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Moving From Harm Mitigation to Affirmative Discrimination Mitigation: The Untapped Potential of Artificial Intelligence to Fight School Segregation and Other Forms of Racial Discrimination

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MOVING FROM HARM MITIGATION TO AFFIRMATIVE DISCRIMINATION MITIGATION: THE UNTAPPED POTENTIAL OF ARTIFICIAL INTELLIGENCE TO FIGHT SCHOOL SEGREGATION AND OTHER FORMS OF RACIAL DISCRIMINATION

Andrew Gall

The United States government took an increasingly hands-on approach to AI development and governance during the 116th and 117th Congresses under Presidents Trump and Biden – creating the Select Committee on AI and the AI Research and Development Interagency Working Group,[1] launching AI.gov,[2] releasing three major reports on the status of AI in the United States,[3] and most notably, passing the National Artificial Intelligence Act of 2020 (NAIIA).[4]

1 *Artificial Intelligence for the American People*, TRUMP WHITEHOUSE, https://trumpwhitehouse.archives.gov/ai/ai-american-industry/ (last visited Nov. 7, 2022); LAURIE A HARRIS, CONG. RSCH. SERV., R46795, ARTIFICIAL INTELLIGENCE: BACKGROUND, SELECTED ISSUES, AND POLICY CONSIDERATIONS (2021).

2 *See* Press Release, Biden Admin., The Biden Administration Launches AI.gov Aimed at Broadening Access to Federal Artificial Intelligence Innovation Efforts, Encouraging Innovators of Tomorrow (May 5, 2021).

3 *See generally* U.S. DEP'T. OF COM., U.S. LEADERSHIP IN AI: A PLAN FOR FEDERAL ENGAGEMENT IN DEVELOPING TECHNICAL STANDARDS AND RELATED TOOLS (2019); SELECT COMM. ON ARTIFICIAL INTEL., THE NATIONAL ARTIFICIAL INTELLIGENCE RESEARCH AND DEVELOPMENT STRATEGIC PLAN: 2019 UPDATE (2019); NAT'L SEC. COMM'N ON ARTIFICIAL INTELLIGENCE, FINAL REPORT (2021).

4 *See* William M. (Mac) Thornberry National Defense Authorization Act for Fiscal Year 2021, Pub. L. No. 116-283, 134 Stat. 3388, 4523 (2021) (establishing multiple entities, including: the National Artificial Intelligence Initiative ("Initiative") in the White House Office of Science and Technology Policy; the National Artificial Intelligence Research Institutes ("Research Institutes") to support interdisciplinary AI research; the Interagency Committee, an interagency body overseeing the Initiative; the National AI Advisory Committee (NAIAC) in the Department of Commerce; and a National Artificial Intelligence Research Resource Task Force focused on creating a roadmap for the National AI Research

Congress also created the AI Center of Excellence under the General Services Administration[5] and increased funding for AI-related national defense purposes by hundreds of millions of dollars annually.[6]

This flurry of activity has occurred because AI is increasingly important to the decisions and processes of government, and AI is one of the rare issues in the United States where supporters and skeptics are not neatly divided along partisan ideological lines.[7] As a result, there is space—an "Overton window" in political science parlance—for policymakers to enact meaningful legislation and build lasting guideposts to responsibly expand AI's use in government.[8] While this window is open, and before bureaucratic inertia takes hold, it is essential for policymakers committed to expanding opportunities to all Americans of all racial and ethnic backgrounds to seize this moment to enshrine principles of affirmative discrimination mitigation in AI governance structures.

The debate around government's use of AI has largely centered on skeptics worried about algorithmic bias and/or government overreach and proponents worried about declining American competitiveness, particularly vis-à-vis the Chinese.[9] Skeptics are correct to worry about algorithmic bias, biased datasets

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Resource to share computing and data infrastructure with researchers).

5 *See* Consolidated Appropriations Act, Pub. L. No. 116–260, § 103, 134 Stat. 1182, 2287 (2020).

6 Jackson Barnett, *Austin Commits to $1.5B for DOD's Joint AI Center Over Next 5 Years*, FEDSCOOP (July 13, 2021), www.fedscoop.com/lloyd-austin-dod-jaic-funding; *see generally About the JAIC*, JOINT A.I. CTR. https://www.ai.mil/about.html (last visited Nov. 7, 2022) (describing mission of the Joint Artificial Intelligence Center); STAFF OF H. COMM. ON RULES, 117TH CONG., HOUSE AMEND. TO S. 1605 (Comm. Print 2021); Cheryl Pellerin, *Project Mavin to Deploy Computer Algorithms to War Zone by Year's End*, U.S. DEP'T OF DEFENSE: DOD NEWS (July 21, 2012), https://www.defense.gov/News/News-Stories/Article/Article/1254719/project-maven-to-deploy-computer-algorithms-to-war-zone-by-years-end/.

7 *See, e.g.*, Webinar: Subcommittee on Crime, Terrorism, and Homeland Security, *Facial Recognition Technology: Examining Its Use by Law Enforcement*, H. COMM. ON THE JUDICIARY, (July 13, 2021), https://judiciary.house.gov/calendar/eventsingle.aspx?EventID=4635 (showing July 2021 congressional hearing wherein Congressman Jim Jordan (R) (OH-4) and Congresswoman Sheila Jackson Lee (D) (TX-18) exhibited remarkable bonhomie and policy alignment in advocating limitations on law enforcement's warrantless use of facial recognition technology to identify suspects without judicial safeguards.).

8 *See generally The Overton Window*, MACKINAC CTR. FOR PUB. POL'Y, https://www.mackinac.org/OvertonWindow (last visited Nov. 7, 2022).

9 *See generally* LAURIE A. HARRIS, CONG. RSCH. SERV., R46795, ARTIFICIAL INTELLIGENCE: BACKGROUND, SELECTED ISSUES, AND POLICY CONSIDERATIONS (2021) ("AI systems may perpetuate or amplify bias, may not yet be fully able to explain their decision-making, and often depend on vast datasets that are not widely accessible to facilitate research and development (R&D) [so] some stakeholders have advocated for slowing the pace of AI development and use until more research, policymaking, and preparation can occur. Others have countered that AI will make lives safer, healthier, and more productive,

(the "garbage in, garbage out" problem), and secretive, impenetrable lines of code (the "black box" problem).[10] However, these skeptics, who largely profess a desire to fight systemic discrimination, have failed to expand the conversation to include ways in which AI can be used affirmatively to combat systemic discrimination.[11] This paper seeks to remedy this oversight by:

1. Proposing a White House Office of Ethics for Artificial Intelligence, Emerging Technologies, and Data Collection (Office of Ethics and Technology);
2. Analyzing the language of the NAIIA to identify the existing statutory authority to take affirmative steps to mitigate extant forms of discrimination;
3. Identifying where and how AI should be used to affirmatively mitigate discrimination, with a particular focus on affirmatively promoting racial integration in U.S. schools; and
4. Analyzing the legal basis for the federal government to affirmatively pursue policies to reduce discriminatory outcomes.

I. PROPOSAL FOR A WHITE HOUSE OFFICE OF ETHICS FOR ARTIFICIAL INTELLIGENCE, EMERGING TECHNOLOGIES, AND DATA COLLECTION

The United States must confront and develop sustainable solutions to the novel challenges posed by new technologies, including lethal autonomous weapons, data harvesting, unregulated broadcasting in outer space, and algorithmic discrimination.[12] These novel challenges present unique ethical

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so the federal government should not attempt to slow it, but rather should give broad support to AI technologies and increase federal AI funding."); Graham Allison & Eric Schmidt, *Is China Beating the U.S. to AI Supremacy?*, NAT'L INT. (Dec. 22, 2019), https://nationalinterest.org/feature/china-beating-america-ai-supremacy-106861.

[10] *See, e.g.*, Brad Goldstein & Tod Northman, *Your AI is Racist: An Accusation that is Probably More Accurate than You Think*, Mar. 19, 2021, 2021 WL 1043746; R. Stuart Geiger et. al., *"Garbage in, Garbage Out" Revisited: What Do Machine Learning Application Papers Report About Human-Labeled Training Data?*, 2 QUALITATIVE SCI. STUDIES 795 (2021); Jenna Burrell, *How the Machine "Thinks": Understanding Opacity in Machine Learning Algorithms*, 3 BIG DATA & SOC'Y 1 (2016).

[11] *See, e.g.*, *Digital Justice*, LAWS.' COMM. FOR C.R. UNDER L., https://www.lawyerscommittee.org/digitaljustice/ (last visited Nov. 7, 2022); Stop Discrimination by Algorithms Act of 2021, B. 24-0558, D.C. Council (D.C. 2021).

[12] *See generally* Adam Satariano et al., *Why There's a Growing Push to Ban Killer Robots*, N.Y. TIMES (Dec. 17, 2021), https://www.nytimes.com/2021/12/17/world/robot-drone-ban.html; Kirsty Needham & Clare Baldwin, *China's Gene Giant Harvests Data from Millions of Women*, REUTERS (July 7, 2021), https://www.reuters.com/investigates/special-report/health-china-bgi-dna/; Heather Zeiger, *China: DNA Phenotyping Profiles Racial Minorities*, MIND MATTERS (Dec. 26, 2019), https://mindmatters.ai/2019/12/china-dna-phenotyping-profiles-racial-minorities/; Thor Benson, *DNA Databases in the U.S. and China Are Tools of Racial Oppression*, IEEE SPECTRUM (June 30, 2020), https://spectrum.ieee.org/dna-databases-in-china-and-the-us-are-tools-of-racial-oppression; *see* Kashmir Hill, *The Secretive Company That Might End Privacy as We Know It*, N.Y. TIMES, https://www.nytimes.com/2020/01/18/technology/clearview-privacy-facial-

issues that cannot be viewed with old paradigms but rather require government take new approaches to identify appropriate ethical boundaries. Therefore, the U.S. government should establish an office to mediate ethical questions stemming from AI, emerging technologies, and data collection: the White House Office of Ethics for Artificial Intelligence, Emerging Technologies, and Data Collection (Office of Ethics and Technology). The Office of Ethics and Technology would increase government uptake of emerging technologies by providing a streamlined decision-making process and building a whole-of-government consensus while protecting Americans' freedoms.

Further, beyond focusing on the inherent risks and challenges posed by emerging technologies, the government should affirmatively use AI to improve existing ethical challenges in society, including racial and ethnic discrimination. The Office of Ethics and Technology would play a central role in establishing mitigation priorities and the ethical and legal outlines for affirmative discrimination mitigation strategies.

II. BUILDING UPON THE NAIIA

An alternative approach to achieving AI-enabled affirmative discrimination mitigation would be for policymakers committed to expanding opportunities to all Americans of all racial and ethnic backgrounds to use the currently enacted (and broad) language of the NAIIA to establish AI-enabled affirmative discrimination mitigation policies.

The NAIIA, which was passed into law on January 1, 2021, as part of the William M. (Mac) Thornberry National Defense Authorization Act for Fiscal Year 2021, established, among other things, a National Artificial Intelligence Initiative ("Initiative") to advance AI "research and development," "develop[] and use . . . trustworthy artificial intelligence systems in the public and private sectors," "prepare [Americans] for the integration of artificial intelligence systems across all sectors of the economy and society," and coordinate AI "activities among the [different federal government] agencies."[13] The Initiative supports interdisciplinary research programs that responsibly "foster interdisciplinary perspectives and collaborations among subject matter experts

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recognition.html (Nov. 2, 2021); Raffi Khatchadourian, *How Your Family Tree Could Catch a Killer*, NEW YORKER (Nov. 15, 2021), https://www.newyorker.com/magazine/2021/11/22/how-your-family-tree-could-catch-a-killer; Mark Buchanan, *Contacting Aliens Could End All Life on Earth. Let's Stop Trying*., WASH. POST (June 10, 2021,), https://www.washingtonpost.com/outlook/ufo-report-aliens-seti/2021/06/09/1402f6a8-c899-11eb-81b1-34796c7393af_story.html.

[13] William M. (Mac) Thornberry National Defense Authorization Act for Fiscal Year 2021, Pub. L. No. 116-283, § 5101(a), 134 Stat. 3338, 4524–25 (2021).

in relevant fields, including . . . social sciences, health, psychology, behavioral science, ethics, security, [and] legal scholarship."[14] Section 5101(b)(1) permits activities to "[s]ustain[] . . . support for artificial intelligence research and development," section 5101(b)(4) permits "other activities under the Initiative, as appropriate," and section 5102(b)(4) mandates the Initiative "promote . . . innovations, best practices, and expertise . . . to [agencies] across the Federal Government."[15] The law also mandates that the Initiative conduct regular outreach to civil rights organizations and identifies an obligation to support K-12 education institutions.[16] The only limitations on the Initiative's authorities relate to impinging on national security matters, so there is no prohibition on advancing discrimination mitigation work.[17]

The NAIIA also created other entities, including an Interagency Committee (§ 5103), the National Artificial Intelligence Advisory Committee (NAIAC) (§ 5104), the National Academies of Artificial Intelligence Impact Study on Workforce (§ 5105), the National AI Research Resource Task Force (§ 5106), and the Artificial Intelligence Research Institutes (§ 5201) and expanded AI-related responsibilities of the National Institute of Standards and Technology (NIST) (§ 5301) and the National Science Foundation (NSF) (§ 5401).[18] In each of these sections, there is language that, like the Initiative's enabling text, is broad enough to encompass affirmative AI-enabled discrimination mitigation measures.[19]

Under leadership that is determined to affirmatively address racial and ethnic discrimination in society, the broad language of the NAIIA will allow the Initiative, the Interagency Committee, NAIAC, the Research Institutes, NIST, and NSF to focus time and resources on affirmative discrimination mitigation. Congress purposely drafted the NAIIA to command agencies to regularly consult with civil rights stakeholder organizations.[20] Beyond focusing on bias audit procedures to prevent algorithms from exacerbating discrimination, civil rights organizations must use the power granted by Congress to fiercely advocate for the development and deployment of AI-resources to affirmatively fight discrimination in society.

III. Areas for Application of AI-Assisted Affirmative Discrimination

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14 *Id.* § 5101(b)(3).
15 *Id.* §§ 5101(b)(1), (4), 5102(b)(4).
16 *Id.* §§ 5101(b)(2)–(3), 5101(b)(5).
17 *Id.* § 5101(c)–(d).
18 *Id.* §§ 5103–5106, 5201, 5301, 5401.
19 *Id.* §§ 5103, 5104–06, 5201, 5301, 5401.
20 *Id.* §§ 5101(b)(5), 5102(b)(3), 5104(b), (e)(2)(D), 5106(b)(2)(G), 5201(b)(2)(B).

MITIGATION

A. Defining the Scope

While the United States has made laudable progress against discrimination, prejudice—in many forms, in many areas—remains a fact of life in the United States.[21] Discrimination based upon national origin, gender, sexual orientation, religion, age, income, and more all impact Americans to varying degrees. However, the Supreme Court has recognized that discrimination based upon the immutable characteristics of race and ethnicity are particularly invidious and therefore subject to especially heightened levels of scrutiny.[22] While other forms of discrimination are certainly worthy of opprobrium and affirmative mitigatory actions by the federal government, this paper limits its focus to invidious discrimination against the immutable and discrete classes of race and ethnicity.

