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## Remaking Environmental Justice

Clifford Villa

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# REMAKING ENVIRONMENTAL JUSTICE

Clifford J. Villa\*

## ABSTRACT

*From movements for civil rights in the 1960s and environmental protection in the 1970s, the environmental justice movement emerged in the 1980s and 1990s to highlight the disparate impacts of pollution, principally upon people of color and low-income communities. Over time, the scope of environmental justice expanded to address concerns for other dimensions of diversity, including gender, culture, and age. Some of this expansion reflected early principles of environmental justice for equity and inclusion in all aspects of environmental protection. However, the expanded scope of environmental justice also reflected deliberate efforts by the U.S. Environmental Protection Agency to move away from what might be seen as programs for affirmative action. A resulting concern for “all people” raises the question of whether “environmental justice” retains any unique meaning today.*

*In 2020, we have seen that “all people” are not affected equally by COVID-19, with disproportionate impacts on Blacks, Latinos, and indigenous communities. In 2020, we have also seen unabated racism and racial violence, such as the police killings of George Floyd and Breonna Taylor. In 2020, we have seen diverse communities, such as Flint, Michigan, continuing to lack necessities such as safe drinking water. And with every next catastrophic fire, flood, hurricane, or drought, we see further evidence of the uneven impacts of climate change. Together, these new and continuing challenges tell us that we still need an “environmental jus-*

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\* Associate Professor, University of New Mexico School of Law. The author thanks Mara Yarbrough, UNM Law Class of 2020, for research assistance and all-hours sounding-board ideas beyond compare. The author thanks the student-scholars of his 2020 Environmental Justice seminar for continuing inspiration and energy. Gratitude to Justin Pidot, Mike Pappas, Katy Kuh, Sanne Knudsen, and all participants in the workshop on Environmental Scholarship held at the University of Arizona in February 2020. All opinions expressed herein are those of the author alone, and comments on this paper will always be welcome.

*tice” to help focus our attention and resources on the disparate impacts of environmental harm. However, these new and continuing challenges may also tell us that we need to reframe our understanding of environmental justice to ensure better protection for people going forward.*

*One way to reframe this understanding may be to apply the heuristic of vulnerability analysis as proposed by legal theorist Martha Fineman and subsequent scholars. Starting from recognition that vulnerability is inherent in the human condition, vulnerability theory has already been explored in a variety of contexts, but has yet to be fully investigated as a means for reframing environmental justice for future application. This article urges further consideration of vulnerability theory in the environmental justice context. It specifically proposes a new definition of “environmental justice” to incorporate vulnerability theory in order to assist policymakers and community advocates with identifying the people most at risk from environmental hazards and most in need of attention to protect their health and safety.*

*Do you believe in justice and equality?*

*Because if you believe in justice and equality, you believe in it all the time, for all people.<sup>1</sup>*

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1. IJEOMA OLUO, SO YOU WANT TO TALK ABOUT RACE 204 (2019).

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## I. INTRODUCTION

In 2005, when Hurricane Katrina left scenes of African-American people fording floodwaters or stranded on rooftops, commentators immediately expressed concerns for environmental justice.<sup>2</sup> A dozen years later, environmental justice concerns reappeared clearly with the devastation in Puerto Rico following Hurricane Maria in September 2017.<sup>3</sup> In the same fall of 2017, northern California experienced the worst wildfires in state history. The Tubbs Fire ravaged city blocks in Santa Rosa as well as wine country in Napa and Sonoma County.<sup>4</sup> The next fall, however, the Camp Fire of 2018 eclipsed the Tubbs Fire of 2017 and became the worst wildfire in state history, leveling the town of Paradise, California, and surrounding areas.<sup>5</sup> In the summer of 2019, cataclysmic bush fires spread across Australia<sup>6</sup> and were still

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2. See, e.g., Eileen Gauna, *Katrina and Environmental Injustice*, JURIST (Oct. 10, 2005), <https://www.jurist.org/commentary/2005/10/katrina-and-environmental-injustice> (noting that the devastation wrought by Hurricane Katrina “was an exceptionally large echo of a socioeconomic political condition known popularly as environmental injustice”); CENTER FOR PROGRESSIVE REFORM, AN UNNATURAL DISASTER: THE AFTERMATH OF HURRICANE KATRINA 38 (2005) (“Government officials tend not to acknowledge publicly the fact that it was impossible for many people to evacuate. This ‘blame the victim’ strategy . . . is troubling in general and particularly from the perspective of environmental justice”). See MANUEL PASTOR ET AL., IN THE WAKE OF THE STORM: ENVIRONMENT, DISASTER, AND RACE AFTER KATRINA (2006); see ROBERT D. BULLARD & BEVERLY WRIGHT, THE WRONG COMPLEXION FOR PROTECTION (2012).

3. See, e.g., Phil McKenna, *What’s Happening in Puerto Rico Is Environmental Injustice*, SLATE (Sept. 27, 2017), <https://slate.com/technology/2017/09/puerto-rico-is-experiencing-a-crisis-created-by-environmental-injustice.html>; Connor Maxwell & Cathleen Kelly, *3 Million Reasons for Environmental Justice in Puerto Rico*, CENTER FOR AM. PROGRESS (Oct. 19, 2017), <https://www.americanprogress.org/issues/green/news/2017/10/19/441060/3-million-reasons-environmental-justice-puerto-rico>. See also, VILLA ET AL., ENVIRONMENTAL JUSTICE: LAW, POLICY, AND REGULATION (3<sup>rd</sup> ed. 2020), at Chap. 15 (noting, “Environmental justice, or *injustice*, can indeed help explain many of the impacts from disasters on certain populations; the disproportionate impacts of climate change on the people of Puerto Rico through stronger and more frequent hurricanes is certainly one example”).

4. *Remembering the Victims of the North Bay Fires*, PRESS DEMOCRAT (Dec. 27, 2017) (identifying 40 victims of the Tubbs Fire across Sonoma, Napa, and Mendocino Counties, <https://www.pressdemocrat.com/article/news/remembering-the-victims-of-the-north-bay-fires/?ref=related>).

5. Katherine Skiba, *One Year Ago: California’s Deadliest Wildfire Ravaged Town of Paradise*, AARP (Oct. 15, 2019), <https://www.aarp.org/politics-society/history/info-2019/paradise-camp-fire-anniversary.html>.

6. See, e.g., Helen Sullivan, *Australia’s Fire Season Ends, and Researchers Look to the Next One*, N.Y. TIMES (Apr. 21, 2020), <https://www.nytimes.com/2020/04/21/science/australia-wildfires-technology-drones.html>; Damien Cave, *The End of Aus-*

burning in February 2020, when the world's attention turned to the spread of the coronavirus.

