Sputnik 1 by the Soviets in 1957 marked the beginning of the Space Race between the two countries that lasted over a decade.[115] In 1961, Russian cosmonaut Yuri Gagarin became the first human to journey into space, followed shortly by Alan Shepard of the United States.[116] The Space Race reached its climax with the Apollo 11 Moon landing by the United States in 1969.[117] The Space Race officially concluded with the Apollo-Soyuz Test Project in 1975, which was a cooperative mission between the United States and the Soviet Union.[118] These historic events fueled the dream of long-term human space exploration.

Space exploration in the 1970s and 80s shifted to more diverse ambitions, including the Skylab, the first American space station, and the Viking spacecraft that successfully landed on Mars.[119] Simultaneously, the National Aeronautics and Space Administration (NASA) created its Space Shuttle program with the launch of the Space Shuttle Columbia in 1981 and the Space Shuttle Challenger that tragically exploded in 1986.[120]

The new millennium brought the advent of the first commercial crewed spaceflight when SpaceX's Dragon became the first commercially built and operated spacecraft to be recovered successfully from orbit in 2010.[121] Now, private companies like SpaceX and Blue Origin conduct crewed missions, space tourism efforts, and have ambitious plans for lunar and Mars exploration.[122] There is seemingly a demand, and as mentioned, when ambitious entrepreneurs identify a market demand, they will go to any lengths to meet it and capitalize on the profits, even at the expense of others or the broader public good.

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editorial/project-paperclip-and-american-rocketry-after-world-war-ii.

114. *Racing to Space: Gagarin and Shepard*, Nat'l Air & Space Museum, https://airandspace.si.edu/explore/stories/gagarin-vs-shepard (last visited Mar. 27, 2024).

115. *Id.*

116. *Id.*

117. *Apollo 11*, NASA, https://www.nasa.gov/mission/apollo-11/ (last visited Mar. 27, 2024).

118. *Apollo-Soyuz Test Project*, NASA, https://www.nasa.gov/apollo-soyuz-test-project/ (last visited Mar. 27, 2024).

119. *Skylab*, NASA, https://www.nasa.gov/skylab/ (last visited Mar. 27, 2024); *Viking Project*, NASA, https://science.nasa.gov/mission/viking/ (last visited Mar. 27, 2024).

120. *The Space Shuttle*, NASA, https://www.nasa.gov/space-shuttle/ (last visited Mar. 27, 2024).

121. Matthew Weinzierl & Angela Acocella, *Blue Origin, NASA, and New Space*, Harv. Bus. Sch. (May 31, 2016), at 28.

122. *Id.* at 24.

C. Similar Challenges and Benefits of Human Expansion into Space and Earth's Oceans

Human expansion into space and the oceans represent two of humanity's most ambitious frontiers. While distinct in nature, both environments are vast, inhospitable, and largely unexplored. Human expansion into both environments has several challenges as well as benefits.

1. Ethical

The shared ethical considerations from human expansion into space and to the ocean floor highlight the universal challenges of humanity with uncharted and shared domains.

a. Inequitable Access

Global disparities create a de facto barrier to entry for developing countries.[123] High entry costs limit participation to wealthy nations and large corporations, which effectively sidelines nations that lack the infrastructure or capital to engage.[124] This limits the ability of some nations to garner more resources and participate in scientific discoveries, exacerbating global inequities.[125] Powerful stakeholders and the rapid pace of technological development create a situation that further marginalizes those without the means to participate initially.[126]

b. Peaceful Use

The challenges of arms proliferation and militarization pose significant risks to the peaceful use of the ocean and space.[127] This reflects broader concerns about international security, strategic stability, and conflict prevention.[128] Expansion to the ocean and space can heighten international tensions and lead to conflicts, especially in contested regions or during periods of geopolitical rivalry.[129] Incidents such as the interception of military aircraft or naval vessels in international

123. Byers & Boley, *supra* note 8, at 120.
124. *Id.*
125. *Id.*; Byers & Boley, *supra* note 8, at 173.
126. *Id.*
127. Nancy Gallagher, *A Reassurance-Based Approach to Space Security*, Int'l Sec. Rsch & Outreach Programme Int'l Sec. Bureau (Oct. 2009), at 7.
128. *Id.*
129. *Id.*

airspace or waters or the destruction of satellites in space can act as flashpoints, increasing the risk of broader conflict.

2. Technological and Scientific

The frontiers of space and the ocean push the boundaries of human knowledge and capabilities. The challenges are immense and remarkably similar, but the benefits seem limitless. Both environments demand sophisticated technology to overcome extreme conditions. Space exploration must contend with extreme temperatures and cosmic radiation in the vacuum outside of our planet's atmosphere.[130] Similarly, the deep ocean presents challenges related to high pressure and cold temperatures in dark conditions, necessitating specialized submersibles and equipment.[131]

Conquering these challenges facilitates many technological advancements in materials science, robotics, and telecommunications.[132] The inventions that enable human expansion have widespread applications that extend into many sectors of society.[133] For instance, satellite technology initially developed for space exploration is now integral to internet communication, navigation, weather forecasting, and disaster management.[134] Also, ocean science of the seafloor has been critical in developing early warning systems and disaster preparedness strategies.[135]

3. Resource Utilization

Many challenges and benefits of resource utilization in the oceans and space mirror each other. If harnessed responsibly, the vast and largely untapped resources could benefit humanity significantly.