This section highlights seven areas of focus for federal AI resources to identify and mitigate discrimination—taking a particularly deep dive on education segregation before briefly outlining six other areas of concentration for AI-assisted affirmative discrimination mitigation: housing, employment, criminal justice, pollution, healthcare, and financial services.

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21 *See generally* RICHARD ROTHSTEIN, THE COLOR OF LAW (2017) (describing the history and effects of racial housing discrimination); RUCKER JOHNSON & ALEXANDER NAZARYAN, CHILDREN OF THE DREAM: WHY SCHOOL INTEGRATION WORKS (2019) (describing the history and continued legacy of race-based education segregation in the United States); MICHELLE ALEXANDER, THE NEW JIM CROW: MASS INCARCERATION IN THE AGE OF COLORBLINDNESS (2d ed. 2011) (describing racially disparate treatment in the criminal justice system); ISABEL WILKERSON, THE WARMTH OF OTHER SUNS: THE EPIC STORY OF AMERICA'S GREAT MIGRATION (2010) (describing discrimination in the Jim Crow South); DAVID GRANN, KILLERS OF THE FLOWER MOON: THE OSAGE MURDERS AND THE BIRTH OF THE FBI (2017) (describing the history and effects of discriminatory practices against the Osage); DAVE EGGERS, ZEITOUN (2009) (describing discriminatory treatment of a Syrian-American during and after Hurricane Katrina in 2005).

22 Parents Involved in Cmty. Schs. v. Seattle Sch. Dist. No. 1, 551 U.S. 701, 758 (2007) (Thomas, J., concurring) (arguing that the court has emphasized that "every racial classification" should be held to the standard of strict scrutiny); Batson v. Kentucky, 476 U.S. 79, 93 (1986); Lyng v. Castillo, 477 U.S. 635, 638 (1986); Plyler v. Doe, 457 U.S. 202, 216–18 (1982) (holding that racial discrimination is invidious and subject to exacting scrutiny); Fullilove v. Klutznick, 448 U.S. 448, 496 (1980) (Powell, J., concurring) (noting that the immutability of a discrete class is a plus factor in determining the application of strict scrutiny); Regents of Univ. of California v. Bakke, 438 U.S. 265, 290–91 (1978); Washington v. Davis, 426 U.S. 229, 242 (1976); Frontiero v. Richardson, 411 U.S. 677, 688 (1973); Loving v. Virginia, 388 U.S. 1, 11–12 (1967); Harper v. Virginia State Bd. of Elections, 383 U.S. 663, 670 (1966).

B. Education

1. Defining the Problem

For a nation of immigrants whose identity is based upon a shared commitment to an idea—of liberty and justice for all—the narrative we tell about ourselves is particularly important. Slavery, the failure of reconstruction, and the imposition of the racial caste system of Jim Crow is the ultimate stain on our shared narrative. This underlies the ferocity of recent debates over the teaching of critical race theory and the 1619 project.[23] Further, national statistics on educational attainment, homelessness and home ownership, wealth and poverty, incarceration, life expectancy, etcetera expose that America's march towards racial equality has stalled and is in need of a kick start.[24] Big data and artificial intelligence pose significant risks to reinforcing and even exacerbating established racial inequalities.[25] While this truth is well documented, less explored are the opportunities that the era of big data and machine learning pose

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[23] *See generally* Benjamin Wallace-Wells, *How a Conservative Activist Invented the Conflict Over Critical Race Theory*, NEW YORKER (June 18, 2021), https://www.newyorker.com/news/annals-of-inquiry/how-a-conservative-activist-invented-the-conflict-over-critical-race-theory; Christopher Hooks, *Critical Race Fury: The School Board Wars Are Getting Nasty in Texas*, TEX. MONTHLY (Nov. 2021), https://www.texasmonthly.com/news-politics/critical-race-fury-the-school-board-wars-are-getting-nasty-in-texas/; Terry Gross, *Uncovering Who is Driving the Fight Against Critical Race Theory in Schools*, NPR (June 24, 2021), https://www.npr.org/2021/06/24/1009839021/uncovering-who-is-driving-the-fight-against-critical-race-theory-in-schools; Barbara Rodriguez, *Republican State Lawmakers Want to Punish Schools That Teach the 1619 Project*, USA TODAY, https://www.usatoday.com/story/news/education/2021/02/10/slavery-and-history-states-threaten-funding-schools-teach-1619-project/4454195001/ (Feb. 10, 2021, 11:39); Naaz Modan, *What's Behind the 1619 Project Controversy,* K-12 DIVE (Feb. 12, 2021), https://www.usatoday.com/story/news/education/2021/02/10/slavery-and-history-states-threaten-funding-schools-teach-1619-project/4454195001/.

[24] *See generally* Abigail Thernstrom & Stephan Thernstrom, *Black Progress: How Far We've Come, and How Far We Have to Go*, BROOKINGS INST. (Mar. 1, 1998), https://www.brookings.edu/articles/black-progress-how-far-weve-come-and-how-far-we-have-to-go/; Shaylyn Romney Garrett & Robert D. Putnam, *Why Did Racial Progress Stall in America?*, N.Y. TIMES (Dec. 4, 2020), https://www.nytimes.com/2020/12/; Dee Gill & Emily Lambert, *Why Progress on the Racial Wage Gap Has Stalled*, CHI. BOOTH REV. (Oct. 14, 2021), https://www.chicagobooth.edu/review/why-progress-racial-wage-gap-has-stalled.

[25] *See, e.g.*, Margaret Hu, *Algorithmic Jim Crow*, 86 FORDHAM L. REV. 633, 633–34 (2017); Valerie Schneider, *Locked Out by Big Data: How Big Data, Algorithms and Machine Learning May Undermine Housing Justice*, 52 COLUM. HUM. RTS. L. REV. 251, 258–59 (2020); Sharona Hoffman & Andy Podgurski, *Artificial Intelligence and Discrimination in Health Care*, 19 YALE J. HEALTH POL'Y, L. & ETHICS 1, 5 (2020); Sonia M. Gipson Rankin, *Technological Tethereds: Potential Impact of Untrustworthy Artificial Intelligence in Criminal Justice Risk Assessment Instruments*, 78 WASH. & LEE L. REV. 647, 652 (2021).

for identifying and reducing systemic racial inequalities.[26]

2. Why Focus on School Segregation?

U.S. Marshalls are no longer necessary to escort children through angry mobs to their classrooms, but racial segregation in schools continues to be the problem we all live with.[27] Attending diverse schools reduces racial bias, promotes residential integration later in life, improves intellectual self-confidence, enhances interpersonal leadership skills, and reduces intergroup anxiety.[28] Reduced bigotry is essential to the United States' continued sovereign coherence, as federal law enforcement identify anti-government extremists and White supremacists as the greatest threats facing the United States.[29] America is becoming increasingly segregated by race and political party affiliation at the same time that religious affiliations, particularly Christianity, which once gave common cause to see across differences, is waning.[30] If America divides along race, geography, and partisan ideology without a common denominator to bring it together, it will inevitably fracture: "a house divided against itself cannot stand."[31] School integration fosters increased incidences of friendships between

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26 *See* Rankin, *supra* note 25, at 653.

27 *See generally* JOHNSON & NAZARYAN, *supra* note 21 (describing the history and continued legacy of race-based education segregation in the United States).

28 *The Benefits of Socioeconomically and Racially Integrated Schools and Classrooms*, CENTURY FOUND. (Apr. 29, 2019), https://production-tcf.imgix.net/app/uploads/2016/02/26171529/Factsheet_Benefits_FinalPDF.pdf.

29 *See Threats to the Homeland: Evaluating the Landscape 20 Years After 9/11: Statement Before the S. Homeland Sec. Gov't Affs. Comm.*, 107th Cong. (2021) (statement of Christopher Wray, Director, Fed. Bureau of Investigation) ("The top threats we face from [domestic violent extremists] are from those we categorize as racially or ethnically motivated violent extremists (RMVEs) and anti-government or anti-authority violent extremists. While RMVEs who advocate for the superiority of the white race were the primary source of lethal attacks perpetrated by DVEs in 2018 and 2019, anti-government or anti-authority violent extremists, specifically, militia violent extremists and anarchist violent extremists, were responsible for three of the four lethal DVE attacks in 2020."); Eileen Sullivan & Katie Benner, *Top Law Enforcement Officials Say the Biggest Domestic Terror Threat Comes from White Supremacists*, N.Y. TIMES, https://www.nytimes.com/2021/05/12/us/politics/domestic-terror-white-supremacists.html (June 15, 2021).

30 Christina Pazzanese, *Democrats and Republicans Do Live in Different Worlds*, HARV. GAZETTE (Mar. 16, 2021), https://news.harvard.edu/gazette/story/2021/03/democrats-and-republicans-live-in-partisan-bubbles-study-finds/; Gregory Smith et al., *America's Changing Religious Landscape: Christians Decline Sharply as Share of Population; Unaffiliated and Other Faiths Continue to Grow*, PEW RSCH. CTR. (May 12, 2015), https://www.pewforum.org/wp-content/uploads/sites/7/2015/05/RLS-08-26-full-report.pdf.

31 Abraham Lincoln, Address to the Illinois Republican State Convention: A House Divided (June 16, 1858); *see generally* BARBARA F. WALTER, HOW CIVIL WARS START AND HOW TO STOP THEM (2022) (noting that fractures along ethnic, religious, or racial lines often

individuals of differing racial identity.[32] By growing bonds of affection across race, ethnicity, and class, school integration can bind up the nation's wounds and appeal to the better angels of our nature. Failing to do so risks violence and dissolution.[33] America, for all its many flaws, is a bulwark against totalitarianism, and the failure of the world's greatest multiethnic democracy would unleash waves of suffering across the world.[34]

3. Background: A Short History of Segregated Education in America

States in the Deep South passed anti-literacy laws prohibiting teaching individuals who were enslaved to read or write.[35] After the Civil War, during Reconstruction, rights for formerly enslaved individuals were temporarily enforced.[36] However, after the remaining federal troops were removed from the South in the compromise to seat Rutherford B. Hayes as President, civil rights protections for Black Americans in the former Confederacy were eradicated by revanchist White supremacists.[37] Instead, strict racial hierarchies were enshrined in law under a system of segregation known as "Jim Crow."[38]

In 1896, in *Plessy v. Ferguson*, the Supreme Court gave Jim Crow its imprimatur by holding that states could mandate separate public facilities for individuals based upon whatever "proportion of colored blood [was] necessary to constitute a colored person, as distinguished from a white person" because it was a "fallacy . . . that the enforced separation of the two races stamps the

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leads to violence).

32 CENTURY FOUND., *supra* note 28; Kristin Davies et al., *Cross-Group Friendships and Intergroup Attitudes: A Meta-Analytic Review*, 15 PERSONALITY AND SOC. PSYCH. REV. 332, 345 (2011).

33 *See generally* WALTER, *supra* note 31 (noting that fractures along ethnic, religious, or racial lines often leads to violence).

34 *See generally* Sarah Repucci & Amy Slipowitz, *The Global Expansion of Authoritarian Rule*, FREEDOM HOUSE, https://freedomhouse.org/sites/default/files/2022-02/FIW_2022_PDF_Booklet_Digital_Final_Web.pdf (last visited Nov. 12, 2022) (noting the relationship between the loss of democracy and the loss of freedom).

35 *See e.g.*, ALA. SLAVE CODE § 31 (1833) (repealed 1865) ("Any person who shall attempt to teach any free person of color, or slave, to spell, read or write, shall upon conviction thereof by indictment, be fined in a sum of not less than two hundred fifty dollars, nor more than five hundred dollars.").

36 *See generally* DARLENE CLARK HINE ET AL., THE AFRICAN-AMERICAN ODYSSEY: VOLUME 2 314 (6th ed. 2013) (noting that, for example, Black American legislators Rep. Robert C. DeLarge (SC), Rep. Jefferson Long (GA), Sen. Hiram R. Revels (MS), Rep. Benjamin S. Turner (AL), Rep. Josiah T. Walls (FL), Rep. Joseph H. Rainey (SC), and Rep. Robert B. Elliott (SC) were elected to Congress during this short period of rights enforcement).

37 *Id.* at 331–32.

38 *Id.* at 347–49.

colored race with a badge of inferiority."[39] While segregated water fountains, train cars, zoos, and other more overt forms of segregation were limited to the South, schools were widely segregated throughout the nation during this time.[40] In the South, school segregation was the result of codified statutes.[41] In the North and West, school segregation stemmed from strictly imposed housing segregation, known as "redlining", which were color-coded maps drawn by the Federal Housing Administration to segregate neighborhoods by race.[42] Asian Americans, Mexican Americans, and Native Americans were also subjected to segregated school environments under the "separate but equal" doctrine.[43]

Plessy remained good law for 58 years until 1954, when *Brown v. Board of Education* held that segregating schools by race was inherently unequal.[44] The following year, the Court examined the case again and ordered public schools to institute policies to admit students in a nondiscriminatory fashion "with all deliberate speed."[45] However, throughout the following decade, many school districts continued to drag their feet and exclude students on the basis of race.[46] This forced the Court to intervene to hasten the speed of integration.[47] In 1963, the Court pointed out that "the term ['with all deliberate speed'] was not intended

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39 Plessy v. Ferguson, 163 U.S. 537, 551–52 (1896), *overruled by* Brown v. Bd. of Educ., 347 U.S. 483 (1954).

40 *See generally* NAT'L PARK SERV., CIVIL RIGHTS IN AMERICA: RACIAL DESEGREGATION OF PUBLIC ACCOMMODATIONS (rev. ed. 2009), https://www.nps.gov/subjects/tellingallamericansstories/upload/civilrights_desegpublicaccom.pdf (describing overt segregation in the American South); Erica Frankenberg, et al., *Southern Schools More Than a Half-Century After the Civil Rights Revolution*, C.R. PROJECT UCLA (May 23, 2017), https://www.civilrightsproject.ucla.edu/research/k-12-education/integration-and-diversity/southern-schools-brown-83-report/Brown63_South_052317-RELEASE-VERSION.pdf ("[T]he North and West that had very segregated schools but which had no laws requiring segregation as the South had.").

41 *See generally* Frankenberg, *supra* note 40.

42 *See generally* ROTHSTEIN, *supra* note 21 (explaining the history of housing segregation in the United States); Jacob W. Faber, *We Built This: Consequences of New Deal Era Intervention in America's Racial Geography*, 85 AM. SOCIO. REV. 739 (2020) (explaining the history of housing segregation in the United States).

43 *See generally* Westminster Sch. Dist. v. Mendez, 161 F.2d 774, 775 (9th Cir. 1947) (identifying segregation of Mexican Americans); DEP'T OF INTERIOR, OMB NO. 1024-0018, RACIAL DESEGREGATION IN PUBLIC EDUCATION IN THE UNITED STATES: THEME STUDY (2000) (describing segregation of Native Americans); Joyce Kuo, Note and Comment, *Segregated and Forgotten: A Historical View of the Discrimination of Chinese Americans in Public Schools*, 5 ASIAN L.J. 181 (1998) (detailing segregation of Asian Americans).