Researchers studying the coronavirus and the disease it causes, known as COVID-19, soon observed that the virus posed particular threats to racial and ethnic minorities. In one early study, researchers found that of 3,626 patients who tested positive for COVID-19 in Louisiana between March 1 and April 11, 2020, Black people comprised 31% of the patient cohort; made up almost 77% of COVID-19 patients who required hospitalization; and represented more than 70% of COVID-19 patients who died.<sup>7</sup> Later studies have also indicated severe disparate impacts of COVID-19 on Latino<sup>8</sup> and Native American populations.<sup>9</sup> Of course, COVID-19 has also had severely disproportionate impacts on older adult populations.<sup>10</sup>

As with COVID-19 in 2020, researchers observed disproportionate impacts on discrete populations after Hurricane Maria in 2017 and the northern California fires of 2017-2018. In those cas-

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*tralia as We Know It*, N.Y. TIMES (Feb. 15, 2020), <https://www.nytimes.com/2020/02/15/world/australia/fires-climate-change.html>.

7. See Eboni G. Price-Haywood et al., *Hospitalization and Mortality among Black Patients and White Patients with Covid-19*, 382 N. ENGL. J. MED. 2534 (2020). For continuing data on the disparate impacts of COVID-19 on blacks and other racial minorities, see the COVID Racial Data Tracker maintained by the Boston University Center for Antiracist Research, <https://covidtracking.com/race>.

8. See, e.g., Richard A. Oppel, Jr. et al., *The Fullest Look Yet at the Racial Inequity of Coronavirus*, N.Y. TIMES (July 5, 2020) (reporting COVID-19 cases per 10,000 people as 23 for whites, 62 for blacks, and 73 for Latinos), <https://www.nytimes.com/interactive/2020/07/05/us/coronavirus-latino-african-americans-cdc-data.html>.

9. In a study of 861 COVID-19 cases on 287 Indian reservations and other tribal lands, researchers found an occurrence of coronavirus infection more than four times higher among Indian populations than white populations (0.24 cases per 1000 for reservations vs. 0.057 cases per 1000 in the United States off-reservation). See Desi Rodriguez-Lonebear et al., *American Indian Reservations and COVID-19: Correlates of Early Infection Rates in the Pandemic*, 26 J. PUB. HEALTH MGMT. & PRACT. 371 (2020). Of course, COVID-19 was not the first pandemic to adversely affect Native communities in the United States. First contact with European colonists left many Eastern tribal communities devastated by smallpox, while the Spanish flu of 1918-1919 had similar impacts on tribal communities across the United States. See Matthew L.M. Fletcher, *Indian Lives Matter: Pandemics and Inherent Tribal Powers*, 73 STANFORD L. REV. ONLINE (2020), <https://www.stanfordlawreview.org/online/indian-lives-matter>.

10. As of July 2020, the U.S. Centers for Disease Control and Prevention (CDC) estimated that eight out of ten COVID-19 deaths reported in the United States were adults age 65 or older. CENTERS FOR DISEASE CONTROL AND PREVENTION, YOUR HEALTH: OLDER ADULTS (updated July 30, 2020), <https://www.cdc.gov/coronavirus/2019-ncov/need-extra-precautions/older-adults.html>.

es, however, survival was not so much a question of race or ethnicity.<sup>11</sup> For Hurricane Maria, one major factor was diabetes, which researchers found to be the third leading cause of “excess deaths” in Puerto Rico in the months following the hurricane.<sup>12</sup> For both Hurricane Maria and the northern California fires, the most deadly factor appeared to be advanced age.<sup>13</sup> Most starkly, of the 85 deaths from the cataclysmic Camp Fire in 2018, 92% were age 50 or above.<sup>14</sup>

Whether the impacts of COVID-19 and climate change are most associated with race or ethnicity, income, age, or pre-existing conditions, one common and confounding factor may be environmental degradation. For example, researchers from the Harvard School of Public Health found a strong connection between COVID-19 death rates in the United States and air pollution, with a mere one microgram per cubic meter ( $\mu\text{g}/\text{m}^3$ ) increase in fine particulate matter ( $\text{PM}_{2.5}$ ) correlated to an 8% increase in the COVID-19 death rate.<sup>15</sup> A more detailed study from the Netherlands found an even tighter connection between poor air quality and the incidence of COVID-19 infections, hospitalization, and deaths.<sup>16</sup> Subsequent studies in both Europe and China have found similar results.<sup>17</sup> While the precise causal link between air

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11. According to data from the U.S. Census Bureau, at the time of the Camp Fire, the town of Paradise, California, was 92.8% white. [https://cbb.census.gov/rae/#industry0=00&geoType=place&dynGeo\\_place=0655520&dynHeader=My%20region&view=regionreport&reportType=detailed](https://cbb.census.gov/rae/#industry0=00&geoType=place&dynGeo_place=0655520&dynHeader=My%20region&view=regionreport&reportType=detailed).

12. Raul Cruz-Cano & Erin L. Mead, *Causes of Excess Deaths in Puerto after Hurricane Maria: A Time-Series Estimation*, 109 AM. J. PUB. HEALTH 1050 (2019). According to this study, the leading cause of “excess deaths,” above prior year levels, was heart disease (253 deaths), followed by “other” (204 deaths), and then diabetes (195 deaths).

13. See *id.* at 1052 (finding that 86.1% of deaths from Hurricane Maria were people age 65 or older).

14. Skiba, *supra* note 5 (noting that of 84 bodies identified, all but six were below the age of 50). Similarly, of 40 victims from the Tubbs Fire, all but six were below the age of 50. Of those six, one victim was a firefighter in the line of duty and two victims were confined to wheelchairs and unable to escape the flames. PRESS DEMOCRAT, *supra* note 4.

15. Xiao Wu et al., *Exposure to air pollution and COVID-19 mortality in the United States*, MEDRXIV 2 (Apr. 27, 2020) (unpublished manuscript) (on file with medRxiv online), <https://doi.org/10.1101/2020.04.05.20054502>.

16. See Matthew A. Cole et al., *Air Pollution Exposure and COVID-19*, ENV'T & RESOURCE ECON. (forthcoming 2020).

17. Damian Carrington, ‘Compelling’ evidence air pollution worsens coronavirus – study, THE GUARDIAN (July 13, 2020), <https://www.theguardian.com/world/2020/jul/13/compelling-evidence-air-pollution-worsens-coronavirus-study>.

pollution and COVID-19 effects requires further investigation, one environmental commentator observed: “Patients with severe COVID-19 are twice as likely to have had pre-existing respiratory diseases and three times as likely to have had cardiovascular problems. And decades of . . . research have shown air pollution damages hearts and lungs.”<sup>18</sup>

As for the environmental basis for the hurricanes of 2017, including Harvey, Irma, and Maria, and the wildfires of 2017-2019, such extreme climate events precisely reflect the earliest predictions for the consequences of unchecked greenhouse gas emissions.<sup>19</sup> Climate change and air pollution have long been recognized as species of concern for environmental justice.<sup>20</sup> Accordingly, could we say that at least some of the hundreds of thousands of “excess deaths” worldwide associated with COVID-19,<sup>21</sup> along with those who perished after climate events such as Hurricane Maria and the fires in northern California, were the victims of environmental injustice?