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130. *See Surviving Extreme Conditions in Space*, Eur. Space Agency, https://www.esa.int/Science_Exploration/Space_Science/Extreme_space/Surviving_extreme_conditions_in_space (last visited Feb. 11, 2025).

131. *See Ocean Extreme Environments*, Geo-Ocean, https://www.geo-ocean.fr/en/Science-for-all/Our-classrooms/Hydrothermal-systems/Hydrothermalism/Oceanic-extreme-environments (last visited Mar. 2, 2024).

132. *See Ocean Exploration: Technology*, Nat'l Geographic, https://education.nationalgeographic.org/resource/ocean-exploration/ (last visited Mar. 2, 2024); *see also* Landry Signé & Hanna Dooley, *How Space Exploration is Fueling the Fourth Industrial Revolution*, Brookings (Mar. 28, 2023), https://www.brookings.edu/articles/how-space-exploration-is-fueling-the-fourth-industrial-revolution/.

133. Signé & Dooley, *supra* note 132.

134. *See id.*; *see also How Does the Ocean Affect Climate and Weather on Land?*, NOAA https://oceanexplorer.noaa.gov/facts/climate.html (last visited Mar. 3, 2024).

135. *The Role of Ocean Energy in Disaster Resilience*, Green, https://green.org/2024/01/30/the-role-of-ocean-energy-in-disaster-resilience/ (last visited Jan. 30, 2024).

a. Energy Production

The ocean is a magnificent source of renewable energy production. Wave energy is produced by converting the energy of surface waves into electricity.[136] Tidal energy harnesses the power of highly predictable tidal movements to create a reliable renewable energy source.[137] Ocean thermal energy conversion (OTEC) exploits the temperature difference between warmer surface water and colder deep water to generate electricity.[138] Offshore drilling dominates nonrenewable energy production by extracting petroleum from beneath the ocean floor.[139]

Space is arguably immeasurable, and human expansion into space opens up a portal to extraordinary amounts of energy.[140] Space-based solar power (SBSP) involves capturing solar energy in space, where solar irradiance is constant and unaffected by Earth's atmospheric or weather conditions, and then wirelessly transmitting this energy back to Earth.[141] This concept could deliver a continuous energy supply, overcoming the intermittency issues associated with terrestrial renewable energy sources.[142]

b. Mineral Mining

Deep-sea mining involves the extraction of minerals and other geological materials from the ocean floor.[143] This practice is considered by many as a way to meet the increasing demand for precious metals and minerals. Rare earth elements, including gold, copper, nickel, and cobalt, are essential for modern electronics, batteries, and renewable energy technologies.[144] Proponents assert that deep-sea mining is an

136. *See* Graham Lumley, *What is Wave Power?*, BKVENERGY, https://bkvenergy.com/learning-center/what-is-wave-energy/ (last visited Jan. 28, 2025).

137. *Id.*

138. *Ocean Thermal Energy Conversion*, U.S. ENERGY INFO. ADMIN., https://www.eia.gov/energyexplained/hydropower/ocean-thermal-energy-conversion.php (last visited Mar. 19, 2024).

139. *See Offshore Energy Dominance: Assessing Domestic Offshore Energy Reserves and Ensuring U.S. Energy Dominance: Hearing Before the Subcomm. on Energy & Mineral Res. of the H. Comm. on Nat. Res.,* 118th Cong. (2024) (statement of Dr. Walter D. Cruickshank, Deputy Director, Bureau of Ocean Energy Mgmt., U.S. Dep't. of the Interior).

140. *See* Nola Taylor Tillman & Jonathan Gordon, *How Big Is the Universe*, SPACE (Jan. 28, 2022), https://www.space.com/24073-how-big-is-the-universe.html*; see Space-Based Solar Power*, DEP'T. ENERGY https://www.energy.gov/space-based-solar-power (last visited Mar. 17, 2024).

141. *Id.*

142. *Id.*

143. *See* Oliver Ashford, Jonathan Baines, Melissa Barbanell, & Ke Wang, *What We Know About Deep-Sea Mining — and What We Don't*, WORLD RES. INST. (Feb. 23, 2024), https://www.wri.org/insights/deep-sea-mining-explained.

144. *Id.*

alternative to land mining, which leads to harmful deforestation, soil erosion, and habitat destruction.[145] Opponents point to the significant risks to marine ecosystems, many of which are not fully understood.[146]

Space mining, also known as asteroid mining or planetary mining, is the concept of extracting natural resources from celestial bodies such as asteroids, moons, and planets.[147] Asteroids are considered the prime targets for mining due to their abundance in the solar system and richness in metals, and even diamonds.[148] The lunar surface is rich in valuable materials, including water ice, rare earth elements, and helium-3, an isotope that could potentially be used in future nuclear fusion reactors.[149] Proponents look to the enormous economic potential that some believe can exceed trillions of dollars. Opponents point to the potential environmental impact on celestial bodies.