44 Brown v. Bd. of Educ., 347 U.S. 483, 495 (1954).

45 Brown v. Bd. of Educ., 349 U.S. 294, 301 (1955).

46 *See generally School Segregation and Integration*, LIBR. OF CONG., https://www.loc.gov/collections/civil-rights-history-project/articles-and-essays/school-segregation-and-integration/ ("[T]he vast majority of segregated schools were not integrated until many years [after *Brown*]") (last visited Nov. 12, 2022).

47 *Id.*

. . . to excuse an indefinite withholding of constitutional rights,"[48] nor to "countenance indefinite delay in elimination of racial barriers in schools."[49] In 1964, the Court opined that "[t]here has been entirely too much deliberation and not enough speed in enforcing the constitutional rights which we held in Brown v. Board of Education" so "[t]he time for mere 'deliberate speed' has run out."[50] In 1965, the Court stated, "[d]elays in desegregating school systems are no longer tolerable."[51] In 1968, the Court placed the burden on the school systems "to come forward with a plan that promises to realistically work, and promises to realistically work now" to "eliminate[] [racial discrimination] root and branch." [52] In 1969, fifteen years after declaring "separate but equal" schools unconstitutional, Justice Black wrote that "the phrase 'with all deliberate speed' should no longer have any relevancy whatsoever in enforcing the constitutional rights of Negro students."[53] Thus, after centuries of laws and policies formally excluding Black Americans from the rights to an equal education, the Court eliminated such barriers as we entered the 1970s.[54]

As a result, Black Americans experienced rapid educational advancements, with the test score gaps between Black and White students falling by more than half.[55] In addition, Black Americans who attended integrated schools were more likely to graduate high school, go on to college, earn a degree, and make more money than Black Americans who attended segregated schools.[56] Five years of integrated schooling increased the earnings of Black adults by 30 percent.[57] Black students attending integrated schools were also significantly less likely to be incarcerated and were physically healthier.[58] Further, White students at

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48 Bd. of Sch. Comm'rs v. Davis, 84 S. Ct. 10, 12 (1963).

49 Watson v. City of Memphis, 373 U.S. 526, 530 (1963).

50 Griffin v. Cnty. Sch. Bd., 377 U.S. 218, 229, 234 (1964).

51 Bradley v. Sch. Bd., 382 U.S. 103, 105 (1965).

52 Green v. Cnty. Sch. Bd., 391 U.S. 430, 438–39 (1968).

53 Alexander v. Holmes Cnty. Bd. of Educ., 396 U.S. 1218, 1220 (1969).

54 *See id.*; *Green*, 391 U.S. at 438–39; *Bradley*, 382 U.S. at 105; *Griffin*, 377 U.S. at 229, 234; *Watson*, 373 U.S. at 530; Bd. of Sch. Comm'rs v. Davis, 84 S. Ct. 10, 12 (1963).

55 *See* Thernstrom & Thernstrom, *supra* note 24 ("In 1971, the average African-American 17-year-old could read no better than the typical white child who was six years younger. The racial gap in math in 1973 was 4.3 years; in science it was 4.7 years in 1970. By the late 1980s, however, the picture was notably brighter. Black students in their final year of high school were only 2.5 years behind whites in both reading and math and 2.1 years behind on tests of writing skills.").

56 Rucker C. Johnson, *Long-Run Impacts of School Desegregation & School Quality on Adult Attainments* 25 (Nat'l Bureau of Econ. Rsch., Working Paper No. 16664, 2011), https://www.nber.org/system/files/working_papers/w16664/w16664.pdf.

57 *Id.* at 21.

58 Carolyn Phenicie, *74 Interview: Professor Rucker Johnson on How School Integration Helped Black Students — And How Much More Is Possible When It's Paired with Early Education & Spending Reforms*, THE 74 (May 27, 2019), https://www.the74million.org/article/74-interview-professor-rucker-johnson-on-how-

integrated schools performed just as well academically as their peers in segregated schools.[59]

However, America's commitment to racially integrated schooling was short-lived. Richard M. Nixon, a staunch opponent of compulsory school integration, was elected President of the United States in 1968.[60] The Nixon administration stopped withholding Title VI funds from discriminating school districts.[61] While this strategy of "benign neglect" was deemed unconstitutional in *Adams v. Richardson*, and President Nixon was unsuccessful in his goal of passing a constitutional amendment proscribing bussing, the administration was more successful in unwinding the progress of integration by other means.[62] Under the Nixon administration's aegis, Congress passed Section 420 (also known as the Eagleton-Biden Amendment) in 1978, which prohibited states and localities from using federal funds in order to transport students for the purpose of integrating schools:

> no funds appropriated for the purpose of carrying out any applicable program may be used for the transportation of students or teachers (or for the purchase of equipment for such transportation) in order to overcome racial imbalance in any school or school system, or for the transportation of students or teachers (or for the purchase of equipment for such transportation) in order to carry out a plan of racial desegregation of any school or school system.[63]

The Court, which led the charge on dismantling the legacy of segregated schools in the 1950s and 1960s, similarly began to backslide in the 1970s. In 1974, *Milliken v. Bradley* forbade Michigan from desegregating schools across district lines,[64] and in 1978, the Court limited the scope of affirmative action in higher education by declaring racial quotas unconstitutional in *Regents of the University of California v. Bakke*.[65]

The Court next revisited affirmative action in higher education in the 2003 case *Grutter v. Bollinger*.[66] In this case, the Court recognized that schools have a compelling interest in diverse student bodies.[67] However, more recently, the

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school-integration-helped-black-students-and-how-much-more-is-possible-when-its-paired-with-early-education-spending-reforms/.

59 *See* Johnson, *supra* note 56.

60 Chinh Q. Le, *Racially Integrated Education and the Role of the Federal Government*, 88 N.C. L. REV. 725, 738 (2010).

61 *Id.*

62 *Id.* at 738–39 (citing Adams v. Richardson, 480 F.2d 1159, 1164 (D.C. Cir. 1973)).

63 20 U.S.C.A. §§ 1861–1864 (Westlaw through Pub. L. No. 93-380) (repealed 1979)).

64 *See generally* Milliken v. Bradley, 418 U.S. 717 (1974).

65 Regents of Univ. of Cal. v. Bakke, 438 U.S. 265, 270–71 (1978).

66 Grutter v. Bollinger, 539 U.S. 306, 328 (2003).

67 *Id.* at 329.

Court has even demonstrated hostility towards *voluntary* desegregation efforts.[68] In 2006, the Court granted certiorari for *Parents Involved in Community Schools v. Seattle School District No. 1 v. Jefferson County Board of Education* to decide whether the race-conscious admissions policies of Seattle and Louisville were permissible.[69] The Court held that they were not because the districts' plans were not narrowly tailored to achieve diverse schools, but the Court did reaffirm that the government has a compelling interest in reducing racial isolation and increasing student diversity in schools.[70] While failing to endorse an affirmative duty for school systems to voluntarily desegregate their schools, Justice Kennedy's controlling opinion rejected the contention that "the Constitution mandates that . . . local school authorities must accept the status quo of racial isolation in schools" and embraced the premise that public school districts may "consider the racial makeup of schools and . . . adopt general policies to encourage a diverse student body."[71] Kennedy elaborated,

> If school authorities are concerned that the student-body compositions of certain schools interfere with the objective of offering an equal educational opportunity to all of their students, they are free to devise race-conscious measures to address the problem in a general way and without treating each student in different fashion solely on the basis of a systematic, individual typing by race. School boards may pursue the goal of bringing together students of diverse backgrounds and races through other [race conscious] means, including strategic site selection of new schools; drawing attendance zones with general recognition of the demographics of neighborhoods; allocating resources for special programs; recruiting students and faculty in a targeted fashion; and tracking enrollments, performance, and other statistics by race.[72]

The thrust of Kennedy's opinion was that it was impermissible to selectively identify individual students for admission or non-admission to a public school *solely* by race, but it was perfectly constitutional to purposefully increase student racial diversity through other means, including racial gerrymandering.[73]

Even this significantly weakened interpretation of *Brown v. Board of Education* is now imperiled by the current conservative-dominated Supreme Court.[74] The Court is set to hear two cases that threaten affirmative action in

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68 *See* Jelani Cobb, *The Failure of Desegregation*, NEW YORKER (Apr. 16, 2014), https://www.newyorker.com/news/news-desk/the-failure-of-desegregation; Parents Involved in Cmty. Schs. v. Seattle Sch. Dist. No. 1, 551 U.S. 701, 701 (2007).

69 *Parents*, 551 U.S. at 701.

70 *Id.* at 710–11, 715.

71 *Id.* at 788–89 (Kennedy, J., concurring).

72 *Id.*

73 *Id.*

74 *See, e.g.*, Ian Millhiser, *A New Supreme Court Case Makes George W. Bush Look*

university admissions: *Students for Fair Admissions v. President & Fellows of Harvard College* and *Students for Fair Admissions v. University of North Carolina*.[75] Through these cases, the Court could forbid universities from considering race as part of its admissions process for the purpose of obtaining a diverse student body.[76] Additional challengers also seek to eliminate school districts' ability to adopt policies to encourage diverse student bodies in K-12 schools.[77] This paper should serve as a counterargument to the wisdom of such an approach by the Supreme Court.

4. Background: School Segregation Today

School desegregation peaked in 1988, and "the share of intensely segregated schools," those with less than 10 percent White student populations, has "more than tripled" since that time.[78] Every region in the country experienced an increase in segregated schooling after 1988 for both Black and Hispanic students.[79] Today, "two out of five Black and Latinx students attend schools where more than 90 percent of their classmates are non-White, while one in five White students attends a school where more than 90 percent of students are also White."[80] This has harmed Black American educational progress, as the

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Like a Racial Justice Crusader, VOX (Apr. 14, 2022), https://www.vox.com/2022/4/14/23022265/supreme-court-affirmative-action-coalition-tj-fairfax-school-george-bush-race; Mark Tushnet, *Who's Behind the Integration Decision?*, L.A. TIMES (July 7, 2007), https://www.latimes.com/la-oe-tushnet7jul07-story.html; Press Release, NAACP Legal Def. Fund, Parents and Advocates Push Back on Attempt to Roll Back Desegregation Efforts in Hartford Public Schools (May 8, 2018) (on file with author).

75 Students for Fair Admissions, Inc. v. President & Fellows of Harvard Coll., 142 S. Ct. 895 (argued Oct. 31, 2022); Students for Fair Admissions, Inc. v. Univ. of N.C., 142 S. Ct. 896 (argued Oct. 31, 2022).

76 *See* Amy Howe, *Affirmative Action Cases Up First in November Argument Calendar*, SCOTUSBLOG (Aug. 3, 2022), https://www.scotusblog.com/2022/08/affirmative-action-cases-up-first-in-november-argument-calendar/.

77 *See, e.g.*, Coal. for TJ v. Fairfax Cnty. Sch. Bd., No. 1:21CV296, 2022 WL 579809 (E.D. Va. Feb. 25, 2022).

78 Gary Orfield et al., Brown *at 62: School Segregation by Race, Poverty, and State*, UCLA CIV. RTS. PROJECT 3 (May 16, 2016), https://www.civilrightsproject.ucla.edu/research/k-12-education/integration-and-diversity/brown-at-62-school-segregation-by-race-poverty-and-state/Brown-at-62-final-corrected-2.pdf.

79 Will McGrew, *U.S. School Segregation in the 21st Century*, WASH. CTR. FOR EQUITABLE GROWTH (Oct. 15, 2019), https://equitablegrowth.org/research-paper/u-s-school-segregation-in-the-21st-century.

80 Halley Potter & Michelle Burris, *Here Is What School Integration in American Looks Like Today*, CENTURY FOUND. (Dec. 2, 2020), https://tcf.org/content/report/school-integration-america-looks-like-today/; *see generally* Gary Orfield & Danielle Jarvie, *Black Segregation Matters*, C.R. PROJECT UCLA (Dec. 2020),

academic performance of Black students suffers when attending highly segregated schools.[81] This, in turn, partly explains why national student progress has stalled.[82] While students at the top end of the achievement curve have continued to grow, the scores at the bottom end have actually declined.[83] Thus, to paraphrase Dr. Martin Luther King, Jr., all Americans, whether we like it or not, are bound together in a web of mutuality, and we will rise together, or we will sink together, weighed down by the oppressive forces of segregation.[84]

C. AI & School Segregation: A Vision for Change

1. The Model

In *Gill v. Whitford*, a new model was offered for identifying gerrymandered political districts: the "efficiency gap."[85] The efficiency gap counts the number of votes each party receives in excess to what is needed to win a seat in Congress.[86] A similar concept can be applied to schools, but instead of using 50% + 1 voter as the baseline to begin counting, courts and policymakers could use the percent of White students enrolled in the grade level (elementary, middle, or high school) as the baseline. For example, if there are 10,000 middle school students in District X, and 10% of those 10,000 students are White, and West Middle School in District X has 1,000 students, then the baseline to count the efficiency/segregation gap from would be 100. If there are 200 white students in West Middle School, then there would be a segregation gap of more than 100.

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https://civilrightsproject.ucla.edu/research/k-12-education/integration-and-diversity/black-segregation-matters-school-resegregation-and-black-educational-opportunity/BLACK-SEGREGATION-MATTERS-final-121820.pdf (noting that desegregation peaked in 1988).

81 Emma Garcia, *Schools Are Still Segregated, and Black Children are Paying a Price*, ECON. POL'Y INST. (Feb. 12, 2020), https://files.epi.org/pdf/185814.pdf.

82 Michael J. Petrilli, *NAEP 2017: America's "Lost Decade" of Educational Progress*, THOMAS B. FORDHAM INST. (Apr. 10, 2018), https://fordhaminstitute.org/national/commentary/naep-2017-americas-lost-decade-educational-progress.

83 Grady Wilburn et al., *The Great Divergence: Growing Disparities Between the Nation's Highest and Lowest Achievers in NAEP Mathematics and Reading Between 2009 and 2019*, NAEP BLOG (Oct. 30, 2019), https://nces.ed.gov/nationsreportcard/blog/mathematics_reading_2019.aspx.

84 *See* Letter from Dr. Martin Luther King, Jr. to Bishop C. C. J. Carpenter, et al., (Apr. 16, 1963) (on file with the Stanford School Library) ("Letter from a Birmingham Jail") ("We are caught in an inescapable network of mutuality, tied in a single garment of destiny."), http://okra.stanford.edu/transcription/document_images/undecided/630416-019.pdf.