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18. Damian Carrington, *Is air pollution making the coronavirus pandemic even more Deadly?*, THE GUARDIAN (May 4, 2020), <https://www.theguardian.com/world/2020/may/04/is-air-pollution-making-the-coronavirus-pandemic-even-more-deadly>.

19. In 1990, with the first assessment report by the Intergovernmental Panel on Climate Change (IPCC), the IPCC predicted that as a consequence of increasing heat and drought, “[l]osses from wildfire will be increasingly extensive.” IPCC, CLIMATE CHANGE: THE 1990 AND 1992 IPCC ASSESSMENTS 88 (1992). See also BILL MCKIBBEN, THE END OF NATURE 95-96 (1989) (discussing threats of bigger and more intense hurricanes as a consequence of climate change).

20. See Letter, Circa Earth Day 2001, to George W. Bush, President of the United States of America (Apr. 19, 2001) (“We are writing you today to express our profound concern with your new climate changes policies with respect to their impacts on poor people and people of color in the United States and around the world”), reprinted in VILLA, ET AL., *supra* note 3, at Chap. 1.

21. According to Johns Hopkins University, as of December 15, 2020, there were 1,623,864 reported deaths worldwide due to COVID-19, including 300,494 deaths in the United States. See JOHN HOPKINS U., CORONAVIRUS RESOURCE CENTER: GLOBAL MAP (last visited Dec. 16, 2020), <https://coronavirus.jhu.edu/map.html>. The CDC has noted, however, that “some deaths due to COVID-19 may be assigned to other causes of deaths, [such that] COVID-19 mortality may be undercounted.” See CTRS. FOR DISEASE CONTROL AND PREVENTION, EXCESS DEATHS ASSOCIATED WITH COVID-19 (updated July 29, 2020), [https://www.cdc.gov/nchs/nvss/vsrr/covid19/excess\\_deaths.htm](https://www.cdc.gov/nchs/nvss/vsrr/covid19/excess_deaths.htm). Recognition of this potential for undercounting mortality is significant, as the federal government has in the recent past undercounted deaths by orders of magnitude. See, e.g., *infra* note 205 (undercounting victims of Hurricane Maria by up to a factor of 72). In any event, contrary to the imagination of conspiracy theorists, it appears highly unlikely that the official COVID-19 mortality count has been inflated by the U.S. Government; if anything, it is likely that the official count is too low.



From the beginning, environmental justice has both demanded and defied definitions.<sup>22</sup> Under the most common definition, maintained (inconsistently) by the U.S. Environmental Protection Agency (EPA), environmental justice is:

the fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income with respect to the development, implementation, and enforcement of environmental law, regulations, and policies.<sup>23</sup>

While this EPA definition has remained essentially unchanged for more than 20 years, it still leaves much to be considered. What do we even mean, for example, by *the environment*?<sup>24</sup> How should we describe *justice* in this context?<sup>25</sup> If there is such a thing as an *environmental justice community*, what does that look

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22. See, e.g., THE ROUTLEDGE HANDBOOK OF ENVIRONMENTAL JUSTICE 3 (Ryan Holifeld, Jayajit Chakraborty, & Gordon Walker eds., 2018) (observing that “[t]he terms *environmental justice* and *environmental injustice* have always resisted straightforward definition”).

23. U.S. EPA, ENVIRONMENTAL JUSTICE (2020), <https://www.epa.gov/environmentaljustice>.

24. Advocates for environmental justice tend to define “the environment” broadly in relation to human experiences. See, e.g., Eileen Gauna, *El Día de Los Muertos: The Death and Rebirth of the Environmental Movement*, 38 ENV’T L. 457, 466 n.55 (2008) (“environment” defined by activists as “where we live, work, play, learn, and pray”). A very different notion of “the environment” reflects in President Trump’s Earth Day message of 2019: “Earth Day is a celebration of the abundant beauty and life-sustaining bounty of our natural environment. From the Appalachian Mountains to the golden shores of California, America is blessed with some of the most beautiful scenery on Earth.” The White House, Presidential Message on Earth Day, 2019. While Trump’s understanding of “the environment” may obviously be limited, this sense of “the environment” as a place of inherent and natural beauty follows a strong tradition in the American imagination and in legislation. See, e.g., NM. CONST. art. XX, § 21 (“The protection of the state’s beautiful and healthful environment is hereby declared to be of fundamental importance. . .”).

25. The most influential article to analyze the “justice” component of “environmental justice” is Robert R. Kuehn, *A Taxonomy of Environmental Justice*, 30 ELR 10681 (2001). In this seminal article, Kuehn articulates four primary dimensions of “justice” in the environmental justice context: “distributive justice,” “procedural justice,” “corrective justice,” and “social justice.” However, within these four dimensions, Kuehn further recognizes embedded dimensions of “retributive justice,” “compensatory justice,” “restorative justice,” and “commutative justice.” *Id.* at 10693-10694. Subsequent scholarship continues to identify or propose further dimensions of “justice” in this context. See, e.g., Jessica Eisen, Roxanne Mykitiuk, and Dayna Nadine Scott, *Constituting Bodies into the Future: Toward a Relational Theory of Intergenerational Justice*, 51 U.B.C. L. REV. 1 (2018); Candice Youngblood, *Put Your Money Where Their Mouth Is: Actualizing Environmental Justice by Amplifying Community Voices*, 45 ECOLOGY L.Q. 455 (2019) (urging consideration of “recognitional justice” alongside distributive and procedural justice).

like?<sup>26</sup> Most saliently, what counts as a *concern* for environmental justice? This last question may become especially urgent now in the age of COVID-19 and the *Anthropocene*,<sup>27</sup> where human mobility and industry have so profoundly altered our planetary system that our future may have “no analogue” to the past in human history.<sup>28</sup>

Given all these uncertain elements, it's no surprise that *environmental justice* itself has been subject to multiple and competing definitions over time. Any conception of *environmental justice* will likely include concerns for the unequal distribution of environmental burdens based upon race.<sup>29</sup> Defining events in the origin story of environmental justice include the 1982 protest against a toxic waste landfill in a largely African-American community in Warren County, North Carolina.<sup>30</sup> In 1991, the First National People of Color Environmental Leadership Summit broadened the tent and ensured the environmental justice move-

26. One early and (cumbersome) EPA definition provided: “To be classified as an environmental justice community, residents must be a minority and/or low-income group excluded from the environmental policy setting and/or decision-making process; subject to a disproportionate impact from one or more environmental hazards; and experience a disparate implementation of environmental regulations, requirements, practices and activities in their communities.” U.S. EPA, OFFICE OF ENVIRONMENTAL JUSTICE, F.A.Q.: WHAT IS ENVIRONMENTAL JUSTICE (2000).