4. Environmental Concerns

Looking past the challenges and benefits of expanding into the ocean and space, they both pose serious environmental concerns.

a. Effects of Expansion into the Ocean

Offshore drilling dates back to the early 20th century and has well-understood environmental impacts.[150] The biggest is likely the result of oil spills that devastate marine life and coastal communities.[151] Oil spills coat marine organisms with toxic substances, impairing their ability to breathe, maintain buoyancy, and reproduce.[152] They cause extensive damage to marine ecosystems and local economies dependent on fishing and tourism.[153] Even when there are no spills, drilling and extracting the oil can release other pollutants, including drilling mud and chemicals

145. *Id.*
146. *Id.*
147. *See* Alex Gilbert, *Mining in Space is Coming*, Milken Inst. Rev. (Apr. 26, 2021), https://www.milkenreview.org/articles/mining-in-space-is-coming.
148. *See* Jamie Carter, *There Could Be 16 Quadrillion Tons Of Diamonds On The Planet Mercury Suggests New Research*, Forbes (Mar. 17, 2022), https://www.forbes.com/sites/jamiecartereurope/2022/03/17/there-could-be-16-quadrillion-tons-of-diamonds-on-the-planet-mercury-suggests-new-research/.
149. *Helium-3 mining on the lunar surface*, Eur. Space Agency, https://www.esa.int/Enabling_Support/Preparing_for_the_Future/Space_for_Earth/Energy/Helium-3_mining_on_the_lunar_surface (last visited Feb. 2024).
150. Shelia Hu, *Offshore Drilling 101*, Nat'l Res. Def. Council (Mar. 22, 2024), https://www.nrdc.org/stories/offshore-drilling-101.
151. *Id.*
152. *See How Oil Spills Affect Wildlife*, Env't Prot. Agency, https://acmeboom.com/articles/how-oil-spills-affect-wildlife/ (last visited Jan. 28, 2025).
153. Hu, *supra* note 150.

used in the extraction process.[154] These substances can be toxic to marine life and may accumulate in the food chain, posing risks to marine organisms and humans relying on seafood.[155] Drilling also contributes to noise pollution, disrupting the communication, navigation, and the feeding behaviors of marine mammals such as whales and dolphins.[156] The continuous noise from drilling operations and seismic surveys (used to locate oil reserves) can lead to disorientation and stress in these sensitive species, potentially leading to population declines.[157] Enabling the continued extraction and consumption of fossil fuels, which release greenhouse gases when burned, further exacerbates global warming and its effects on marine and coastal environments, such as ocean acidification and rising sea levels.[158]

Deep sea mining is relatively new compared to drilling for oil in the ocean.[159] However, it also raises profound environmental concerns.[160] The ocean floor hosts remarkable biodiversity in ecosystems that have evolved over millions of years.[161] Mining activities directly threaten these habitats by physically altering their seafloor landscape.[162] The extraction processes of scraping, cutting, or vacuuming mineral-rich deposits can obliterate unique life forms that are yet to be fully understood.[163] As minerals are disturbed and collected, fine particles are suspended in the water column, forming plumes extending far beyond the immediate mining site for miles.[164] These sediments, when resettling, smother marine life, clog the filter-feeding apparatus of benthic organisms, and fundamentally alter the seabed's chemical makeup.[165] There is also a risk of releasing trapped chemicals from deep under the seafloor.[166] Once confined to the deep-sea sediments, heavy metals and other toxic substances can become mobilized, entering the

154. *Id.*
155. *Id.*
156. *Id.*
157. *Id.*
158. *Id.*
159. *See* Ashford et al., *supra* note 143.
160. *Id.*
161. *Id.*
162. *Id.*
163. *See* Rajesh Uppal, *The New Geopolitical Frontier: The Race to Exploit Deep Sea Minerals*, INT'L DEF., SEC. & TECH. (July 29, 2024). https://idstch.com/military/navy/the-new-geopolitical-frontier-the-race-to-exploit-deep-sea-minerals/.
164. *Id.*
165. *Id.*
166. *Id.*

marine food chain.[167] The deep sea is a significant carbon sink, playing a crucial role in sequestering carbon dioxide and mitigating the pace of climate change.[168] Disturbances to the seabed and its sediments could impair this function, releasing stored carbon and exacerbating global warming.

The harmful effects begin to stack up and paint a grim environmental picture. This leads to immediate biodiversity loss and long-term impairment of ecological resilience. This eventually impacts the global food chain, where humans experience the devastation first-hand.

b. Effects of Expansion into Space

Expansion into space has harmful effects on Earth.[169] The journey to space begins with rocket launches, which have immediate environmental impacts on Earth.[170] The combustion of rocket propellants releases significant amounts of greenhouse gases and black carbon particles directly into the atmosphere.[171] The high-altitude emissions from rocket launches are particularly concerning because they are released directly into the upper atmosphere, where they have a more prolonged and potentially more severe impact than ground-level emissions.[172] Additionally, the production of rockets and spacecraft involves energy-intensive manufacturing processes, contributing further to carbon emissions.[173] Some rockets use fuels that leave harmful residues in the atmosphere and surrounding environments, posing risks to both the environment and human health.[174]