85 Gill v. Whitford, 138 S. Ct. 1916, 1933 (2018).

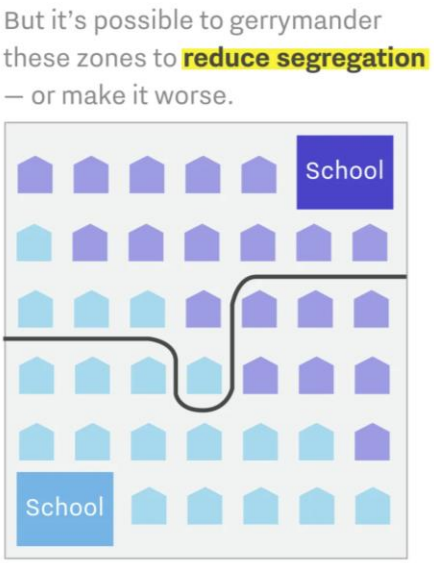
86 *Id.*; *see also* Eric Petry, *How the Efficiency Gap Standard Words*, BRENNAN CTR. FOR JUST., https://www.brennancenter.org/sites/default/files/legal-work/How_the_Efficiency_Gap_Standard_Works.pdf (last visited Nov. 10, 2022).

If there are 11 White students at West Middle School, then there would be a segregation gap of less than 89.[87]

The federal government should use AI resources to draw school boundaries to minimize the "segregation gap" in every district above a certain size (e.g., 20,000 students). As shown in the following illustration, the AI program could take existing, segregated school district lines (see Figure 1) and create more racially/ethnically integrated boundary lines (see Figure 2).

Figure 1

Figure 2



[88]

While it would be possible to do this analysis without AI, there are three major advantages of using AI to perform this task. First, it would take an incredible amount of manpower to do this and keep the maps up to date; AI is much more efficient for large, repetitive tasks such as this.[89] Second, AI is likely to identify

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[87] Alternatively, the "segregation gap" could measure the number of Black and Latino students in comparison to the general school-aged population, as Black and Latino students are the most likely targets of racially isolating line drawing.

[88] Alvin Chang, *We Can Draw School Zones to Make Classrooms Less Segregated. This Is How Well Your District Does.*, VOX, https://www.vox.com/2018/1/8/16822374/school-segregation-gerrymander-map (Aug. 27, 2018).

[89] *See generally* Kai-Fu Lee, *AI's Real Impact? Freeing Us from the Tyranny of Repetitive Tasks*, WIRED (Dec. 12, 2019), https://www.wired.co.uk/article/artificial-intelligence-repetitive-tasks (noting that AI is very good at completing routine tasks).

line-drawing strategies that people would not consider.[90] Third, in gathering and analyzing these large datasets, the AI program could objectively identify the worst offending districts in a manner more likely to be accepted by a court.

In *Wesberry v. Sanders*, the Court held that the principle of one person equaling one vote should be adhered to "as nearly as is practicable."[91] In other words, equal representation was the goal, but small variations due to line drawing realities were expected. An efficiency gap school segregation model for identifying impermissible segregation should be applied similarly; racial demographic data is imperfect and creating perfectly equal school demographics would regularly require the drawing of incredibly complex, confusing, and dispersed boundaries lines because of segregated housing patterns.[92] However, districts should strive for as close to racially/ethnically proportional school boundaries as possible within certain given parameters for compactness.

It should be noted that many districts use school choice models, most frequently in conjunction with charter schools.[93] Nonetheless, such districts almost universally continue to maintain some level of neighborhood (geographically bounded) schools as well—thus ensuring the relevancy of school boundary lines.[94] Further, charter schools have been found, on average, to exacerbate school segregation.[95] AI-enabled analysis could identify the extent of this problem and measure the impact on different school-choice strategies on segregation. For example, 11 D.C. charter schools began a voluntary program to give admissions preferences to at-risk students.[96] If school choice programs in a

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90 *See generally* Cade Metz, *How Google's AI Viewed the Move No Human Could Understand*, WIRED (Mar. 14, 2016), https://www.wired.com/2016/03/googles-ai-viewed-move-no-human-understand/
(noting that AI can look at problems in ways different from humans).

91 Wesberry v. Sanders, 376 U.S. 1, 7–8 (1964).

92 *See generally* Richard D. Kahlenberg & Kimberly Quick, *Attacking the Black-White Opportunity Gap that Comes from Residential Segregation*, CENTURY FOUND. (June 25, 2019), https://production-tcf.imgix.net/app/uploads/2019/06/24132107/housingsegregation_PDF.pdf (noting the persistence of residential segregation).

93 *See generally* JOSH CUNNINGHAM, NAT'L CONF. OF STATE LEGISLATURES, COMPREHENSIVE SCHOOL CHOICE POLICY: A GUIDE FOR LEGISLATORS (2013) https://www.ncsl.org/documents/educ/ComprehensiveSchoolChoicePolicy.pdf (noting that the most prominent public school choice policy is charter schools).

94 *See generally* Marta Jewson, *New Orleans Becomes First Major American City Without Traditional Schools*, THE LENS (July 1, 2019), https://thelensnola.org/2019/07/01/new-orleans-becomes-first-major-american-city-without-traditional-schools/ (noting that New Orleans is the only major American city without geographically-bounded neighborhood schools).

95 Tomas Monarrez et al., *Do Charter Schools Increase Segregation?*, EDUC. NEXT, https://www.educationnext.org/do-charter-schools-increase-segregation-first-national-analysis-reveals-modest-impact/ (July 24, 2019).

96 Martin Austermuhle, *Eleven D.C. Charter Schools to Give Admissions Preference to At-Risk Students*, NPR (Sept. 20, 2021),

given district are demonstrated to substantially increase racial isolation in schools, courts or policymakers could use the findings from this analysis to mandate the district to implement the most effective identified intervention(s).

2. Application in the Courts

In *Gill v. Whitford*, Chief Justice Roberts dismissed the efficiency gap as "sociological gobbledygook."[97] He was roundly criticized for this ill-advised quip.[98] The Court must become more open to, and literate in, data analysis to establish a clear standard for desegregation. Far from novel or revolutionary, the Court used statistical analysis from Dr. Kenneth Clark's famous "doll test" in helping reach the unanimous decision in *Brown v. Board of Education* in 1954.[99] With a more open mind to statistical analysis, the Court ought to use the segregation gap model to identify school districts that are racially gerrymandered.[100] Any school district whose school boundary lines are drawn to increase school segregation by a certain statistical measure (e.g., two standard deviations from the mean) should be subjected to a court ordered plan to desegregate and supervision by the Educational Opportunities Section of the Civil Rights Division of the Department of Justice (see Figure 3).

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https://www.npr.org/local/305/2021/09/20/1038920093/eleven-d-c-charter-schools-to-give-admissions-preference-to-at-risk-students.

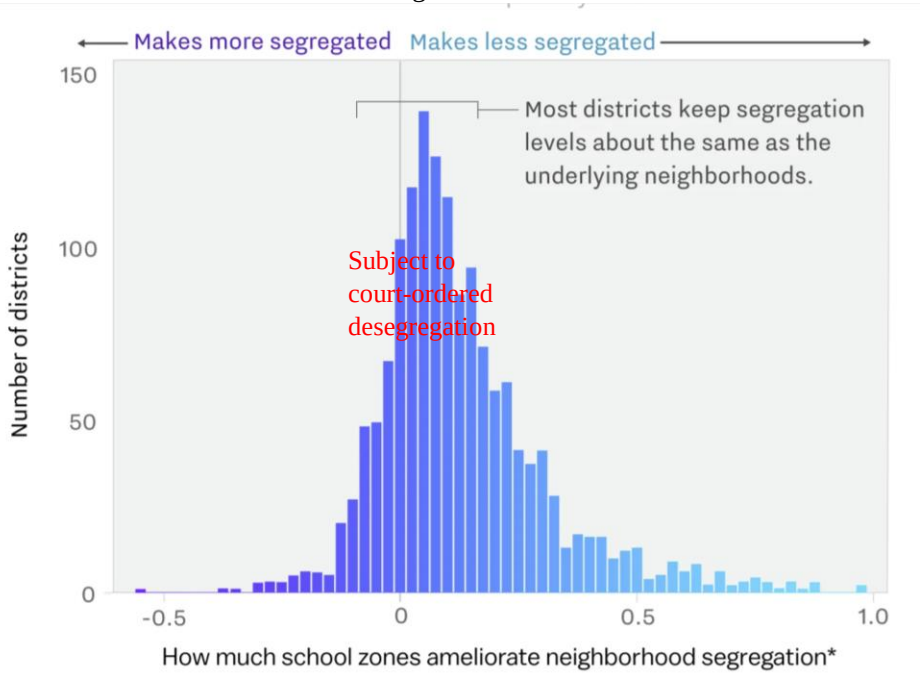
97 Transcript of Oral Argument at 40, Gill v. Whitford, 138 S. Ct. 1916 (2017) (No. 16-1161).

98 *See* Kyle Reinhard, *"Sociological Gobbledygook"*: *Gill v. Whitford, Wal-Mart v. Dukes, and the Court's Selective Distrust of "Soft Science"*, 67 UCLA L. REV. 700, 704 (2020); Graeme Earle, *Political Machines: The Role of Software in Enabling and Detecting Partisan Gerrymandering Under the Whitford Standard*, 19 N.C.J.L. & TECH. ONLINE 67, 84, 90 (2017); Benjamin W. Woodson & Christopher M. Parker, *The Chief Justice Versus the Iconoclast: Popular Constitutionalism and Support for Using "Sociological Gobbledygook" in Legal Decisions*, 55 L. & SOC'Y REV. 657, 657 (2021); Sean M. Kammer, *Whether or Not Special Expertise Is Needed: Anti-Intellectualism, the Supreme Court, and the Legitimacy of Law*, 63 S.D. L. REV. 287, 289–90 (2018); William D. Blake, *"Don't Confuse Me with the Facts": The Use and Misuse of Social Science on the United States Supreme Court*, 79 MD. L. REV. 216, 216 (2019); Todd E. Pettys, *Judging Hypocrisy*, 70 EMORY L.J. 251, 254 (2020); Michael Gentithes, *Gobbledygook: Political Questions, Manageability, & Partisan Gerrymandering*, 105 IOWA L. REV. 1081, 1083 (2020); Richard L. Hasen, *The Supreme Court's Pro-Partisanship Turn*, 109 GEO. L.J. ONLINE 50, 51 (2020).

99 Brown v. Bd. of Educ., 347 U.S. 483, 494 (1954); *see generally A Revealing Experiment*: *Brown v. Board and "The Doll Test"*, NAACP LEGAL DEF. FUND, https://www.naacpldf.org/ldf-celebrates-60th-anniversary-brown-v-board-education/significance-doll-test/ (last visited Nov. 11, 2022) (regarding the importance of the data in the doll test in the result of *Brown v. Board*).

100 *See generally* Chang, *supra* note 88.

Figure 3



Data from research by Tomas E. Monarrez, an economics PhD candidate at the University of California, Berkeley.
* Monarrez plotted out the percentage of black and Hispanic residents for each school attendance zone and compared it to the percentage of black and Hispanic residents in each "neighborhood," which are borders drawn based on the scenario that everyone attends the nearest elementary school. He then figured out the slope of that line, and subtracted that slope from 1. If the number if positive, it ameliorates segregation. If it's negative, it exacerbates it.

[101]

Court-ordered desegregation plans are among the most effective tools in combating racial isolation in schools, but despite increasing school segregation across America, such court-orders have become less common as Jim Crow laws fall further in the rearview mirror.[102] The segregation gap would provide courts with a new, objective tool to identify racially discriminatory school districts worthy of court-orders.

3. Supplemental Approaches

In addition to the above-described, AI-driven segregation gap strategy to address racial isolation in schools, governments at all levels could enact the

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[101] *Id.*

[102] *See generally* Sean F. Reardon et al., Brown *Fades: The End of Court-Ordered School Desegregation and the Resegregation of American Public Schools*, 31 J. POL'Y ANALYSIS & MGMT. 876 (2012).

following four policies to mitigate school segregation: incentivize school integration, impose a segregation tax, impose an excise tax on private schools, and create comprehensive affirmative enrollment strategies.

First, governments can incentivize school integration through the establishment of significant monetary awards, such as a Race to Integrate award, to induce districts to desegregate, similar to the tactic endorsed by the Obama Administration's Race to the Top program.[103] The Court has held that such "carrots" are acceptable, so long as the inducement is not so coercive that it amounts to compulsion.[104]

Second, they can create a "stick" via a segregation tax. Segregation has been found to impose significant costs on society, including on government.[105] These calculations could be used as the baseline for developing an appropriately sized tax on jurisdictions who fail to meet minimum thresholds for integration. The tax could be applied to school districts that are more segregated than the underlying neighborhoods (see Figure 4). Alternatively, the government could assess a tax for any deviation from proportional representation in schools. In the latter example, all school districts would likely be taxed, but it would be far more punitive for more segregated school districts like New York City. The revenue from the tax could be put into a pot for the Race to Integrate award.

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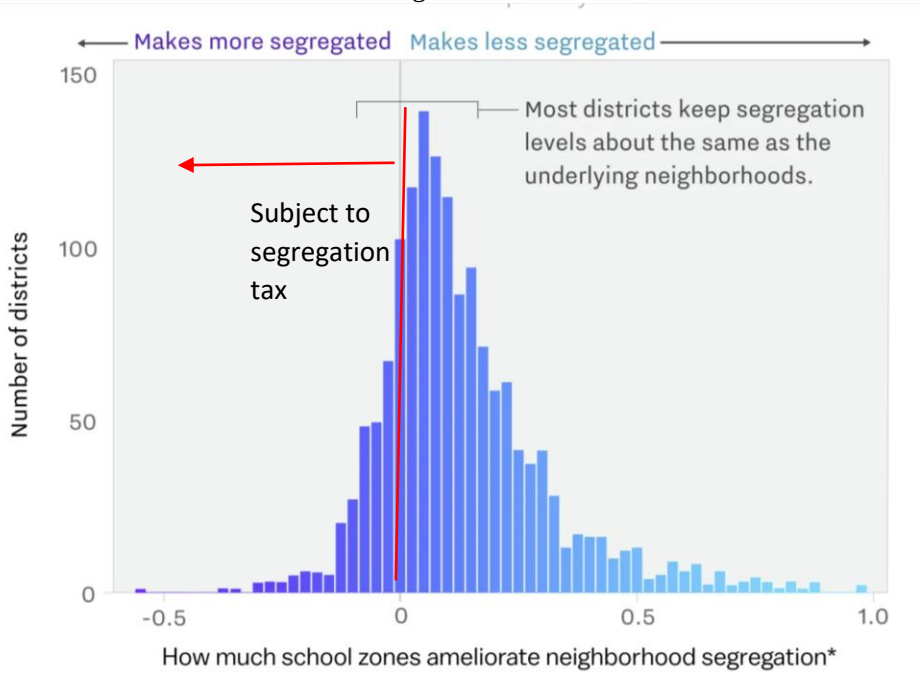
103 U.S. DEP'T OF EDUC., RACE TO THE TOP PROGRAM: EXECUTIVE SUMMARY (2009); Press Release, U.S. Dept. of Educ., President Obama, U.S. Secretary of Education Duncan Announce National Competition to Advance School Reform Obama Administration Starts $4.35 Billion 'Race to the Top' Competition, Pledges a Total of $10 Billion for Reforms (July 24, 2009), https://www2.ed.gov/print/news/pressreleases/2009/07/07242009.html.