27. The “Anthropocene” represents the new geologic era where human impacts now dominate Earth's biological and physical systems. See Eric Biber, *Law in the Anthropocene Epoch*, 106 GEORGETOWN L. J. 1, 3 (2017). After introduction some 20 years ago, it has become an immensely popular subject for legal scholars. See, e.g., Sean M. Kammer, *No-Analogue Future: Challenges for the Laws of Nature in a World Without Precedent*, 42 VERMONT L. REV. 227, 228 (2017) (crediting “Anthropocene” to atmospheric chemist Paul Crutzen and biologist Eugene Stoermer in 2000). For recent scholarship on the Anthropocene, in addition to Biber (2017), see MELINDA HARM BENSON & ROBIN KUNDIS CRAIG, *THE END OF SUSTAINABILITY: RESILIENCE AND THE FUTURE OF ENVIRONMENTAL GOVERNANCE IN THE ANTHROPOCENE* (2017); Jedediah Purdy, *Book Review: Coming into the Anthropocene*, 129 HARV. L. REV. 1619 (2016); Carmen G. Gonzalez, *Bridging the North-South Divide: International Environmental Law in the Anthropocene*, 32 PACE ENV'T L. REV. 407 (2015); Angela P. Harris, *Vulnerability and Power in the Age of the Anthropocene*, 6 WASH. & LEE J. ENERGY, CLIMATE, & ENV'T. 96 (2014).

28. Sean M. Kammer, *No-Analogue Future: Challenges for the Laws of Nature in a World Without Precedent*, 42 VERMONT L. REV. 227 (2017).

29. Assessing the environmental justice movement after 25 years, one noted scholar of environmental justice observed that: “Race remains central to understanding environmental injustices.” Clifford Rechtschaffen, *Strategies for Implementing the Environmental Justice Vision*, 1 GOLDEN GATE ENV'T L.J. 321, 323 (2008).

30. For perhaps the most comprehensive telling of the Warren County story, see EILEEN MCGURTY, *TRANSFORMING ENVIRONMENTALISM: WARREN COUNTY, PCBS, AND THE ORIGINS OF ENVIRONMENTAL JUSTICE* (2007).

ment embraced all people of color, specifically to include indigenous peoples.<sup>31</sup> In 1994, the Executive Order on Environmental Justice, signed by President Clinton, extended environmental justice concerns to “low-income” populations.<sup>32</sup>

At that point, it might have seemed that the environmental justice movement was inclusive enough. However, the U.S. Environmental Protection Agency (EPA) eventually redefined “environmental justice” to apply to “all people”<sup>33</sup> — a definition that remains most commonly employed in the United States today.<sup>34</sup> The broadened scope of environmental justice allowed researchers and advocates to identify and address the disparate impacts of environmental stressors on a wide range of community members not originally considered within the framework of environmental justice, to include women,<sup>35</sup> children,<sup>36</sup> and immigrant communities.<sup>37</sup>

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31. See THE FIRST NATIONAL PEOPLE OF COLOR ENVIRONMENTAL LEADERSHIP SUMMIT, PRINCIPLES OF ENVIRONMENTAL JUSTICE xiii (Oct. 24-27, 1991), reprinted in VILLA ET AL., ENVIRONMENTAL JUSTICE: LAW, POLICY & REGULATION 28-30 (3<sup>rd</sup> ed. 2020).

32. Exec. Order No. 12,898: Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations, 59 Fed. Reg. 7629 (Feb. 16, 1994) [hereinafter, “E.O. 12898”].

33. See *infra* note 111 and accompanying text.

34. Aelita Neimanis et al., *Examining the Place of Ecological Integrity in Environmental Justice: A Systematic Review*, 17 INT’L J. JUST. & SUSTAINABILITY 349, 358 (2012) (finding after a systematic review of relevant literature that “the EPA main definition . . . of environmental justice was cited most frequently”). See also *infra* note 174 and accompanying text (2019 New York State statute).

35. See, e.g., Greta Garrd, *Feminism and Environmental Justice*, in ROUTLEDGE HANDBOOK OF ENVIRONMENTAL JUSTICE at 74; Robert R.M. Verchick, *In a Greener Voice: Feminist Theory and Environmental Justice*, 19 HARV. WOMEN’S L. J. 23 (1996).

36. See, e.g., NATIONAL ENVIRONMENTAL JUSTICE ADVISORY COUNCIL, STRATEGIES FOR ENHANCE SCHOOL AIR TOXICS MONITORING IN ENVIRONMENTAL JUSTICE COMMUNITIES (2010).

37. See, e.g., ROBERT R.M. VERCHICK, FACING CATASTROPHE: ENVIRONMENTAL ACTION FOR A POST-KATRINA WORLD 141 (2010) [hereinafter VERCHICK, FACING CATASTROPHE] (noting that after Hurricane Katrina, “[m]any Latinos in Louisiana were undocumented workers” and that “many Latinos avoided seeking disaster relief after Katrina out of fear of being deported”); Julie Sze, *Asian American Immigrant and Refugee Environmental Justice Activism under Neoliberal Urbanism*, 18 ASIAN AM. L. J. 5 (2011). See also NATIONAL ENVIRONMENTAL JUSTICE ADVISORY COUNCIL, FISH CONSUMPTION AND ENVIRONMENTAL JUSTICE (2002) (noting potential health threats from eating contaminated fish, including particular concerns for diverse communities “such as Russian immigrants, who consume the whole fish”).

The broadening scope of people to be protected by environmental justice paralleled the broadening scope of environmental justice concerns. From an initial focus on the siting of toxic waste facilities, environmental justice advocates soon began to engage on other environmental concerns, including, for example, the disparate impacts of contaminated sites<sup>38</sup> and climate change.<sup>39</sup> Momentous catastrophes such as Hurricane Katrina and Hurricane Maria revealed disparate impacts not only from extreme climate disruption directly but also from the government's handling (or mishandling) of disaster response.<sup>40</sup> More recently, environmental justice advocates have begun to examine our systems for the production and distribution of food<sup>41</sup> and for the generation and delivery of energy.<sup>42</sup> Resulting concerns for "climate justice," "disaster justice," "food justice," and "energy justice" could reach all people on the planet. This may comport with the EPA's "all people" definition of environmental justice, but does it remain true to the original ideals of environmental justice? Should it?