Right outside of our atmosphere but within Earth's orbit is the accumulation of space debris.[175] This consists of defunct satellites, spent rocket stages, and fragments from collisions orbiting at over 15,000 miles per hour, posing collision risks to operational satellites and the International Space Station.[176] Moreover, the increasing density of space debris could lead to the Kessler Syndrome. In this hypothetical scenario, collisions become so frequent that Earth's orbit becomes

167. *Id.*
168. *Id.*
169. Byers & Boley, *supra* note 8, at 6.
170. *Id.* at 11.
171. *Id.* at 39.
172. *Id.*
173. *Id.*
174. *Id.*
175. *See* Chris Impey, *Analysis: Why Trash in Space is a Major Problem With No Clear Fix*, PBS (Sept. 3, 2023), https://www.pbs.org/newshour/science/analysis-why-trash-in-space-is-a-major-problem-with-no-clear-fix.
176. *Id.*

enveloped in an impenetrable debris field, hindering future space activities.[177]

III. Legal Analysis

Given the similarities between human expansion into the oceans and space, it is reasonable to believe that some of the laws and policies governing the oceans could apply to space. As explained earlier, human expansion into space is still a relatively new frontier compared to the history of expansion into the ocean, so the global society has an opportunity to be proactive.[178]

A. The Legal Framework for Outer Space

Space law is an amalgam of legal norms, principles, and treaties that govern space activities. It has evolved significantly since the dawn of early space exploration in the mid-20th century. The following are the salient agreements contributing to space law.

1. International Agreements

The Committee on the Peaceful Uses of Outer Space (COPUOS) was set up by the United Nations General Assembly in 1959 to govern the exploration and use of space for "the benefit of all humanity: for peace, security and development."[179] The Committee was instrumental in the creation of the five treaties that provide the framework for international space law.[180]

a. The Outer Space Treaty[181]

The Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, including the Moon and Other Celestial Bodies (OST), is the foundational framework for international space law.[182] Ratified in 1967, it establishes basic principles

177. *Id.*
178. *See* Landrigan et al., *supra* note 3.
179. Committee on the Peaceful Uses of Outer Space, U.N. OFF. FOR OUTER SPACE AFFS. https://www.unoosa.org/oosa/en/ourwork/copuos/index.html (last visited Jan 28, 2025).
180. *Id.*
181. Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, Including the Moon and Other Celestial Bodies, Jan. 27, 1967, 18 U.S.T. 2410, 610 U.N.T.S. 205, 61 I.L.M. 386 (1967) [hereinafter Outer Space Treaty (OST)].
182. Katherine Latimer Martinez, *Lost in Space: An Exploration of the Current Gaps in Space Law*, 11 SEATTLE J. ENV'T. L. 322, 322-23 (2021).

for the conduct of space activities.[183] It is commonly referred to as the "constitution"[184] or "magna carta" of outer space.[185] While it promotes the peaceful, cooperative, and sustainable exploration of space, it fails to address many contemporary issues the global community faces regarding space law.[186]

b. The Rescue Agreement[187]

The rescue agreement was adopted by the United Nations General Assembly in 1967 and entered into force in 1968.[188] It builds upon provisions in the OST as it aims to enhance international cooperation by establishing the responsibility of states to assist astronauts and return space objects in distress.[189] This reflects the humanitarian principle that astronauts are considered "envoys of mankind" (as stated in Article V of the OST).[190]

c. The Liability Convention[191]

The Liability Convention is a pivotal document in international space law that addresses the issue of liability for damage caused by space objects.[192] Adopted by the United Nations in 1972, the convention builds upon the liability principles outlined in the OST by providing a detailed legal framework governing the damage compensation process.[193]

183. *Id.*
184. Kelsey Eyanson, *Billionaires Eclipse Nasa: The Next Space Race over National Regulation*, 60 HOUS. L. REV. 1181 (2023).
185. Rossana Deplano, *The Artemis Plan: A Paradigm Shift In International Space Law?*, 46 J. SPACE L. 101, 102 (2022).
186. Martinez, *supra* note 182.
187. Agreement On the Rescue of Astronauts, the Return of Astronauts and Return of Objects Launched Into Outer Space, Apr. 22, 1968, 19 U.S.T. 7570, 672 U.N.T.S. 119, 7 I.L.M. 149 (1968) [hereinafter Rescue Agreement].
188. *Id.*
189. *Id.*
190. *See* Outer Space Treaty art. V.
191. Convention On the International Liability For Damage Caused By Space Objects Mar. 29, 1972, 24 U.S.T. 2389, 961 U.N.T.S. 187, 10 I.L.M. 965 (1972) [hereinafter Space Liability Convention].
192. Sam Logterman, *Astronomical Arbitration: Why Amending the Liability Convention is the Best Step Forward for Interstellar Adjudication*, 30 MINN. J. INT'L L.183, 188–89.
193. *Id.*

d. The Registration Convention[194]