104 *See, e.g.*, South Dakota v. Dole, 483 U.S. 203, 211 (1987); Nat'l Fed'n of Indep. Bus. v. Sebelius, 567 U.S. 519, 632 (2012); Agency for Int'l Dev. v. All. for Open Soc'y Int'l, Inc., 570 U.S. 205, 213–14 (2013); United States v. Am. Libr. Ass'n, 539 U.S. 194, 203 (2003).

105 METRO. PLANNING COUNCIL, THE COST OF SEGREGATION 2 (Mar. 2017).

Figure 4



Data from research by Tomas E. Monarrez, an economics PhD candidate at the University of California, Berkeley.
* Monarrez plotted out the percentage of black and Hispanic residents for each school attendance zone and compared it to the percentage of black and Hispanic residents in each "neighborhood," which are borders drawn based on the scenario that everyone attends the nearest elementary school. He then figured out the slope of that line, and subtracted that slope from 1. If the number if positive, it ameliorates segregation. If it's negative, it exacerbates it.

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Third, a second tax-focused approach, they could create an excise tax for private schools, as private schools are the greatest drivers of intra-district school segregation.[107] For example, Anniston City Schools in Alabama have been under a desegregation order since 1963, yet their schools remain starkly segregated by race because of private schools.[108] The town's population is approximately half White and half Black, yet the public-school population is 95% Black because most White students attend private schools.[109]

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106 Chang, *supra* note 88.

107 TOMAS MONARREZ, BRIAN KISIDA & MATTHEW CHINGOS, WHEN IS A SCHOOL SEGREGATED? 15 (Urb. Inst. 2019) ("[C]ontrolling for neighborhood composition and school enrollment, we estimate that private schools contribute more to segregation than any other type of school.").

108 Sarah Whites-Koditschek, *Annexit: How One Alabama City Could Split in Half Along Racial Lines*, ADVANCE LOC., https://www.al.com/reckon/2019/10/annexit-how-one-alabama-city-could-split-in-half-along-racial-lines.html (Feb. 12, 2021).

109 *Id.*

Lastly, policymakers should create comprehensive affirmative enrollment strategies that prioritize student diversity. As described above, even though the facts in this case failed the *Grutter* analysis, the Court held that school diversity is a compelling government interest, so localities could, for example, require that 20 percent of seats at every school in the district be reserved for at-risk students (as defined by certain parameters such as homelessness, lack of parental education, low-income status, etcetera) or for students from certain low-opportunity census tracts.[110] Algorithmic modeling could be used to determine the percent of seats that maximize integration (integration peaks at a certain point as flight from well-resourced individuals is triggered).[111] These interventions could then be measured to identify the most effective integration strategies.

D. Housing

While neighborhood segregation decreased markedly between 1970 and 1990, with the proportion of White Americans living in all-White census tracts falling from 63 percent to 36 percent,[112] most metropolitan areas remain identifiably segregated by race, with contemporary racial residential patterns closely tracking with historical redlined Home Owners' Loan Corporation maps.[113] Residential segregation is intertwined with educational segregation.[114] In addition, integrated housing is a desirable end in and of itself, as positive

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110 Parents Involved in Cmty. Sch. v. Seattle Sch. Dist. No. 1, 551 U.S. 701, 722 (2007).

111 *See generally* Samuel H. Kye, *The Persistence of White Flight in Middle-Class Suburbia*, 72 SOCIAL SCI. RESEARCH 38 (2018), https://doi.org/10.1016/j.ssresearch.2018.02.005.

112 Ingrid Gould Ellen, *Welcome Neighbors? New Evidence on the Possibility of Stable Racial Integration*, BROOKINGS (Dec. 1, 1997), https://www.brookings.edu/articles/welcome-neighbors-new-evidence-on-the-possibility-of-stable-racial-integration/; *contra The Dream Revisited: Integration in the 21st Century*, NYU FURMAN CTR., https://furmancenter.org/research/iri/intro (last visited Nov. 14, 2022) (noting that residential segregation by income has increased over the past 20 years).

113 *See Mapping Inequality: Redlining in New Deal America*, UNIV. OF RICHMOND, https://dsl.richmond.edu/panorama/redlining/#loc=5/39.1/-94.58 (last visited Nov. 14, 2022); *see also* Anna Blatto, A CITY DIVIDED: A BRIEF HISTORY OF SEGREGATION IN BUFFALO (P'ship for the Pub. Good & OpenBuffalo 2018); *see, e.g.*, ROTHSTEIN, *supra* note 21.

114 *See generally* Kfir Mordechay & Jennifer B. Ayscue, *Diversifying Neighborhoods, Diversifying Schools? The Relationship Between Neighborhood Racial Change and School Segregation in New York City*, 0 EDUC. & URBAN SOC'Y 1 (2022), https://www.researchgate.net/publication/362313757_Diversifying_Neighborhoods_Diversifying_Schools_The_Relationship_Between_Neighborhood_Racial_Change_and_School_Segregation_in_New_York_City (finding that diversifying neighborhoods experience a reduction in school segregation).

externalities such as increased earnings, graduation, employment rates, and decreased single parenthood is tied to decreased residential segregation for Black Americans.[115] The following examines three areas where government deployed AI can target housing discrimination.

1. Mortgages

As a result of deeply entrenched practices of racial discrimination in home-lending, the mortgage loan industry is heavily regulated to avoid discrimination.[116] However, recent investigations have uncovered persistent racial discrimination in the mortgage loan market.[117] Americans should not have to rely on investigative journalists or local whistleblowers to uncover such problems. Rather the federal government should develop AI programs to constantly seek out discriminatory patterns in mortgage lending.

2. Home Appraisals

Scandalized headlines have splashed across the pages of newspapers around the country describing families who saw their home appraisal values rise significantly after replacing African-American art and pictures of Black family members with pictures of White families.[118] These anecdotal stories have been

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115 David M. Cutler & Edward E. Glaeser, *Are Ghettos Good or Bad?*, 112 Q.J. ECON. 827, 828 (1997).

116 *See, e.g.*, Policy Statement on Discrimination in Lending, 59 Fed. Reg. 18266 (Apr. 15, 1994).

117 Aaron Glantz & Emmanuel Martinez, *For People of Color, Banks Are Shutting the Door to Homeownership*, REVEAL NEWS (Feb. 15, 2018), https://revealnews.org/article/for-people-of-color-banks-are-shutting-the-door-to-homeownership/; *see also* Settlement Agreement at 1–2, State v. Evans Bancorp, Inc., No. 1:14-cv-00726 (W.D.N.Y. 2015).

118 Johnathan Edwards, *A Black Couple Says an Appraiser Lowballed Them. So, They "Whitewashed" Their Home and Say the Value Shot Up.*, WASH. POST (Dec. 6, 2021), https://www.washingtonpost.com/nation/2021/12/06/black-couple-home-value-white-washing/; Brooke Endale, *Home Appraisal Increased by Almost $100,000 After Black Family Hid Their Race*, USA TODAY, https://www.usatoday.com/story/money/nation-now/2021/09/13/home-appraisal-grew-almost-100-000-after-black-family-hid-their-race/8316884002/ (Sept. 13, 2021); Jill Sheridan, *A Black Woman Says She Had to Hide Her Race to Get a Fair Home Appraisal*, NPR (May. 21, 2021), https://www.npr.org/2021/05/21/998536881/a-black-woman-says-she-had-to-hide-her-race-to-get-a-fair-home-appraisal; Aris Folley, *Florida Couple Says Home Was Appraised 40 Percent Higher After Removing Black Relatives' Photos*, HILL (Aug. 26, 2020), https://thehill.com/policy/finance/housing/513770-florida-couple-says-home-was-appraised-for-40-percent-higher-after; Russell Haythorn, *An Unconscious Bias? Biracial Denver Couple Says They Faced Discrimination on Home Appraisal*, DENVER 7 ABC, https://www.thedenverchannel.com/news/local-news/an-unconscious-bias-biracial-denver-couple-says-they-faced-discrimination-on-home-appraisal (Nov. 19, 2020).

supported by empirical research conducted by Freddie Mac.[119] The federal government should use the authorities granted under the NAIIA to establish AI protocols to continuously and proactively seek out discriminatory home appraisal patterns, warn companies against such patterns, and then bring suit under the Fair Housing Act if the companies fail to ameliorate such discrimination. Home values are one of the most significant contributing factors to the racial wealth gap, and home appraisal discrimination is one of the underlying factors for disparate home values.[120]

3. Renting

Traditionally the federal government has assessed rental discrimination by using matched-pair testers.[121] However, this process is time and resource intensive.[122] As more rental applications move online, there are increased opportunities to perform larger scale analyses to detect bias in the rental market.[123] A recent paper from the National Bureau of Economic Research demonstrated the effectiveness of this approach. The paper showed responses to rental applications from fictitious African American and Hispanic applicants with 5.6% and 2.7% lower response rate than applications by fictious White applicants (Asian and other identities were not assessed).[124] The agencies

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119 *Racial and Ethnic Valuation Gaps in Home Purchase Appraisals*, FREDDIE MAC (Sept. 2021), https://www.freddiemac.com/research/insight/20210920-home-appraisals (last visited November 7, 2022).

120 Rashawn Ray et. al., *Homeownership, racial Segregation, and Policy Solutions to Racial Wealth Equity*, BROOKINGS, (Sept. 1, 2021), https://www.brookings.edu/essay/homeownership-racial-segregation-and-policies-for-racial-wealth-equity/ (last visited November, 7, 2022); *see generally* Aditya Aladangady & Akila Forde, *Wealth Inequality and the Racial Wealth Gap*, FED. RESERVE (Oct. 22, 2021), https://www.federalreserve.gov/econres/notes/feds-notes/wealth-inequality-and-the-racial-wealth-gap-20211022.htm (last visited November 7, 2022) ("[T]he average Black and Hispanic or Latino households . . . own only about 15 to 20 percent as much net wealth" as the average White household.).

121 U.S. DEP'T OF HOUS. & URBAN DEV., PAIRED TESTING AND THE HOUSING DISCRIMINATION STUDIES, (2014), https://www.huduser.gov/portal/periodicals/em/spring14/highlight2.html (Last visited November 7, 2022).

122 *See* Jerusalem Demsas, *Black & Hispanic Renters Experience Discrimination in Almost Every Major American City*, VOX (Dec. 7, 2021), https://www.vox.com/22815563/rental-housing-market-racism-discrimination (last visited November 7, 2022).

123 *See id.*; Sun Jung Oh & John Yinger, *What Have We Learned From Paired Testing in Housing Markets?*, 17 CITYSCAPE 15, 16 (2015).

124 Peter Christensen et. al., RACIAL DISCRIMINATION AND HOUSING OUTCOMES IN THE UNITED STATES RENTAL MARKET 2, 14-15 (Nov. 2021), https://www.nber.org/papers/w29516 (last visited November 7, 2022).

empowered under the NAIIA should help HUD develop processes to conduct analyses of rental markets to identify discrimination. This would significantly expand HUD's ability to test rental markets for discrimination and thereby reduce instances of rental discrimination and create a more level playing field for all Americans.[125]

E. Employment

More than 55% of U.S. human resources managers use AI in hiring decisions, including hiring managers in the federal government.[126] Civil rights advocates have warned that the use of algorithmic resume screeners and AI-enabled interview screeners raise concerning red flags for biases to be baked into the hiring processes, thereby exacerbating existing inequalities.[127] Proponents, on the other hand, argue that AI-driven hiring offers a level playing field where unconscious bias cannot impact screening decisions because algorithms lack consciousness.[128]

The federal government should mandate algorithmic transparency and other standard practices to mitigate bias in AI employment screeners. In addition, the government should develop and implement an AI program to audit AI-enabled hiring software used by the federal government or entities receiving federal funding-and screen for discrimination against resumes with ethnically identifiable universities (historically Black colleges or universities, Hispanic-serving institutes of higher education, or Tribal colleges or universities), ethnically identifiable names, addresses in high minority census tracts, and other markers of race or ethnicity. Once developed and deployed by the federal government, the National AI Research Resource should make these tools available for companies and subnational governments across the United States.

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125 A similar process likely could, and should, be applied to realtor discrimination.

126 Avi Asher-Schapiro, *AI Is Taking Over Job Hiring, But Can It Be Racist?*, THOMAS REUTERS FOUNDATION, (June 7, 2021), https://news.trust.org/item/20210607035142-h238l/ (last visited November 7, 2022); *Resumes Are Scanned for Keywords By An Automated System*, USAJOBS HELP CENTER https://www.usajobs.gov/Help/faq/myths/resume-scanned-for-keywords/ (last visited November 7, 2022).

127 *See* Erin Mulvaney, *Artificial Intelligence Hiring Bias Spurs Scrutiny and New Regs*, BLOOMBERG L., (Dec. 29. 2021) https://news.bloomberglaw.com/daily-labor-report/artificial-intelligence-hiring-bias-spurs-scrutiny-and-new-regs (last visited November 7, 2022).

128 *See* Frida Polli, *Using AI to Eliminate Bias from Hiring*, HARV. BUSINESS REV. (Oct. 29, 2019), https://hbr.org/2019/10/using-ai-to-eliminate-bias-from-hiring (last visited November 7, 2022).

F. Criminal Justice

While Americans across the political spectrum identify policing and the criminal justice system as the areas Black Americans are most likely suffer from unfair treatment, there is considerable debate about the efficacy and fairness of using AI in sentencing decisions.[129] Civil rights organizations caution that bad data will reinforce discriminatory sentencing practices, and proponents argue that computer-driven decision-making can reduce judges' unconscious bias from affecting bail and sentencing decisions.[130] However, both civil rights proponents and AI evangelists should agree on the benefits of identifying judges with racially discriminatory sentencing practices. Therefore, the Initiative should use AI to identify and publicize outlier judges that hand down disproportionately harsh sentences to members of specific racial or ethnic minority groups.

In addition, the Initiative should analyze police departments' use of force patterns, arrest patterns, and constituent complaints to identify departments with the most discriminatory patterns and practices. Currently, the Department of Justice (DOJ) uses a highly political, ad hoc process to identity police departments for investigation (and possible imposition of consent decrees).[131] Centralizing data and AI in the investigative decision-making process will be more effective, efficient, and fair.[132]

G. Pollution

Leaders of the environmental justice movement like Catherine Coleman Flowers and Robert Bullard have demonstrated the inequities visited upon communities of color through pollution and inequitable lived environments,

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129 Drew DeSilver et al. *10 Things We Know About Race and Policing in the U.S.*, PEW RSCH. CTR. (June 3, 2020), https://www.pewresearch.org/fact-tank/2020/06/03/10-things-we-know-about-race-and-policing-in-the-u-s/ (last visited November 7, 2022).

130 *See generally* Aleš Završnik, *Algorithmic Justice: Algorithms and Big Data in Criminal Justice Settings*, 18 EUR. J. CRIM. 623, 624–25 (2021), https://doi.org/10.1177/1477370819876762 (analyzing the case for "algorithmic justice").

131 *See* Katie Benner, *Justice Dept. Restores Use of Consent Decrees for Police Abuses*, N.Y. TIMES (Apr. 16, 2021), https://www.nytimes.com/2021/04/16/us/politics/justice-department-consent-decrees.html.