While "All Lives Matter" may be facially correct, critics note that it fails to recognize the genuine concerns of "Black Lives Matter."<sup>43</sup> Does environmental justice for "all people" similarly

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38. For one early connection between environmental justice and contaminated sites, see ROBERT D. BULLARD, *DUMPING IN DIXIE: RACE, CLASS, AND ENVIRONMENTAL QUALITY* 45-51 (1990) (discussing lead contamination from RSR lead smelter in community of West Dallas, Texas, that was 85% black). See also Armen H. Merjian, *Washington Park Lead Committee, Inc. v. United States Environmental Protection Agency: Helen Person and the Landmark Struggle Against Environmental Injustice*, 30 CHICANA/O-LATINA/O L. REV. 65 (2011) (discussing lead contamination in public housing project of Portsmouth, Virginia).

39. See *supra* note 20, Letter, Circa Earth Day 2001.

40. For the foundational article on "disaster justice," see Robert R.M. Verchick, *Disaster Justice: The Geography of Human Capability*, 23 DUKE ENV'T L. & POL'Y F. 23 (2012). For an insightful look at disaster injustice in the federal response to Hurricane Maria, see Daniel Farber, *Response and Recovery after Maria: Lessons for Disaster Law and Policy*, 87 REVISTA JURÍDICA U.P.R. 743 (2018) (comparing FEMA responses to Hurricane Harvey and Hurricane Maria).

41. JOSHUA SBICCA, *FOOD JUSTICE NOW!: DEEPENING THE ROOTS OF SOCIAL STRUGGLE* (2018); and GARRETT BROAD, *MORE THAN JUST FOOD: FOOD JUSTICE AND COMMUNITY CHANGE* (2016).

42. See CARMEN G. GONZALEZ ET AL., *ENERGY JUSTICE: US AND INTERNATIONAL PERSPECTIVES* (2018).

43. As one scholar of race and criminal justice observed:

[A] preference for expanding to an "All Lives Matter" framework is just a call to recognize the common humanity of all people. Such a change, however, potentially ignores important elements of a racialized struggle for equality. Insisting that "All Lives Matter" decenters the racial component of the movement—a component many argue should remain front and center because to ignore the ra-

drain “environmental justice” of meaning? If air toxics and hurricane threats to poor Black residents of Louisiana pose concerns for environmental justice, does environmental justice equally encompass the increasing threat of wildfires to white middle-class retirees in northern California? Does COVID-19 now mean that older people everywhere present a concern for environmental justice? If the goal is now to protect *everyone* from *everything*, does “environmental justice” remain anything more than a slogan or abstract ideal?

If COVID-19, climate disasters, and continuing acts of racial violence teach us anything, they confirm that we still need an “environmental justice” definition, maybe now more than ever. But they also urge us to reframe our notion of “environmental justice” for use in an increasingly dynamic and global environment. Part II of this article will review the origin and comprehension of concerns for environmental justice before “environmental justice” carried that designation. Part III will examine the development of the EPA’s definition and conception of “environmental justice” as protecting “all people.” Part IV introduces a new theoretical framework that may help conceptualize “environmental justice” beyond COVID-19 and into the future, based upon emerging scholarship on heuristics and vulnerability analysis. Part V concludes with a new proposed framework for “environmental justice,” incorporating vulnerability theory into the EPA’s “all people” definition of environmental justice.

## II. BEFORE “ENVIRONMENTAL JUSTICE”

Before “environmental justice” entered the lexicon of community activists, government reports, and academic journals, environmental injustice existed and became recognized under other terms and frameworks. To comprehend the meaning of environmental justice today, the evolution reveals something of both what environmental justice was intended to address as well as what it might further address today. This Part will trace the evo-

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cial dimensions of a raced problem is to deny a primary explanation for why the problem exists.

Mario Barnes, *Foreword: Criminal Justice for Those (Still) at the Margins—Addressing Hidden Forms of Bias and the Politics of Which Lives Matter*, 5 UC IRVINE L. REV. 711, 731 (2015). See also Tyler Huckabee, *The Problem with Saying “All Lives Matter,”* RELEVANT (July 6, 2016), <http://www.relevantmagazine.com/current/nation/problem-saying-all-lives-matter> (sagely reminding readers: “There’s a difference between ‘true’ and ‘helpful’”).

lution of the concept of environmental justice before its acceptance as a popular term.

### A. GENESIS

While the origin story of environmental justice typically begins with Warren County, North Carolina, in 1982, scholars have recognized much earlier roots. Some argue that environmental justice's lineage perhaps runs all the way back to antiquity and the original Judeo-Christian duty to care for Creation.<sup>44</sup> In United States history, a full century ago during the Industrial Revolution, factories were on the rise, work was dangerous, and the roots of environmental justice appeared in the nascent field of occupational health.<sup>45</sup> Within more recent American history, one could see environmental justice reemerge directly from the civil rights movement of the 1960s, led by Dr. Martin Luther King. The day before his assassination in April 1968, King traveled to Memphis, Tennessee, in order to support African-American sanitation workers striking against low pay and dangerous working conditions.<sup>46</sup> Soon after, environmental justice was also included in the labor movement. In 1970, for example, Cesar Chavez secured union contracts in California that banned the use of certain pesticides in order to protect the health of farmworkers and their families.<sup>47</sup> That same year, Senator Ed Muskie, drafter of much of

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44. See, e.g., Jonathan C. Augustine, *Environmental Justice and Eschatology in Revelation*, 58 LOY. L. REV. 325 (2012) (arguing "the concept of environmental justice has deep origins in the Holy Bible," drawing theological support particularly from the Book of Revelation).

45. For one dramatic study in environmental injustice from this period of U.S. history, see KATE MOORE, *THE RADIUM GIRLS: THE DARK STORY OF AMERICA'S SHINING WOMEN* (2017).

46. See Paola Rosa-Aquino, *What the Environmental Justice Movement Owes Martin Luther King Jr.*, GRIST (Jan. 21, 2019), <https://grist.org/article/what-the-environmental-justice-movement-owes-martin-luther-king-jr/>. As one environmental justice leader reportedly observed: "You don't get more environmental justice than that." *Id.* (quoting Eddie Bautista, executive director of the New York City Environmental Justice Alliance).