The registration convention was adopted by the United Nations in 1974.[195] It builds upon the desire expressed by States in the OST, the Rescue Agreement, and the Liability Convention to make provision for a mechanism that provides States with a means to assist in the identification of space objects.[196] The United Nations Register of Objects Launched into Outer Space addressed issues relating to Parties' responsibilities concerning their space objects.[197] It aims to promote transparency and accountability by requiring states to register space objects they launch with the United Nations, creating an official record of space activities.[198] This agreement enhances global awareness of space activities and facilitates the identification of objects that may cause damage or malfunction.[199] It serves a critical function as the volume of space launches continues to grow exponentially.

e. Moon Agreement[200]

The Moon Agreement is an international treaty that aims to extend the principles of the OST specifically to the Moon and other celestial bodies within the solar system, excluding Earth.[201] Adopted by the United Nations General Assembly in 1979 and entering into force in 1984, the Moon Agreement elaborates on the use of the Moon and other celestial bodies for peaceful purposes, prohibiting military installations, weapons testing, and any military maneuvers.[202] It also emphasizes that the exploration and use of the Moon should be carried out for the benefit of all countries, regardless of their level of economic or scientific development.[203] One of the most distinctive aspects of the Moon Agreement is its declaration that the Moon and its natural resources are the "common heritage of mankind," suggesting that an

194. Convention On the Registration Of Objects Launched Into Outer Space, Jan. 14, 1975, 28 U.S.T. 695, 1023 U.N.T.S. 15, 14 I.L.M. 43 (1975). [hereinafter Registration Convention].

195. *Id.*

196. *Convention on the Registration of Objects Launched into Outer Space*, U.N. OFF. FOR OUTER SPACE AFFS, https://www.unoosa.org/oosa/en/ourwork/spacelaw/treaties/introregistration-convention.html.

197. *Id.*

198. Registration Convention I & II.

199. *Id*. at pmbl. & art.V.

200. Agreement Governing the Activities of States on the Moon and Other Celestial Bodies, Dec. 18, 1979, 1363 U.N.T.S. 3 [hereinafter Moon Agreement].

201. Kevin V. Cook, *The Discovery of Lunar Water: An Opportunity to Develop a Workable Moon Treaty*, 11 GEO. INT'L ENV'T. L. REV. 647, 647 (1999).

202. *Id.* at 661.

203. *Id.*

international regime should be established to govern the exploitation of these resources once it becomes feasible.[204] The U.S. conspicuously neither signed nor ratified the Moon Agreement.[205]

2. United States Space Law and Policy

a. The 2015 Space Act

The U.S. Commercial Space Launch Competitiveness Act, commonly known as the 2015 Space Act, represents a significant milestone in the evolution of space law, particularly regarding commercial space activities.[206] Signed into law on November 25, 2015, this Act encompasses a broad range of provisions aimed at facilitating the growth of the commercial space industry in the United States.[207] One of its most notable sections, "Title IV—Space Resource Exploration and Utilization," specifically addresses the rights of U.S. citizens to engage in the commercial exploration and recovery of space resources, including water and minerals from asteroids and other celestial bodies.[208] This provision effectively recognizes the rights of American companies to own, transport, and sell resources they extract from celestial bodies, subject to existing obligations under international treaties, such as the OST.[209]

b. Presidential Directives and Executive Orders

U.S. space policy has undergone significant development under the administrations of Donald Trump and Joe Biden, each introducing key executive orders and directives. The Trump administration's space policy directives aimed to revitalize U.S. leadership in space exploration, deregulate commercial space activities, and emphasize national

204. *Id.* at 648.

205. David P. Fidler, *The Artemis Accords and the Next Generation of Outer Space Governance,* COUNCIL ON FOREIGN RELS. (June 2, 2020), https://www.cfr.org/blog/artemis-accords-and-next-generation-outer-space-governance.

206. Hunter Sutherland, *The Stakes are Out of This World: How to Fix the Space Act of 2015*, 22 VT. J. ENV'T. L. 100, 102 (2021).

207. *See id.* §§ 102–103 (providing various provisions to facilitate the growth of the commercial space sector).

208. *See id.* § 402, 129 Stat. at 720 (establishing the rights of U.S. citizens to engage in commercial space resource exploration and recovery, specifically under "Title IV—Space Resource Exploration and Utilization").

209. *See id.* § 403, 129 Stat. at 721 (recognizing the rights of American companies to own, transport, and sell resources extracted from celestial bodies, in compliance with obligations under the Outer Space Treaty).

security.[210] A key focus was to redirect NASA's efforts toward returning humans to the Moon as a precursor to missions to Mars by collaboration with private companies and international partners.[211] The U.S. Space Force was created to address national security concerns specifically.[212] A strategy was introduced to advance nuclear propulsion for deep-space missions, including Mars exploration.[213] One Trump executive order reactivated the National Space Council (NSpC) to coordinate space policy across the government and commercial sectors.[214] But most notably, President Trump issued an executive order proclaiming that "the United States does not view space as a global commons," affirming the right of private and government entities to extract and use resources from celestial bodies like the Moon.[215]

The Biden administration largely embraced the previous administration's space policies,[216] but with a slightly more progressive agenda. The NSpC was expanded through executive order to include climate, economic, and domestic policy advisors, reflecting a broader approach to space policy.[217] The U.S. Space Priorities Framework[218] prioritizes diversity and inclusion within the U.S. space workforce, encouraging participation from underrepresented groups in science, technology, engineering, and mathematics (STEM).[219] It supports NASA's Artemis mission to return the first woman and the first person of color to the Moon, reflecting the administration's focus on representation in exploration.[220] The framework also emphasizes

210. *See* National Space Policy of the United States of America, 85 Fed. Reg. 81755, 81756-57 (Dec. 9, 2020) [hereinafter National Space Policy].