132 It should be noted that, to successfully analyze the roughly 18,000 police departments across the United States, the federal government will need to collect much more thorough data from the nation's police forces; *See generally* Rachel Harmon, *Why Do We (Still) Lack Data on Policing?*, 96 MARQ. L. REV. 1119 (2013) (noting the lack of centralized policing data); Tom Jackson, *For a Second Year, Most US Police Departments Decline to Share Information on Their Use of Force*, WASHINGTON POST (Jun. 9, 2021), https://www.washingtonpost.com/nation/2021/06/09/police-use-of-force-data/.

including disparate tree-cover,[133] air particulate pollution,[134] lead contamination in water,[135] petrochemical pollution in "cancer alley,"[136] and chemical pollutants.[137] As early as 1987, researchers identified empirical evidence that toxic-waste sites were inordinately concentrated in Black and Hispanic communities stating, "The possibility that these patterns resulted from chance is virtually impossible."[138] Such environmental discrimination imposes tremendous costs on affected communities: air pollution is associated with increased deaths and disease, lower IQ scores, and increased criminality.[139] AI-assisted research developed by the federal government could help the EPA identify projects and policies that will most efficiently reduce racial disparities in air and water quality. (Of course, if other measures taken to affirmatively dismantle housing segregation are successful, such racialized geographies will disappear, and these measures and methods to identify and correct environmental racism will be inapplicable.) Further, Congress could mandate the Congressional Budget Office provide an environmental racism scorecard, along with traditional budgetary scores, when Congress passes laws affecting the environment, and the Initiative could develop the computing program to conduct this scoring.

H. Healthcare

Black and Indigenous maternal mortality rates are disproportionately high.[140]

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133 Shannon Lea Watkins & Ed Gerrish, *The Relationship Between Urban Forests and Race: A Meta-Analysis* (Mar. 1, 2018), https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5889081/pdf/nihms952140.pdf.

134 Christopher W. Tessum et al., *$PM_{2.5}$ Polluters Disproportionately and Systemically Affect People of Color in the United States* (Apr. 28, 2021), https://www.science.org/doi/10.1126/sciadv.abf4491.

135 Kristi Pullen Fedinick, et al., Watered Down Justice, NAT. RES. DEF. COUNCIL (Sept. 2019), https://www.nrdc.org/sites/default/files/watered-down-justice-report.pdf; *see also* German Lopez, *Lead Exposure Is a Race Issue. The Crisis in Flint, Michigan, Shows Why*, VOX (Jan. 6, 2016), https://www.vox.com/2016/1/6/10724536/flint-michigan-lead-exposure-race.

136 *Environmental Racism in Louisiana's 'Cancer Alley', Must End, Say UN Human Rights Experts*, UN NEWS (Mar. 2, 2021), https://news.un.org/en/story/2021/03/1086172; *see also* Luke Denne, *In 'Cancer Alley,' A Renewed Focus on Systemic Racism is Too Late*, NBC NEWS (Jun. 21, 2020), https://www.nbcnews.com/science/science-news/cancer-alley-renewed-focus-systemic-racism-too-late-n1231602.

137 Ken Ward Jr., *How Black Communities Become "Sacrifice Zones" for Industrial Air Pollution*, PROPUBLICA (Dec. 21, 2021), https://www.propublica.org/article/how-black-communities-become-sacrifice-zones-for-industrial-air-pollution.

138 Comm'n for Racial Just., *Toxic Wastes and Race in the United States*, UNITED CHURCH OF CHRIST (1987), https://www.nrc.gov/docs/ML1310/ML13109A339.pdf.

139 David Wallace-Wells, *Ten Million a Year*, 43 LONDON REV. OF BOOKS, (2021) https://www.lrb.co.uk/the-paper/v43/n23/david-wallace-wells/ten-million-a-year.

140 *Racial Disparities in Maternal Health*, U.S. COMM'N ON C. R. (2021), 1, 30,

This is just one example of a litany of unequal healthcare outcomes.[141] To identify the causes of, and find solutions to, racial disparities in healthcare, the Initiative should help HHS conduct AI-assisted research and systems analysis. This research should include identifying bias within AI-systems, as AI-assisted healthcare was found to have potentially contributed to the racial health disparities from COVID-19.[142]

I. Financial Services

Beyond mortgage loans, other financial services are also susceptible to discriminatory application. For example, discrimination has been found in the automobile loan and insurance industries.[143] The federal government should use the authorities granted under the NAIIA to assist the Consumer Finance Protection Bureau in developing AI-enabled programs to proactively identify discriminatory practices across all financial services.

J. Other

The above seven priorities (education, housing, employment, criminal justice, pollution, healthcare, and financial services) for utilizing AI to proactively mitigate racial and ethnic bias in systems and society are not exhaustive. There are many other areas of government that would likely benefit from affirmative actions to identify discrimination. However, addressing these seven areas would be momentous and make our nation much fairer and more just.

IV. APPLYING IDENTIFIED AI-DISCRIMINATION MITIGATION TOOLS TO THE

https://www.usccr.gov/files/2021/09-15-Racial-Disparities-in-Maternal-Health.pdf.

141 *See generally* David A. Ansell, THE DEATH GAP: HOW INEQUALITY KILLS (Univ. of Chi. Press 2017) (noting that poor, Black Americans die at disproportionately high rates).

142 Eliane Röösli, et.al., *Bias at Warp Speed: How AI May Contribute to the Disparities Gap in the Time Of COVID-19*, 28 J. AM. MED. INFORMATICS ASS'N. 190, 190 (2020), https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7454645/pdf/ocaa210.pdf.

143 *Examining Discrimination in the Automobile Loan and Insurance Industries: Hearing Before the H. Comm. on Fin. Serv.*, 2 (2019) (statement of Kristen Clarke, President and Executive Director, Lawyers' Committee for Civil Rights Under Law), https://lawyerscommittee.org/wp-content/uploads/2020/12/hhrg-116-ba09-wstate-clarkek-20190501.pdf.

CURRENT LEGAL REGIME

A. Defining the Issue

AI developed under the authorities of the NAIIA can mitigate extant racial discrimination in two primary ways: it can identify existing patterns of disparate treatment or impacts that can be used to notify violators and precipitate voluntary affirmative actions or to bring suit to compel affirmative actions, and it can identify affirmative strategies for the federal government to reduce identified disparities. The latter is likely to require differential treatment on the ground of race or ethnicity, which triggers strict scrutiny review regardless of whether it is designed to benefit or burden historically marginalized groups.[144] The advantages of AI in overcoming this demanding standard of review are explored in the education section below.

By purposely using AI resources to identify and publicize existing discrimination, the agencies empowered by the NAIIA can lay the foundation for disparate impact or disparate treatment claims. While not addressing every area of racial or ethnic discrimination AI-enabled programs may uncover, the following sections examine the current legal standards for disparate impact claims in education, housing, and employment, as well as examining disparate treatment claims for education segregation.

B. Education

1. Fourteenth (14th) Amendment

Section one of the Fourteenth Amendment states, in part, "No State shall . . . deny to any person within its jurisdiction the equal protection of the laws."[145] This is known as the Equal Protection Clause.[146] As first explained in *Brown v. Board of Education*, "in the field of public education the doctrine of 'separate but equal' has no place. Separate educational facilities are inherently unequal. Therefore, we hold that [those subject to school segregation are] deprived of the equal protection of the laws guaranteed by the Fourteenth Amendment."[147]

Consequently, districts that maintained *du jure* systems of racial segregation in schools (e.g., the State of Alabama whose Constitution states that "no child

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144 *See* Rice v. Cayetano 528 U.S. 495, 495–96 (2000); City of Richmond v. J.A. Croson Co., 488 U.S. 469, 472; 519–20 (1989).

145 U.S. CONST. amend. XIV, § 1.

146 *See e.g.*, Nordlinger v. Hahn, 505 U.S. 1, 10–12, (1992).

147 Brown v. Bd. of Educ., 347 U.S. 483, 495 (1954).

of either race shall be permitted to attend a school of the other race"[148]) have an affirmative "duty 'to take necessary steps to eliminate from public schools all vestiges of state-imposed segregation' [and] '[e]ach instance of failure or refusal to fulfill this affirmative duty continues the violation of the Fourteenth Amendment.'"[149] To eliminate "vestiges" of discrimination, a district must eradicate "the injuries and stigma inflicted upon the race disfavored by the violation . . . [including] subtle and intangible [injuries and stigmatization]."[150] Indicia of the eradication of such vestiges is "produc[ing] schools of like quality, facilities, and staffs."[151] Although continued racial imbalance in schools is not alone enough to demonstrate a continuing violation of the Fourteenth Amendment,[152] "[s]chools . . . predominantly of one race in a district of mixed population will require close scrutiny to determine that school assignments are not part of state-enforced segregation,"[153] "[t]he school district bears the burden of showing that any current imbalance is not traceable . . . to the prior violation,"[154] and the district must demonstrate it "actively set out to dismantle [the] dual system."[155]

Policymakers, under the broad authorization of the NAIIA, should dedicate resources to develop an AI program to determine if "vestiges" of segregation remain in every district where *du jure* school segregation was once imposed. Although there has been little appetite in recent years to bring such litigation, as the passage of time makes it more difficult to tie modern racial isolation to past *de jure* discrimination,[156] this AI program could open the door to the identification of new districts who have failed their affirmative duty "to take all steps necessary to eliminate the vestiges of the unconstitutional *de jure* system."[157]

The Supreme Court noted that, for school districts like Denver and Minneapolis that maintained segregated schools without writing it into law, "it

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148 ALA. CONST. § 256.

149 United States v. City of Yonkers, 96 F.3d 600, 622 (2d Cir. 1996) (quoting Milliken v. Bradley, 433 U.S. 267, 290 (1977) and Columbus Board of Education v. Penick, 443 U.S. at 459 (1979)).

150 Freeman v. Pitts, 503 U.S. 467, 485, 496 (1992).

151 Swann v. Charlotte-Mecklenburg Bd. of Ed., 402 U.S. 1, 18–19 (1971).

152 Washington v. Davis, 426 U.S. 229, 240 (1976); *see also* Freeman v. Pitts, 503 U.S. 467, 496 (1992).

153 Swann v. Charlotte-Mecklenburg Bd. of Ed., 402 U.S. 1, 25–26 (1971).

154 Freeman v. Pitts, 503 U.S. 467, 494 (1992).

155 Columbus Bd. of Ed. v. Penick, 443 U.S. 449, 461 (1979) (quoting Penick v. Columbus Bd. of Ed., 429 F. Supp. 229, 260 (S.D. Ohio 1977)).

156 Freeman, 503 U.S at 496 ("As the *de jure* violation becomes more remote in time and these demographic changes intervene, it becomes less likely that a current racial imbalance in a school district is a vestige of the prior *de jure* system").

157 *Id.* at 485.

is only common sense to conclude that there exists a predicate for a finding of the existence of a dual school system."[158] Legal scholar E. Edmund Reutter further explained that "[c]orrection of such actions comes within the direct mandate of Brown, for it is segregation which has developed, not fortuitously, but by governmental action. Although often called de facto segregation, it is really 'covert de jure' segregation."[159] Thus, while there is an additional burden on the state to demonstrate the existence of a purposefully created dual school system, Fourteenth Amendment claims may also be brought in the North and the West where schools were systemically segregated by government actions but not by a written law forbidding integrated schooling. Therefore, the AI program should also seek to identify vestiges of segregation in such school districts.

Creating an AI-program to identify school segregation patterns that remain intact from the mid-20th century could help the Department of Education's Office of Civil Rights and the U.S. Attorney General identify new districts to seek court-ordered desegregation plans for intentional segregation. However, because of the passage of time, shifting demographics, the Court's current ideological makeup, and prior court rulings limiting the reach of the Fourteenth Amendment in school segregation cases,[160] it would likely be difficult to prove that modern school segregation results from purposeful dual school systems in the mid-20th century, as new court ordered desegregation plans are extraordinarily rare.[161]

A more promising path to use challenges under the 14th Amendment to mitigate school segregation is to focus on the growing school district secession movement.[162] The AI-program could identify vestiges of segregative patterns to prevent wealthier, whiter splinter school districts from seceding from larger,

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158 Keyes v. Sch. Dist. No. 1, Denver Colo., 413 U.S. 189, 201 (1973); *see generally* Booker v. Special Sch. Dist. No. 1, Minneapolis, Minn., 585 F.2d 347 (8th Cir. 1978).

159 E. REUTTER, THE LAW OF PUBLIC EDUCATION 795 (3d ed.1985).

160 Milliken v. Bradley, 418 U.S. 717, 720, 792–93, 796–97 (1974); *see generally* Parents Involved in Cmty. Sch. v. Seattle Sch. Dist. No. 1, 1551 U.S. 701 (2007).

161 Will Stancil, *Is School Desegregation Coming to an End?* THE ATLANTIC (Feb. 28, 2018), https://www.theatlantic.com/education/archive/2018/02/a-bittersweet-victory-for-school-desegregation/554396/ (last visited Nov. 5, 2022).

162 *See* Alvin Chang, *School Segregation Didn't Go Away. It Just Evolved.*, VOX (Jul. 27, 2022), https://www.vox.com/policy-and-politics/2017/7/27/16004084/school-segregation-evolution (list visited Nov. 5, 2022); P.R. Lockhart, *Smaller Communities Are 'Seceding' From Larger School Districts. It's Accelerating School Segregation.*, VOX (Sept. 6, 2019), https://www.vox.com/2019/9/6/20853091/school-secession-racial-segregation-louisiana-alabama (last visited Nov. 5, 2022); Alvin Chang, *More Affluent Neighborhoods are Creating Their Own School Districts*, VOX (Apr. 17, 2019), https://www.vox.com/2019/4/17/18307958/school-district-secession-worsening-data (last visited Nov. 5, 2022); EDBUILD, *Fractured: The Accelerating Breakdown of America's School Districts* (2019), https://edbuild.org/content/fractured/fractured-full-report.pdf.

more diverse school districts.[163] For already splintered districts, the government could use AI supported analysis to supplement suits seeking new court-ordered desegregation plans for intentional discrimination.

2. Court-Orders

An alternative approach to mitigating the effects of racial and ethnic discrimination in schools is to focus on enforcing existing federal court-ordered school desegregation. According to the Century Foundation, there are 907 school districts (including charter school networks) under court-ordered desegregation decrees today, with 722 of those court-orders not adequately enforced.[164] Other scholarship has also lamented the federal government's failure to properly monitor and oversee such court-orders.[165] Schools under desegregation orders need to seek unitary status to be released from court oversight.[166] AI-enabled programs could be used to proactively identify school-districts out of compliance with their decrees, easing the burden on government's limited civil rights enforcement resources. Further, these programs could analyze districts previously granted unitary status to identify flaws in such grants based on the frequency with which patterns of racial isolation reappeared.[167] This data could be used to prevent granting unitary status to undeserving districts in the future.