47. MIRIAM PAWEL, *THE CRUSADES OF CESAR CHAVEZ* 457 (2014) (noting that contracts negotiated by United Farmworkers (UFW) banned use of DDT two years before it was outlawed by federal law). The final hunger strike of Cesar Chavez, 36 days in 1988, specifically targeted the continuing threats to farmworkers from pesticide exposures. *Id.* at 459-60. Among other things, Chavez's campaign against pesticide use in the 1980s may have responded to concerns for a cancer cluster identified in 1983 affecting children in the San Joaquin Valley town of McFarland. At the time, Chavez declared, "These cancer clusters come because of the unregulated use of cancer-causing pesticides." *Id.* at 457.

the environmental legislation of the 1970s, spoke at the first Earth Day. Senator Muskie sounded themes of environmental justice when he spoke out against a society that would “tolerate slums for some and decent houses for others, rats for some and playgrounds for others, clean air for some and filth for others.”<sup>48</sup> Clearly, mainstream environmentalism from the 1970s also contributed to the rise of the environmental justice movement in the years that followed.<sup>49</sup>

As mainstream environmentalism advanced in the 1970s, early academic literature and specialty press began to acknowledge concerns for what we would come to know as environmental justice.<sup>50</sup> By the end of the 1970s, the seeds were sown for some of the most famous campaigns in the annals of environmental justice, including the fight against the Whispering Pines landfill in the Northwood Manor neighborhood of Houston<sup>51</sup> and the protest against disposal of polychlorinated biphenyls (PCBs) in Warren County, North Carolina.<sup>52</sup> While history casts both of

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48. JEDEDIAH PURDY, *THIS LAND IS OUR LAND* 129 (2019) (quoting Sen. Muskie). In the chapter titled, *The Long Environmental Justice Movement*, Purdy makes a powerful argument that concerns we recognize today as “environmental justice” considerably predated the environmental movement of the 1970s. Purdy’s evidence includes the work of Alice Hamilton, a public health scholar who in the 1920s studied the impacts of toxic chemicals including lead and phosphorus on factory workers.

49. After reexamining the history of what he terms “the long environmental justice movement,” Purdy declares that “it is time to reclaim that older environment movement and see that it was an environmental justice movement all along.” PURDY at 107.

50. See, e.g., Susan Zakin, *The Ominous Color of Toxic Dumping*, SIERRA, July-Aug. 1979; Julian McCaull, *Discriminatory Air Pollution*, 18 ENV’T: SCIENCE & POL’Y FOR SUSTAIN. DEV. 26, 26 (1976) (reporting results of 1975 Ford Foundation study finding that “chances of being exposed to poor-quality air in urban areas are greatest for persons in poverty . . . in low-rent districts, and in the black population”). Credit for original research into these early indications of disparate environmental impacts goes to Professor Richard Lazarus, now at Harvard Law School, as reported in his classic article, *Pursuing “Environmental Justice”: The Distributional Effects of Environmental Justice*, 87 NW. L. REV. 787 (1993).

51. On behalf of the neighborhood residents, attorney Linda McKeever Bullard drew upon statistical analysis by her husband, sociologist Robert Bullard, to demonstrate a pattern of discriminatory siting of waste facilities throughout the Houston area. ROBERT D. BULLARD, *DUMPING IN DIXIE: RACE, CLASS, AND ENVIRONMENTAL QUALITY* 44 (1990). However, the extraordinary efforts of the Bullards were still unable to convince the federal district court to issue a preliminary injunction in order to stop completion of the landfill. *Bean v. Southwestern Waste Management Corporation*, 482 F. Supp. 673 (S.D. Tex. 1979), *aff’d*, 780 F.2d 1038 (5th Cir. 1986).

52. See generally EILEEN MCGURTY, *TRANSFORMING ENVIRONMENTALISM: WARREN COUNTY, PCBs, AND THE ORIGINS OF ENVIRONMENTAL JUSTICE* (2007).

these famous campaigns as racialized events, the actors actually involved in the Warren County drama may or may not have seen it that way. As revealed in the most detailed published study of Warren County, the original organizers of the protest — the Warren County Citizens Concerned about PCBs — had “white leadership and predominantly white membership.”<sup>53</sup> Moreover, while an overwhelming majority of protesters arrested were Black, large numbers of white and Native American protesters were also arrested.<sup>54</sup> Confirming the sense that Warren County may not have been as racialized as history insists, two teenagers at the scene of the protest — one Black and one white — were observed by a local newspaper linking arms, with the Black teen quoted: “Some people are beginning to feel this is a racial issue. It’s not a racial issue. It’s a people issue.”<sup>55</sup>

If not a “racial issue” but a “people issue,” Warren County could be understood as more of an issue for poor, rural people.<sup>56</sup> This perspective would be consistent with calls that soon arose for “eco-justice,” where the “eco-” stood “as much for ‘economic’ and for ‘ecological.’”<sup>57</sup> Continuing this theme, environmental justice pioneer Luke Cole, before embracing the term “environmental justice,”<sup>58</sup> famously advocated for establishment of an “environmental poverty law” to meet the needs of poor communities impacted by environmental hazards.<sup>59</sup> In the same year as Cole’s influential 1992 article, another environmental justice organization chastised the EPA as “treat[ing] the issue of environmental jus-

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53. *Id.* at 95.

54. *See infra* note 64 and accompanying text.

55. MCGURTY, *supra* note 52, at 97.

56. *See id.* at 84 (noting that some white participants in the protests “emphasized the political powerlessness of the rural poor”).

57. *See* Regina Austin & Michael Schill, *Black, Brown, Poor & Poisoned: Minority Grassroots Environmentalism and the Quest for Eco-Justice*, 1 KAN. J.L. & PUB. POL’Y 69, 78 (1991).

58. *See* LUKE COLE & SHEILA FOSTER, *FROM THE GROUND UP: ENVIRONMENTAL RACISM AND THE RISE OF THE ENVIRONMENTAL JUSTICE MOVEMENT* (2001).

59. Luke W. Cole, *Empowerment as the Key to Environmental Protection: The Need for Environmental Poverty Law*, 19 ECOLOGY L.Q. 619 (1992). In at least one sense, before his untimely death in 2009, Cole did succeed in establishing an “environmental poverty law,” through creation of the national nonprofit organization Center on Race, Poverty & the Environment, based in California’s San Joaquin Valley. *See* CENTER ON RACE, POVERTY & THE ENVIRONMENT, ABOUT (last visited Oct. 10, 2020), <https://crpe-ej.org/about>.



tice as a concept of 'recent' genesis."<sup>60</sup> Clearly, the concept of environmental justice had been developing long before it acquired a popular name and modern definitions.