211. *Id.* at 81767.

212. *About Us*, U.S. Space Force, https://www.spaceforce.mil/About-Us/ (last visited Nov. 16, 2024).

213. National Space Policy, *supra* note 210.

214. *See* Exec. Order No. 13,803, 82 Fed. Reg. 31,429 (July 7, 2017), https://www.federalregister.gov/d/2017-14378.

215. Exec. Order No. 13,91441, 85 Fed. Reg. 20381 (Apr. 10, 2020), https://trumpwhitehouse.archives.gov/presidential-actions/executive-order-encouraging-international-support-recovery-use-space-resources/.

216. Johnathan Ward, *Space policy continues to shoot for the moon*, ASU News (Apr. 5, 2021), https://news.asu.edu/20210405-space-policy-continues-shoot-moon.

217. Marcia Smith, *Space Council Gets Not Only More Members But Expanded Authority in New E.O.*, Space Pol'y Online (Dec. 7, 2021), https://spacepolicyonline.com/news/space-council-gets-not-only-more-members-but-expanded-authority-in-new-e-o/.

218. The White House, United States Space Priorities Framework (2021), https://apps.dtic.mil/sti/pdfs/AD1155604.pdf.

219. Kaitlyn Johnson, *To Infinity and Beyond: Civil and Commercial Space Policy in the Biden Administration*, CSIS (Feb. 10, 2021), https://www.csis.org/analysis/infinity-and-beyond-civil-and-commercial-space-policy-biden-administration.

220. *Id.*

climate change research, using satellite technology to monitor and address environmental challenges.[221]

c. The Artemis Accords

The Artemis Accords[222] are a set of non-binding international agreements that outline principles for civil exploration and use of outer space.[223] They were initiated by the United States in 2020 as part of the broader Artemis program, which aims to return humans to the Moon and eventually reach Mars.[224] The Accords promote peaceful exploration, cooperation, and transparency, ensuring activities in space align with the OST.[225]

d. The United States Regulatory Regime

The administrative state also plays a significant role in space policy through regulatory agencies that oversee civil, commercial, and defense-related space activities. Several key agencies have responsibilities in regulating U.S. space activities:

i. The Federal Communications Commission (FCC)

The FCC plays a crucial role in satellite communications by allocating radio frequency spectrum. In 2023, it adopted new rules[226] "to expedite its processing of space and earth station applications to meet the growing needs of today's commercial space sector."[227] It also implements regulations on orbital debris mitigation, requiring operators to deorbit satellites within 25 years.[228]

221. Jeff Foust, *White House releases space priorities framework*, SPACE NEWS (Dec. 1, 2021), https://spacenews.com/white-house-releases-space-priorities-framework/.

222. *See generally The Artemis Accords: Principles for Cooperation in the Civil Exploration and Use of the Moon, Mars, Comets, and Asteroids for Peaceful Purposes'*, NASA, Oct. 13, 2020, https://www.nasa.gov/wp-content/uploads/2022/11/Artemis-Accords-signed-13Oct2020.pdf [hereinafter Artemis Accords].

223. *The Artemis Accords*, NASA, https://www.nasa.gov/artemis-accords/ (last visited Nov. 13, 2024).

224. *See id.*

225. *Id.*

226. *See generally* Expediting Initial Processing of Satellite and Earth Station Applications, 88 Fed. Reg. 84,737 (Dec. 6, 2023) (to be codified at 47 C.F.R. pt. 25).

227. *Id.*

228. Mitigation of Orbital Debris in the New Space Age, 89 Fed. Reg. 13,276 (Feb. 22, 2024) (to be codified at 47 C.F.R. pts. 5, 25, 97).

ii. The Federal Aviation Commission (FAA)

The FAA's Office of Commercial Space Transportation (AST) licenses and regulates all commercial space launches and reentries to protect public safety and ensure compliance with national security requirements.[229] It recently streamlined its processes to provide a "safe, performance-based regulatory approach to commercial space transportation." [230]

iii. National Oceanic and Atmospheric Administration (NOAA) – Office of Space Commerce

The Office of Space Commerce plays a pivotal role in regulating and promoting the U.S. commercial space sector.[231] It focuses on space traffic management (STM) and space situational awareness (SSA), which are critical in tracking orbital objects and debris to avoid collisions.[232]

iv. National Aeronautics and Space Administration (NASA)

NASA leads U.S. civil space exploration and coordinates science missions with international and private partners.[233] It currently runs the Artemis mission tasked with sending four astronauts to the Moon and eventually Mars.[234]

v. U.S. Space Force

The U.S. Space Force ensures the security of American space assets.[235] It manages military satellite constellations, coordinates with the intelligence community, and engages in space warfighting training to defend U.S. interests.[236]

229. *About the Office of Commercial Space Transportation*, FAA, https://www.faa.gov/about/office_org/headquarters_offices/ast (last visited Jan. 28, 2025).