3. Title VI of the Civil Rights Act of 1964

A third approach to remedying racial isolation in schools is to identify a violation of Title VI of the Civil Rights Act of 1964. Section 601 of Title VI proscribes federal funding for elementary, secondary, and postsecondary

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163 *See* Chang, *supra* note 162; P.R. Lockhart, *supra* note 162; Chang, *supra* note 162; EDBUILD, *supra* note 162.

164 Potter & Burris, *supra* note 80.

165 *E.g.*, Nikole Hannah-Jones, *Hundreds of School Districts Have Been Ignoring Desegregation Orders for Decades*, PAC. STANDARD (May 3, 2017), https://psmag.com/education/hundreds-school-districts-ignoring-desegregation-orders-decades-80589 (last visited Nov. 5, 2022); Rachel Cohen, *School Choice and the Chaotic State of Racial Desegregation*, THE AM. PROSPECT (Sep. 15, 2015), https://prospect.org/education/school-choice-chaotic-state-racial-desegregation/ (last visited Nov. 5, 2022).

166 *See generally*, Potter & Burris, *supra* note 80 ("[U]nitary status [is] the designation that releases a district from court oversight.).

167 *See* Sean F. Reardon, et. al., *Brown Fades: The End of Court-Ordered School Desegregation and the Resegregation of American Public Schools*, J. OF POLICY ANALYSIS & MGMT., Dec. 2011 at 1, 8 (previous research has found that granting districts unitary status usually results in increased resegregation of schools).

institutions that discriminate based on race, color, or national origin and provides a basis to sue violative districts.[168] Section 602 of Title VI provides agencies the authority to create regulations to effectuate the precepts embodied in § 601.[169]

In *Alexander v. Sandoval*, the Supreme Court, in a 5-4 decision, held "that § 601 prohibits only intentional discrimination."[170] Justice Scalia wrote conclusively that this was "beyond dispute."[171] This is a disputable interpretation. Section 601 states, "No person in the United States shall, on the ground of race, color, or national origin . . . be subjected to discrimination under any program or activity receiving Federal financial assistance [such as public schools under the Elementary and Secondary Education Act]."[172] Discrimination, whether intentional or unintentional, is discrimination, and "discrimination" is prohibited under § 601.[173] There is no reason to presume or infer that "intentional" was implied in the language of § 601, as the legislative history did not define it as such;[174] rather, the broader, uncircumscribed language of "discrimination" implies that all "intentional or unintentional discrimination" is proscribed.[175] This was the unanimous decision of the Supreme Court in the earlier 1974 case *Lau v. Nichols*, wherein the Court held that denying access to English as a second language (ESL) instruction or subject matter instruction in Chinese to over 1,800 students with limited English proficiency violated Title VI's prohibition on discrimination based upon race, color, or national origin.[176] Considering that the learned justices read the text of Title VI differently a mere 27 years prior, it is clear that Justice Scalia's statement that "[i]t is . . . beyond dispute" that "§ 601 prohibits only intentional discrimination" was false.[177] However, the Court is unlikely to overturn this 20-year-old holding, and legislative efforts to overturn the Court's opinion, like Rep. Robert C. Scott's Equity and Inclusion Enforcement Act of 2021, have yet to gain enough traction to be passed into law.[178]

Intentional discrimination may be proven without a smoking gun statement

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168 42 U.S.C. § 2000d (1964); *see also* Issa v. Sch. Dist. of Lancaster, 847 F.3d 121, 132–33 (3d Cir. 2017).

169 42 U.S.C. § 2000d.

170 Alexander v. Sandoval, 532 U.S. 275, 280 (2001).

171 *Id.*

172 42 U.S.C. § 2000d.

173 *Id.*

174 *See* Regents of Univ. of Cal. v. Bakke, 438 U.S. 265, 286 (1978) (Noting the "[R]epeated refusals of [Title VI's congressional] supporters precisely to define the term 'discrimination'").

175 42 U.S.C. § 2000d.

176 Lau v. Nichols, 414 U.S. 563, 566–569 (1974).

177 Alexander v. Sandoval, 532 U.S. 275, 280 (2001).

178 Equity and Inclusion Enforcement Act of 2021, H.R. 730, 117th Cong. (2021).

from a district official regarding the discriminatory intent of the boundary lines, as a "plaintiff needn't show that the defendant acted with discriminatory animus but only that the defendant intentionally treated one group less favorably . . . ."[179] Thus, the test of intentional discrimination, or disparate treatment, appropriately applied, ought to be whether the action was purposely taken with knowledge of its disparate impacts rather than if the act was done with the express purpose to harm a minority group.

As described in Section (IV)(C)(i) above, the Initiative should help the U.S. Department of Education (USED) establish an AI-enabled program to create more racially integrated school boundary lines. USED should share these AI-designed school boundaries with school districts across the nation. In so doing, USED would place districts on notice of the disparate impacts of their school boundary lines. Plaintiffs could use this notice as evidence of intent to sue Districts that refuse to take steps to ameliorate racially discriminatory school boundary lines for intentional discrimination under Title VI. However, intentional discrimination is more difficult to prove than disparate impact, as courts may take a more restrictive view on what constitutes intentional discrimination (i.e., that racially isolating school boundaries are facially neutral, and therefore valid, unless they specifically proscribe one racial or ethnic group from attending school with another).[180]

Left ambiguous in the *Sandoval* decision was the ability of agencies to create regulations banning practices that produce disparate impact discrimination under § 602 (42 U.S.C. § 2000d-1).[181] The Department of Education promulgated regulations under § 602 to ban policies that produce disparate impacts in 1980, 34 C.F.R. Part 100 (Nondiscrimination under programs receiving Federal assistance through the Department of Education effectuation of Title VI of the Civil Rights Act of 1964).[182] Specifically, 34 C.F.R. 100.3(b)(2) prohibits administering education services in a "method . . . which [has] the *effect* of subjecting individuals to discrimination because of their race, color, or national origin, or [has] the effect of . . . substantially impairing

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179 Parker v. Franklin Cnty. Cmty. Sch. Corp., 667 F.3d 910, 920 (7th Cir. 2012) (citing Communities for Equity v. Michigan High Sch. Athletic Ass'n, 459 F.3d 676, 694 (6th Cir. 2006)).

180 *See, e.g.*, Doe ex rel. Doe v. Lower Merion Sch. Dist., 665 F.3d 524, 552–54 (3d Cir. 2011).

181 *Alexander*, 532 U.S. at 281–82 ("[W]e must assume for purposes of deciding this case that regulations promulgated under § 602 of Title VI may validly proscribe activities that have a disparate impact on racial groups [because] petitioners have not challenged the regulations here.").

182 Nondiscrimination Under Programs Receiving Federal Assistance Through the Department of Education Effectuation of Title VI of The Civil Rights Act Of 1964, 45 Fed. Reg. 30762, 30918 (May 9, 1980) (to be codified at 34 C.F.R. pt. 100).

accomplishment of the objectives of the program [for] individuals of a particular race, color, or national origin" (italics added for emphasis).[183] Banning discriminatory effects is equivalent to banning disparate impact.

While some scholarship has interpreted *Sandoval* to limit agencies' authority to promulgate disparate impact regulations such as 34 C.F.R. 100.3(b)(2), there is strong evidence that the Department of Education maintains authority under § 602 to issue regulations restricting disparate impact discrimination to effectuate § 601.[184] In *Mourning v. Family Publications Service*, the Court held that "the validity of a regulation promulgated [under a statute] will be sustained so long as it is 'reasonably related to the purposes of the enabling legislation.'"[185] Proscribing disparate impact discrimination is quite clearly "reasonably related" to the purposes of Title VI. This was made explicit in *Guardians Association v. Civil Service Commission*, where Justice White, for the majority, wrote that "those charged with enforcing Title VI had sufficient discretion to enforce the statute by forbidding *unintentional* as well as intentional discrimination" (italics added for emphasis).[186] Justice White further noted that "[t]he language of Title VI on its face is ambiguous; the word 'discrimination' is inherently so."[187] In *Chevron v. NRDC*, the Court held that when courts interpret ambiguous statutes, they should defer to the agency's interpretation.[188] Applying *Chevron* deference, courts should defer to the Department of Education to effectuate the anti-discriminatory purposes of Title VI.

As such, the Department of Education ought to issue regulations targeting the "segregation gap" (defined above in section IV, C). The regulations should identify what qualifies as a violation, describe notification requirements for noncompliance,[189] identify methods for districts to reach compliance, and specify timelines for achieving compliance. Applying the "reasonably related" standard for § 602 regulations, it is evident that regulations targeting reductions in racially isolating school boundaries is reasonably related to effectuating the purposes of § 601 that "[n]o person . . . shall . . . be subjected to discrimination."[190] Even under a more restrictive standard, "segregation gap"

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183 34 C.F.R. §100.3(b)(2) (2011).

184 JARED P. COLE, CONG. RSCH. SERV., R45665, CIVIL RIGHTS AT SCHOOL: AGENCY ENFORCEMENT OF TITLE VI OF THE CIVIL RIGHTS ACT (2019).

185 Mourning v. Fam. Publications Serv., Inc., 411 U.S. 356, 369 (1973) (quoting Thorpe v. Hous. Auth. of City of Durham 393 U.S. 268, 280–81 (1969)).

186 Guardians Ass'n v. Civ. Serv. Comm'n of City of New York, 463 U.S. 582, 592 (1983).

187 *Id.*

188 Chevron U.S.A. Inc. v. Nat. Res. Def. Council, Inc., 467 U.S. 837, 843–44 (1984).

189 *See* 42 U.S.C. § 2000d (stating that an agency cannot bring suit for noncompliance unless they have advised the appropriate persons of compliance failures and such compliance cannot be secured voluntarily).

190 42 U.S.C. § 2000d.

regulations should be validly promulgated as targeting the disparate *treatment* of racial and ethnic minorities through the act of drawing racially isolated school boundary lines rather than targeting the disparate *effects* of attending such schools.

Although pertaining to the Fair Housing Act, the Court's most recent decision on disparate impact regulations emphasized "causality" between the "defendant's policy or policies" and the "statistical disparity" at issue.[191] In the case of the "segregation gap," the AI school boundary drawing program would demonstrate that school district policies, not underlying housing segregation, would be responsible for the statistical disparity in school enrollment numbers (as well as the harms that flow from segregated schooling) – thereby demonstrating causality.

Even without new regulations, 34 C.F.R. § 100.3 provides a basis for suit for violative districts identified via segregation gap analysis. 34 C.F.R. § 100.3 prohibitions include: "[p]rovid[ing] any service . . . or other benefit to an individual which is different, or is provided in a different manner, from that provided to others under the program";[192] "[s]ubject[ing] an individual to segregation or separate treatment . . .";[193] "[r]estricting an individual in any way in the enjoyment of any advantage or privilege enjoyed by others . . .";[194] "[d]eny[ing] an individual an opportunity to participate. . . or afford[ing] him an opportunity to do so [in a] different [manner]";[195] and selecting facility locations "with the effect of . . . substantially impairing accomplishment of the objectives of the Act . . . " in protecting individuals of a particular race, color, or national origin.[196] This section also includes a requirement to "take affirmative action to overcome the effects of prior discrimination"[197] and a general prohibition on discriminatory program application.[198] Rules requiring districts to meet certain baseline requirements for nondiscriminatory school boundary lines could be promulgated under any of the above cited provisions targeting disparate treatment, or 34 C.F.R. § 100.3(b)(2), which prohibits administering programs in manners that produce disparate effects on recipients.[199]

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191 Texas Dep't of Hous. & Cmty. Affairs v. Inclusive Cmtys. Project, Inc., 576 U.S. 519, 541–42 (2015).
192 34 C.F.R. § 100.3(b)(1)(ii) (2000).
193 *Id.* § 100.3(b)(1)(iii).
194 *Id.* § 100.3(b)(1)(iv).
195 *Id.* § 100.3(b)(1)(vi).
196 *Id.* § 100.3(b)(3).
197 *Id.* § 100.3(b)(6)(i).
198 *Id.* § 100.3(b)(5).
199 *Id.* § 100.3(b)(2).

4. Equal Educational Opportunities Act

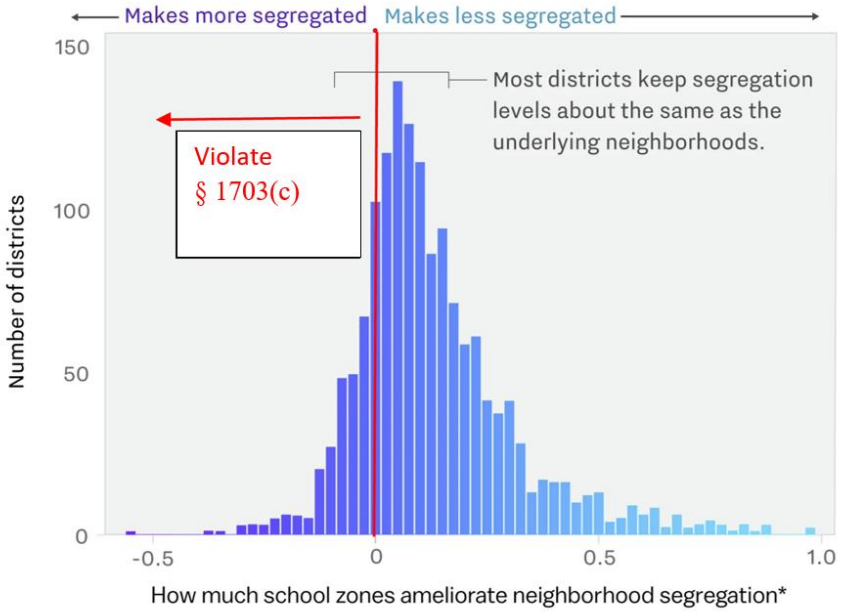
Alternatively, a claim could be brought under the Equal Educational Opportunities Act (EEOA), 20 U.S.C. § 1703 (c), which does not contain an intent requirement. § 1703(c) states:

> "No State shall deny equal educational opportunity to an individual on account of his or her race, color, sex, or national origin, by the assignment by an educational agency of a student to a school, other than the one closest to his or her place of residence within the school district in which he or she resides, if the assignment results in a greater degree of segregation of students on the basis of race, color, sex, or national origin among the schools of such agency than would result if such student were assigned to the school closest to his or her place of residence within the school district of such agency providing the appropriate grade level and type of education for such student."[200]

A plain reading of the statute shows that all schools identified by the AI-program as being subject to the "segregation tax" (see Section IV, C, ii above) are in violation of § 1703(c),[201] as they all assign students to schools that result in a greater degree of racial segregation than would result if such students were assigned to the schools closest to their places of residence. (See Figure 5).

Figure 5

[200] Equal Educational Opportunities Act, 20 U.S.C. § 1703(c) (1974).
[201] *Id.*



Data from research by Tomas E. Monarrez, an economics PhD candidate at the University of California, Berkeley.
* Monarrez plotted out the percentage of black and Hispanic residents for each school attendance zone and compared it to the percentage of black and Hispanic residents in each "neighborhood," which are borders drawn based on the scenario that everyone attends the nearest elementary school. He then figured out the slope of that line, and subtracted that slope from 1. If the number if positive, it ameliorates segregation. If it's negative, it exacerbates it.