### B. "ENVIRONMENTALISM RACISM"

While Warren County may not have been as racialized an event as the popular mind holds, it was certainly a racialized event on some significant level.<sup>61</sup> Like Houston's Northwood Manor neighborhood, whose residents were 82.4% Black at the time of their fight against the Whispering Pines landfill,<sup>62</sup> the residents of the Afton community, locus of the Warren County PCBs dump, were reported to be 84% Black.<sup>63</sup> According to state records, out of the 410 protesters arrested in relation to the Warren County protests, 241 of them (almost 59%) were Black.<sup>64</sup> Among the prominent African Americans arrested in Warren County was the Reverend Benjamin Chavis, arrested on the third day of the protests.<sup>65</sup> Already a high-profile figure from the Civil Rights era, Chavis drew national attention to the protest, appearing on the front line of the protest with fist raised in an iconic photo taken by the Associated Press on September 16, 1982.<sup>66</sup>

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60. SOUTHWEST NETWORK FOR ENVIRONMENTAL AND ECONOMIC JUSTICE, COMMENTS TO THE ENVIRONMENTAL PROTECTION AGENCY ENVIRONMENTAL EQUITY REPORT (1992). Reflecting concerns expressed for years by Cesar Chavez, the comments by the Southwest Network for Environmental and Economic Justice observed that EPA's 1992 report on Environmental Equity "incredibly, fails to even mention the farmworker protection regulations" intended to protect farmworkers and their families from exposure to agricultural pesticides. *Id.* at 2.

61. In the book chapter, *Is It Really about Race?*, Ijeoma Oluo helpfully provides and compellingly defends three propositions about race: (1) It is about race if a person of color thinks it is about race; (2) it is about race if it disproportionately or differently affects people of color; and (3) it is about race if it fits into a broader pattern of events that disproportionately or differently affect people of color. OLUO, *supra* note 1, at 14-15. In the case of Warren County, 1982, all three propositions could clearly be satisfied.

62. BULLARD, *supra* note 38, at 43.

63. *Id.* at 30.

64. EILEEN MCGURTY, TRANSFORMING ENVIRONMENTALISM: WARREN COUNTY, PCBs, AND THE ORIGINS OF ENVIRONMENTAL JUSTICE 108, table 4.2 (2007). According to the same records, 129 white protesters and 40 Native American protesters were also arrested in this event.

65. *Id.* at 98.

66. See VILLA ET AL., *supra* note 31, at Fig. 1-1. The iconic image will also appear in almost any Google search under "ben chavis warren county."

Some years later, Chavis received credit for coining the provocative term, “environmental racism.”<sup>67</sup> In many respects, “environmental racism” made sense. One could not imagine, for example, that any agency would have even considered approving the Whispering Pines landfill in Houston or the PCBs landfill in Warren County in a majority white community. Early investigations appeared to support these suppositions. In 1983, for example, the U.S. General Accounting Office found that in EPA Region 4, covering the Southeastern states, three of four major offsite hazardous waste facilities were located in predominantly African-American communities.<sup>68</sup> Four years later, the United Church of Christ, Commission for Racial Justice, released its landmark report, *Toxic Wastes and Race in the United States*.<sup>69</sup> Studying the characteristics of communities surrounding commercial hazardous waste facilities, the report found that race was the most significant factor in predicting the siting of such facilities and the demographics of host communities.<sup>70</sup> Further studies confirmed these results.<sup>71</sup> Most notably, drawing upon more sophisticated statistical methods, another report by the United Church of Christ twenty years after *Toxic Wastes and Race* found that race was a considerably stronger predictor of host community demographics than originally estimated in 1987.<sup>72</sup>

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67. For a thorough analysis of both the history and meaning of the “Aha!” moment in the coining of this provocative term, see Richard J. Lazarus, “*Environmental Racism! That’s What It is.*” 2000 U. ILL. L. REV. 255 (2000). While Lazarus acknowledges reports that Chavis spoke of “environmental racism” directly in Warren County in 1982, Lazarus concludes that “environmental racism” mostly likely emerged five years later, in conjunction with the release of the United Church of Christ’s Commission for Racial Justice report, TOXIC WASTES AND RACE IN THE UNITED STATES (1987). *Id.* at n.17.

68. U.S. GEN. ACCOUNTING OFFICE, SITING OF HAZARDOUS WASTE LANDFILLS AND THEIR CORRELATION WITH THE RACIAL AND SOCIO-ECONOMIC STATUS OF THE SURROUNDING COMMUNITIES (1983).

69. COMMISSION FOR RACIAL JUSTICE, UNITED CHURCH OF CHRIST, TOXIC WASTES AND RACE IN THE UNITED STATES (1987).

70. COMMISSION FOR RACIAL JUSTICE, UNITED CHURCH OF CHRIST, TOXIC WASTES AND RACE IN THE UNITED STATES 13-14 (1987).

71. See, e.g., BENJAMIN A. GOLDMAN & LAURA FITTON, TOXIC WASTES AND RACE REVISITED 2-3 (1994).

72. For example, while the 1987 UCC report found that people of color composed an average of 23.7% of the population of hazardous waste host communities, the 2007 UCC report found an average people of color population of 47.7%—more than double the 1987 estimate. *Id.* at 43. Also reflecting changes in urban demographics, the 2007 report found that concentrations of Hispanic nearly tripled (from 7.8 % to 23.1%) near hazardous waste facilities while the concentration of African-Americans increased more modestly (from 11.2% to 20.6%). *Id.*

Clearly today, when it comes to the impacts of environmental degradation, “race still matters.”<sup>73</sup> One could hardly observe the callous government activity resulting in the poisoned drinking water of Flint, Michigan, without seeing the hand of systemic, if not overt, racism at play.<sup>74</sup> And yet, community activists, scholars, and policymakers have mostly moved away from use of the term “environmental racism.”<sup>75</sup> Several reasons for this may be offered. It may be that “environmental racism,” at least to some degree, served its original purpose in drawing public attention to racial disparities in environmental protection. The infamous 1990 “Group of Ten” letter, for example, taking major environmental organizations to task for their “lack of people of color in decision-making positions” and their “histories of racist and exclusionary practices,” succeeded in inspiring significant changes in both the staffing and missions of many of these organizations.<sup>76</sup> A second reason might be the caution needed in order to check the profligate use of the weighty term “racism.” As distinguished scholar Gerald Torres observed: “[R]acism has been and should be a term of special opprobrium. We risk having the term lose its condemnatory force by using it too often or inappropriately.”<sup>77</sup>

A third reason might concern legal definitions. Professor Bunyan Bryant, a pioneer in the field of environmental justice, defined “environmental racism,” in part, as “the unequal protection against toxic and hazardous waste exposure and the system-

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73. See Robert D. Bullard et al., *Toxic Wastes and Race at Twenty: Why Race Still Matters After All of These Years*, 38 ENV'T L. 371 (2008).