230. *Legislation & Policies, Regulations & Guidance*, FAA, https://www.faa.gov/space/legislation_regulation_guidance (last visited Jan. 28, 2025); *see* Streamlined Launch and Reentry License Requirements, 85 Fed. Reg, 79,566 (last visited Jan. 28, 2025).

231. *About Us*, Off. Space Com., https://www.space.commerce.gov/about/mission/ (last visited Nov. 20, 2024).

232. *Category: SSA/STC*, Off. Space Com., https://www.space.commerce.gov/category/ssa-stm/ (last visited Nov. 20, 2024).

233. *See generally About NASA*, NASA, https://www.nasa.gov/about/ (last visited Jan. 28, 2025).

234. *Artemis Accords*, supra note 222.

235. *See About Us*, *supra* note 212.

236. *Id.*

B. BBNJ and Its Applicability to Space Policy

The BBNJ is specifically related to the conservation and sustainable use of marine biological diversity in the deep seabed that are not covered by any country's exclusive economic zone (EEZ) or continental shelf claims.[237] As discussed in Section II, part C, there are unique similarities between human expansion into the deep seabed and outer space.

1. Article 7 General Principles and Approaches

This article provides the principles and approaches that shall guide the objectives of the provisions related to the conservation and sustainable use of marine biological diversity in the deep sea.

a. The polluter-pays principle

The polluter-pays principle (PPP) is a fundamental concept in environmental policy. It asserts that the party responsible for producing pollution should bear the costs of managing it to prevent damage to human health or the environment.[238] Originating from the Organization for Economic Cooperation and Development (OECD) guidelines in the early 1970s, PPP was primarily intended to encourage the efficient allocation of resources in environmental protection and to prevent trade distortions.[239] Initially aimed at setting policy approaches for member countries, this principle has influenced national and international environmental laws and policies, promoting the idea that preventing environmental damage is more cost-effective than cleaning up afterward.[240]

The PPP has led to positive results in preventing and controlling ocean pollution.[241] Air and fresh water in countries with set targets and timetables have improved.[242] It has led to a boost in economies, increased tourism, the return of commercial fisheries, and improved human health and well-being.[243]

The international community has made attempts to reduce space pollution.[244] However, the pace at which commercial companies and

237. *Id.* at 280.
238. Delia Sanchez Trancon & Xavier Leflaive, *The Implementation of the Polluter Pays Principle in the context of the Water Framework Directive*, ORG. FOR ECON. COOP. & DEV. 1, 8 (2024).
239. *See id.*
240. *Id.* at 21.
241. Landrigan et al., *supra* note 3, at 32.
242. *Id.*
243. *See id.*
244. BYERS & BOLEY, *supra* note 8, at 107.

nation-states adopt pollution measures is still lagging. While there is general consensus on the issue of pollution, recognition, and enforcement are still hurdles. Wide application of the PPP in space could help reduce orbital pollution as it has in the oceans and address the environmental effects of human expansion into space.

b. The principle of the common heritage of humankind

> The common heritage of humankind principle represents that:
>
> Certain global commons or elements regarded as beneficial to humanity as a whole should not be unilaterally exploited by individual states or their nationals, nor by corporations or other entities, but rather should be exploited under some sort of international arrangement or regime for the benefit of mankind as a whole.[245]

Many states hoped that the common heritage of humankind would be recognized in the ocean's jurisdiction; this concept is also in the OST. The OST's article I goes as far as cementing the doctrine of *res communis omnium* (a thing of the entire community) by holding that the exploitation and exploration of outer space is a "province of all mankind."[246] The OST maintains that outer space is an extra-jurisdictional territory, prohibiting states from exercising their sovereign rights. The application of the common heritage principle in the OST has been divisive and polarizing ever since its emergence. It questions the management of globally valuable resources and requires a reexamination of traditional principles and doctrines concerning international law.[247] The underlying premise of *res communis* may effectively limit expansion and innovation in outer space in two particular areas: national security and property rights and commercialization.[248] However, it is unlikely that many States will recognize and enforce common heritage principles, and some, including the U.S., have policies that run counter to those principles.[249] If adopted, the common heritage principle would address issues of inequitable access and peaceful use from human expansion into space.

245. Jose A. Martin del Campo, *Finders Keepers: Who Has Say Over Private Property in Space*, 7 Tex. A&M J. Prop. L. 199, 211–12 (2021).
246. *Id.* at 214.
247. *Id.*
248. *Id.*
249. *See* Exec. Order No. 13,91441, 85 Fed. Reg. 20381 (Apr. 10, 2020); *see* Martinez, *supra* note 182, at 338 (noting that some argue that the Space Act of 2015 violates the common heritage doctrine).