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Admittedly, this is a novel strategy for mitigating racial isolation in schools, as most EEOA litigation in recent years has revolved around 20 U.S.C. § 1703(f) for failing to properly service English Language Learners, and very few cases have ever been brought under 20 U.S.C. § 1703(c).[203] However, it is a potentially fruitful one because, unlike for §§ 1703(a) and (e), Congress purposely did not require proof of intentional discrimination for a § 1703(c) violation, and numerous districts are violating the plain language of the statute by exacerbating underlying residential segregation through school boundary line decisions.[204]

AI is essential to continuously monitor school boundary lines across all 50 states, the District of Columbia, and U.S. territories. One reason that Congress sought to create a coverage formula for the Voting Rights Act is because it would require too many resources for the Department of Justice to monitor every voting boundary in every state, but AI changes the calculus.[205] Now, if resources are

202 Chang, *supra* note 88.
203 20 U.S.C. § 1703.
204 *Id.*
205 *See generally* Spencer, *supra* note 89. (noting that AI is very good at completing

dedicated for these ends, every sizable school district in the country can be continuously monitored for a § 1703(c) violation. Nonetheless, § 1703(c) is of limited application, as it would not do anything to affirmatively integrate schools beyond neighborhood characteristics.[206]

5. State Actions

State courts offer additional paths to remedying school segregation. In *Milliken v. Bradley*, the Supreme Court placed restrictions on court-ordered inter-district integration remedies under the Fourteenth Amendment absent evidence of cross-boundary, multidistrict, intentional discrimination.[207] This decision was extremely harmful to the progress of desegregation, as, by 2004, "a full 84% of racial/ethnic segregation in U.S. public schools occur[ed] *between* and not within school districts."[208] However, state laws and constitutions can contain broader standards than those outlined in *Milliken*; for example, in *Sheff v. O'Neill*, the State Supreme Court of Connecticut ordered Hartford's schools desegregated on the basis of the State Constitution's "fundamental right to education and . . . corresponding affirmative state obligation to implement and maintain that right."[209] Unlike the U.S. Constitution, all 50 state constitutions contain such a fundamental right to education—offering an additional path to litigants to seek desegregation remedies.[210] Publicizing the results of the AI-program's vestiges of segregation analysis will assist state actors seeking desegregation remedies in state courts. In addition, *Milliken* is not a complete firewall against federal court-ordered inter-district desegregation orders, and this AI-enabled analysis could also benefit litigants seeking such orders in federal court or legislators seeking to create narrowly-tailored, race-conscious laws to effectuate inter-district school integration.[211]

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routine tasks).

206 20 U.S.C. § 1703(c).

207 Milliken v. Bradley, 418 U.S. 717, 721–53 (1974).

208 AMY STUART WELLS ET AL., BOUNDARY CROSSING FOR DIVERSITY, EQUITY AND ACHIEVEMENT, 1 (2009) (citing CHARLES T. CLOTFELTER, AFTER BROWN: THE RISE AND RETREAT OF SCHOOL DESEGREGATION (Princeton University Press 2004)).

209 Sheff v. O'Neill, 678 A.2d 1267, 1279 (1996).

210 EMILY PARKER, 50-STATE REVIEW: CONSTITUTIONAL OBLIGATIONS FOR PUBLIC EDUCATION 1 (2016).

211 *See* Newburg Area Council, Inc. v. Bd. of Ed. of Jefferson Cnty., Ky., 583 F.2d 827, 829 (6th Cir. 1978); Evans v. Buchanan, 435 F. Supp. 832, 845 n.46 (D. Del. 1977) (distinguishing *Milliken*, 418 U.S. 717, from comprehensive jurisdictional desegregation plans as "limited to the propriety of compensatory educational programs as a desegregation remedy").

6. Affirmative Actions to Mitigate School Segregation

Another approach to addressing racial or ethnic discrimination in schools is to identify affirmative steps to mitigate racial isolation in schools. However, any affirmative actions that differentiate based on race or ethnicity will be subject to strict scrutiny.[212] An example of a race-conscious mitigation strategy would be providing down-payment assistance to Black, Latino, and Indigenous households to move to the whitest census block in town. To overcome strict scrutiny and implement race-conscious mitigating policies, the government must demonstrate that there is a compelling interest to take such actions and that the actions are closely tailored to the compelling interest.[213] The Court has repeatedly held that the government has a compelling interest in promoting racial diversity, so the government merely needs to demonstrate that its actions are narrowly tailored to such ends.[214] Utilizing AI to identify strategies to increase racial diversity in schools would be strong evidence that the proposed policy was narrowly tailored to this interest, as that is what the AI program would be directed to focus upon. In theory, it could not be over-or-under inclusive because it would be directly responding to, and only responding to, objective inputs seeking to create more diverse schools. Nonetheless, "strict scrutiny is a rigorous standard" of review that is often "'fatal' in fact."[215]

However, there are numerous race-neutral strategies that policymakers can take to increase school diversity, and these tools do not need to survive strict scrutiny review. Because of America's history of discrimination, income can (imperfectly) be used as a proxy for race in most jurisdictions (disparate treatment by socioeconomic status is adjudged at a lower standard of review).[216]

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[212] *See* Grutter v. Bollinger, 539 U.S. 306, 326 (2003); City of Richmond v. J.A. Croson Co., 488 U.S. 469, 493 (1989).

[213] *See generally* Anita K. Blair, *Constitutional Equal Protection, Strict Scrutiny, and the Politics of Marriage Law*, 47 Cath. U. L. Rev. 1231 (1998) (describing strict scrutiny review).

[214] *E.g.*, Parents Involved in Cmty. Sch. v. Seattle Sch. Dist. No. 1, 551 U.S. 701, 835, 837, 865 (2007); *See generally*, Regents of Univ. of California v. Bakke, 438 U.S. 265, 299 (1978) (holding that the university's special admissions program under which a certain number of seats were reserved for minority students was illegal), City of Richmond v. J.A. Croson Co., 488 U.S. 469, 507–08 (1989) (holding that the city's plan requiring 30% of the dollar amount of each construction contract be awarded to at least one "Minority Business Enterprises" was not narrowly tailored to serve a governmental interest), Wygant v. Jackson Bd. of Educ., 476 U.S. 267, 274, 283–84 (1986) (holding that school board's policy of protecting teachers against layoffs because of their race was unconstitutional).

[215] United States v. Chovan, 735 F.3d 1127, 1149 (9th Cir. 2013) (quoting Bernal v. Fainter, 467 U.S. 216, 219 n. 6, (1984)).

[216] Mario L. Barnes & Erwin Chemerinsky, *The Disparate Treatment of Race and Class in Constitutional Jurisprudence*, LAW & CONTEMP. PROBS., 109, 129 (2009) ("most understand all too well that class status often serves as a proxy for race"). Note that facially

Similarly, place-based affirmative integration programs are not subject to strict scrutiny, and because many neighborhoods are highly segregated by race and ethnicity, place of residence can be an effective proxy for race.[217] School districts may also create their own measures for "high-risk" students that may include homelessness, household income, use of public benefits, or other characteristics.[218] Districts may then assign designated students to wealthier, whiter schools to achieve greater school diversity. The federal government, under the authority of the NAIIA, could create an AI-program to identify effective-race neutral characteristics and analyze race-neutral affirmative discrimination mitigation strategies.

C. Housing

In *Texas Dept. Of Housing and Community Affairs v. Inclusive Communities Project, Inc.*, the Court held that "disparate impact claims are cognizable under the Fair Housing Act."[219] However, the Court circumscribed plaintiffs' abilities to solely rely on statistical analysis to prove disparate harm: "a disparate-impact claim that relies on a statistical disparity must fail if the plaintiff cannot point to a defendant's policy or policies causing that disparity."[220] Thus, while AI-assisted technologies can assist HUD, DOJ, EEOC, and state partners in identifying anomalous housing outcomes, the agencies will still have to prove the underlying cause of the disparate outcomes in court. If plaintiffs successfully identify a statistical disparity and a policy that causes it, then the burden will be on the defendant to prove a "legitimate rationale" for any "disproportionately adverse effect on minorities."[221]

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race-neutral criteria may still be subject to strict scrutiny under certain circumstances. *See e.g.*, Bush v. Vera, 517 U.S. 952, 981 (1996).

[217] *See* Sheryll Cashin, *Place, Not Race: Affirmative Action and the Geography of Educational Opportunity*, 47 U. MICH. J.L. REFORM 935, 953 (2014); Glenn Ellison & Parag A. Pathak, *The Efficiency of Race-Neutral Alternatives to Race-Based Affirmative Action: Evidence from Chicago's Exam Schools*, 111 AM. ECON. REV. 943, 973 (2021); Sally Chung, *Affirmative Action: Moving Beyond Diversity*, 39 N.Y.U. REV. L. & SOC. CHANGE 387, 398–99 (2015).

[218] Parents Involved in Cmty. Schools v. Seattle School District No. 1, 551 U.S. 701, 704 (2007) (the court stated that race, sex, ethnicity, and other protected characteristics could be used as an additional factor(s) for classifying a high-risk student).

[219] Texas Dep't of Hous. & Cmty. Affs. v. Inclusive Communities Project, Inc., 576 U.S. 519, 545 (2015).

[220] *Id*. at 542.

[221] *Id*. at 524 (quoting Ricci v. DeStefano 557 U.S. 557, 577 (2009)).

D. Employment

Employment discrimination is prohibited by Title VII of the Civil Rights Act of 1964.[222] In *Griggs v. Duke Power Co.*, the Court held that "practices, procedures, or tests neutral on their face, and even neutral in terms of intent, cannot be maintained if they operate to 'freeze' the status quo of prior discriminatory employment practices."[223] Thus, the government need not prove discriminatory intent to create a cause of action for a disparate impact in an employment claim.[224] Rather, the party must only show that discrimination resulted as a consequence of the employer's practice(s).[225] All AI-assisted agencies should ensure that they have active regulations prohibiting employment practices that produce disparate impacts on racial and ethnic minorities, as the Court has repeatedly upheld regulations prohibiting practices having a discriminatory effect regardless of intentionality.[226]

Note that Title VII of the Civil Rights Act of 1964 ensures equal opportunities, not equal outcomes, so even if a company hired Black Americans at equal rate to White Americans, if there is a discriminatory practice that unfairly harms Black applicants' chances of being hired, then that practice is violative and forbidden.[227] Currently the EEOC, DOJ, and Department of Labor (DOL) have adopted a four-fifths rule, which states that if members of one race or ethnicity are selected at four-fifths the rate of another, then this is sufficient evidence of disparate impact in employment.[228] Some courts have welcomed this approach,[229] while others have found disparate impact claims at thresholds beneath 80 percent.[230] In summary, "[t]here is no rigid mathematical threshold that must be met to demonstrate a sufficiently adverse impact."[231]

Agencies established under the NAIIA should work to fill in the gaps here. An AI-enabled program ought to be able to develop a more accurate measurement for detecting discrimination in employment than the generic four-fifths rule of thumb. Once a disparate impact hiring practice is established, an employer must prove that the practice is related to "a significant . . . legitimate

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222 42 U.S.C. § 2000e-2 (1991).
223 Griggs v. Duke Power Co., 401 U.S. 424, 430 (1971).
224 *Id*. at 430.
225 Lau v. Nichols, 414 U.S. 563, 568 (1974).
226 *E.g.*, Alexander v. Choate, 469 U.S. 287, 293 (1985).
227 *See* Connecticut v. Teal, 457 U.S. 440, 451–52 (1982).
228 Department of Justice, Title VI Legal Manual § VII, 25 (citing Uniform Guidelines for Employee Selection Procedures), 29 C.F.R. pt. 1607 (EEOC), 28 C.F.R. § 50.14 (DOJ), 41 C.F.R. ch. 60–3 (DOL).
229 *E.g.*, Clady v. Cty. of Los Angeles, 770 F.2d 1421, 1432 (9th Cir. 1985).
230 *E.g.*, Groves v. State Bd. of Educ., 776 F. Supp. 1518, 1526 (1991).
231 *E.g.*, *id.*

employment goal[] of the employer" to overcome the *prima facia* case of disparate impact.[232]

V. CONCLUSION

The NAIIA established and expanded several government entities to further AI research and development in government and society. This Act contains broad language permitting many AI-related activities. Under strong executive leadership dedicated to equalizing opportunity in the United States, the tools embedded in the NAIIA could—and should—be used to identify and affirmatively mitigate existing discrimination, including in K-12 education. The Act requires applicable agencies to regularly consult with civil rights organizations when developing AI-enabled tools.[233] While these organizations should certainly advocate for transparency and audit procedures to ensure that AI programs do to engrain or further exacerbate existing discrimination, it is vital that civil rights organizations use their platform to persuade decision makers to use the power of the federal government's AI resources to affirmatively mitigate existing discrimination.

This analysis places special focus on racial segregation in K-12 schools because formative childhood experiences are key to developing inclusive, anti-discriminatory mindsets,[234] and as a multi-ethnic society, it is essential for the United States' cohesiveness and prosperity to build bridges of opportunity and amity across difference.[235] Research has found that integrated schooling increase interracial friendships and improves academic outcomes.[236] With comprehensive data collection, AI can surpass the abilities of resource-limited federal agency staff to track and identify school boundaries that retain or even exacerbate historic racial and ethnic segregation patterns. Under the authority granted by the NAIIA, an AI program should be developed to identify school districts who have drawn school boundary lines that exacerbate underlying residential segregation patterns in violation of EEOA (20 U.S.C. § 1703(c)). In addition, by creating and publicizing a "segregation gap" analysis that identifies how far school districts' distribution of students are from equal racial distribution, the federal government could lay the foundation for court-ordered

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232 Wards Cove Packing Co., Inc. v. Atonio, 490 U.S. 642, 659 (1989).

233 NAIIA §§ 5101(b)(5), 5102(b)(3), 5104(b), 5104(e)(2)(D), 5106(b)(2)(G), 5201(b)(2)(B).

234 *See* CENTURY FOUND, *supra* note 28; Kristin Davies et al., *supra* note 32.

235 *See generally*, WALTER, *supra* note 33 (noting that the two conditions for civil war are anocracy–a semi-democratic, semi-autocratic government–and fractures along ethnic, religious, or racial lines).

236 CENTURY FOUND, *supra* note 28; Kristin Davies et al., *supra* note 32; Johnson, *supra* note 56.

integration plans under the 14th Amendment, Title VI of the Civil Rights Act, or state law. AI computational power could also help identify districts under current court-ordered desegregation plans that are furthest from compliance and develop race-neutral alternatives to achieve school integration.

As outlined above, there are many other areas the government should focus AI resources on to affirmatively mitigate discrimination in government and society as well. For example, the government should continuously monitor mortgage loan data to identify disparate treatment based on race, ethnicity, or another protected characteristic, identify judges with patterns and practices of discriminatory sentencing, and audit employment screening software for discriminatory practices.

For the United States to overcome its current state of division and maximize its awesome potential, all vestiges of discrimination must be excised, and all Americans must be made to feel welcomed and valued as members of a beloved national community. A committed federal executive can use AI towards these ends.