2. Article 10 Application

The Agreement's provisions do not apply to military activities.[250] This is a limitation given that the OST expressly forbids the placement of nuclear weapons or any other kinds of weapons of mass destruction in orbit around Earth, on the Moon, or any other celestial body. It specifically bans military bases, installations, and fortifications, as well as the testing of any type of weapons and the conduct of military maneuvers on celestial bodies. All activities in outer space, including those of non-governmental entities, must be authorized and supervised by the appropriate state. This means that the military or any national defense activities would still need to comply with the guidelines set forth by the treaty. The OST establishes that outer space, including the Moon and other celestial bodies, cannot be claimed by any State's sovereignty. This rule extends to and affects military activities, as no nation can claim territorial control that could justify military action.[251] Applying these concepts to space law would address peaceful use issues related to human expansion into space.

3. Article 11 In Situ

Article 11 of the Agreement emphasizes the importance of considering the interests and needs of developing states when exploiting marine resources.[252] This principle aims to ensure that the benefits of marine genetic resources are shared equitably among all nations, preventing the monopolization of resources by more developed countries.[253] In the context of space exploration, a similar approach could be adopted to address the disparities between nations with advanced space capabilities and those without. Implementing such a principle in space law would promote inclusivity and cooperation, ensuring that the advancements and benefits of space exploration are accessible to all humanity, not just a privileged few.

The concept of "in situ" resource utilization is particularly relevant for space exploration, where the extraction and use of resources directly at the location (e.g., on the Moon or asteroids) could significantly reduce the costs and logistical challenges associated with transporting materials from Earth. By integrating the needs of developing countries

250. *See* BBNJ, *supra* note 6, at 7.
251. *See* OST, *supra* note 181.
252. *See id.*
253. *See id.*

into this framework, space-faring nations can foster a more collaborative and equitable exploration environment. This would involve creating international agreements that mandate technology transfer, capacity-building initiatives, and equitable sharing of benefits derived from space resources. Such measures would not only promote global equity but also enhance the overall sustainability and efficiency of space exploration efforts.

4. Article 14 Fair and Equitable Sharing of Benefits

The BBNJ provides that the benefits arising from activities with respect to marine genetic resources shall be shared in a fair and equitable manner.[254] Current space law regimes, including the Artemis Accords, have been criticized for undermining the sharing of benefits.[255] Even President Trump issued an executive order declaring that "outer space is a legally and physically unique domain of human activity, and the United States does not view it as a global commons."[256] These types of proclamations question the appetite for some countries to adopt the fair and equitable sharing concepts of the BBNJ. Still, it would address the current inequitable access to space resources related to human expansion into space.

5. Articles 27 and 28 Environmental Impact Assessments

The Agreement ensures that activities are assessed and conducted to prevent, mitigate, and manage significant adverse impacts, protecting and preserving the environment. Parties shall ensure that the potential impacts on the environment of planned activities are assessed.

Given the rush to space that is leading to massive amounts of pollution, adopting this measure would tamper the speed of the space race but would also likely protect Earth as well. In the case of Starlink, the U.S. government never conducted an environmental impact assessment of the potential for tens of thousands of satellites in LEO to cause harm, including to astronomy, even though, under the OST, the Liability Convention, and customary international law, governments are responsible for all 'national activities' in space.[257] Other states, such as the United Kingdom, with its OneWeb project, could well be engaged

254. *See* Ocean Treaty, *supra* note 6, at 11.
255. Rosana Deplano, *The Artemis Plan: 'A Paradigm Shift in International Law'*, 46 J. SPACE L. 101, 133 (2022).
256. *See* Martinez, *supra* note 182, at 339.
257. *See* BYERS & BOLEY, *supra* note 8, at 99.

in similar violations.[258] Although there seems to be little appetite for introducing environmental impact assessments before activities related to expanding into space, this would address many environmental issues on Earth.

IV. Conclusion

As humanity's frontier expands into the vast realms of outer space, the imperative for a robust, equitable legal framework becomes increasingly critical. Drawing parallels from the BBNJ, this paper has explored how analogous challenges in marine and space environments — ranging from resource exploitation to environmental preservation — can be addressed under a unified regulatory vision.

This analysis underscores the potential of the BBNJ's principles, such as the polluter-pays principle and the notion of the common heritage of humankind, to provide a blueprint for sustainable and responsible space exploration and utilization. These principles not only advocate for environmental stewardship but also ensure that space remains a domain for peaceful use and shared human benefit. By proactively adopting these principles in space law, the international community can prevent the mistakes made during the early exploitation of Earth's oceans, thereby fostering a more harmonious and sustainable approach to exploring the final frontier. This forward-looking strategy will require collaboration, innovation, and a commitment to equity, ensuring that the vast opportunities presented by space are available to all nations and future generations.

Unfortunately, the world is marching down a familiar path of incentivizing ambitious and enterprising private entities to capture economic opportunity by exploiting a shiny new resource while pretending to embrace many of the principles related to the good of all humanity. Greed is good at masking the tragedy of the commons. As Derrick Bell alluded to in the Space Traders, when there is a decision between a potential economic windfall and protecting the vulnerable populations, we already know the answer.

258. *Id.*