74. See John Eligon, *A Question of Environmental Racism in Flint*, N.Y. TIMES (Jan. 21, 2016) (asking rhetorically: “If Flint were rich and mostly white, would Michigan’s state government have responded more quickly and aggressively to complaints about its lead-polluted water?”), <https://www.nytimes.com/2016/01/22/us/a-question-of-environmental-racism-in-flint.html>.

75. Plentiful exceptions remain, of course. See, e.g., HARRIET A. WASHINGTON, *A TERRIBLE THING TO WASTE: ENVIRONMENTAL RACISM AND ITS ASSAULT ON THE AMERICAN MIND* (2019); Machara McCall, *Environmental Racism: The U.S. EPA’s Ineffective Enforcement of Title VI of the Civil Rights Act of 1964*, 13 SOUTHERN J. POL’Y & JUST. 49 (2019); Diego Garcia, *When Risk Turns into Reality: The “Canaries” in the Oil Wells of California*, 28 BERKELEY LA RAZA L. J. 103 (2018); Eric Jantz, *Environmental Racism with a Faint Green Glow*, 58 NAT. RESOURCES J. 247 (2017).

76. See VILLA ET AL., ENVIRONMENTAL JUSTICE: LAW, POLICY & REGULATION 33 (3rd ed. 2020).

77. Gerald Torres, *Introduction: Understanding Environmental Racism*, 63 U. COLO. L. REV. 839 (1992). For a more contemporary expression of this same sentiment, see OLUO, *supra* note 1, at 25 (recounting conversation with friend who asserted, “[y]ou can’t just go around calling anything racist. Save that word for the big stuff. You know, for Nazis and cross burnings and lynchings”).

atic exclusion of people of color from environmental decisions affecting their communities.”<sup>78</sup> As intuitive as this definition may appear, invoking authority from the Equal Protection Clause of the U.S. Constitution,<sup>79</sup> it nevertheless implicated the view of the U.S. Supreme Court requiring proof of discriminatory *intent* in order to find an equal protection violation.<sup>80</sup> Consistent with this strained view, should “environmental racism” also require proof of intent to discriminate in the environmental context? In the absence of such proof, should environmental disparities be ignored altogether?<sup>81</sup>

The final, and perhaps most important, reason for moving away from use of “environmental racism” may be its narrow focus on environmental inequity as a function of race, to the potential exclusion of other important factors such as poverty,<sup>82</sup> age,<sup>83</sup> and gender.<sup>84</sup> After the 1994 Executive Order on Environmental Justice explicitly included “low-income populations” in the environmental justice framework,<sup>85</sup> the focus on race alone suggested by “environmental racism” became clearly inadequate, compelling advocates to seek a more inclusive term to describe their concerns for disparate environmental impacts.

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78. ENVIRONMENTAL JUSTICE: ISSUES, POLICIES, AND SOLUTIONS 5 (Bunyan Bryant, ed. 1995).

79. U.S. CONST. amend. XIV.

80. See *Washington v. Davis*, 426 U.S. 229, 239-41 (1976).

81. Implicitly recognizing the challenges of such proof, Robert Bullard advocated for “obviat[ing] the requirement to prove intent to discriminate.” ROBERT D. BULLARD, *Environmental Justice for All*, in UNEQUAL PROTECTION: ENVIRONMENTAL JUSTICE & COMMUNITIES OF COLOR 3, 10-11 (Robert D. Bullard ed., 1996). How to obviate this requirement remains a substantial challenge given the lifetime appointment of Supreme Court justices.

82. See Julian McCaull, *Discriminatory Air Pollution*, 18 ENV'T: SCIENCE & POL'Y FOR SUSTAIN. DEV. 26 (1976) (poverty recognized as a factor in 1975 study of exposures to poor air quality).

83. In one of the earliest public comments to the EPA on what would become “environmental justice,” community advocates criticized the EPA for failure to address “the population that we believe to be the most at risk,” emphasizing “the disproportionate risks that children bear.” Memorandum from Sharon Benjamin, Exec. Dir., Human Environmental Center, to Doretta Mitchum, EPA (Feb. 13, 1992) (on file with author).

84. See Garrod & Verchick, *supra* note 35. See also Neimanis et al., *supra* note 34, at 358 (identifying gender as an “underrepresented theme” in the study of environmental justice).

85. E.O. 12898, *supra* note 32.

### C. "ENVIRONMENTAL EQUITY"

For a brief moment in environmental justice history, the U.S. EPA embraced the term "environmental equity." In July 1990, EPA Administrator Bill Reilly formed the EPA Environmental Equity Workgroup, which delivered a detailed report in June 1992.<sup>86</sup> Among the major findings in its *Environmental Equity* report, the EPA agreed with community advocates that: "There are clear differences between racial groups in terms of disease and death rates."<sup>87</sup> The *Environmental Equity* report further found that: "Racial minority and low-income populations experience higher than average exposures to selected air pollutants, hazardous waste facilities, contaminated fish[,] and agricultural pesticides in the workplace."<sup>88</sup>

Within the *Environmental Equity* report, the EPA also addressed the growing concern for definition and nomenclature. The EPA acknowledged the use of both "environmental racism" and "environmental justice." However, the EPA also explicitly rejected both terms in favor of "environmental equity." The EPA defined "environmental equity" as referring to "the distribution of environmental risks across population groups."<sup>89</sup> The EPA chose this term "because it most readily lends itself to scientific risk analysis," and, "[t]he distribution of environmental risks is often measurable and quantifiable."<sup>90</sup> As further support for its favored term, the EPA noted that "environmental equity, in contrast to environmental racism, includes the disproportionate risk burden placed on any population group, as defined by gender, age, income, as well as race."<sup>91</sup>

Resolved in its adoption of "environmental equity," the EPA proceeded in November 1992 to form an Office of Environmental Equity and embark on strategic planning to make "environmental equity" an agency priority. Within two years, however, the EPA

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86. U.S. EPA, ENVIRONMENTAL EQUITY: REDUCING RISK FOR ALL COMMUNITIES (1992).

87. *Id.* at 3. While acknowledging a "general lack of data" in this area, the EPA identified a "notable exception" for lead poisoning, which affects "a significantly higher percentage of Black children compared to White children."

88. *Id.*

89. U.S. EPA, ENVIRONMENTAL EQUITY: REDUCING RISK FOR ALL COMMUNITIES 2 (1992).

90. *Id.* at 10.

91. *Id.*

would surrender “environmental equity” and change the name of the Office of Environmental Equity to the Office of Environmental Justice. The name change responded to public criticism reflecting the EPA’s definition of environmental equity as a “distribution of environmental risks.” As one commentator wryly observed: “The ‘equity’ versus ‘justice’ framing is more than mere semantics. It represents the fundamental difference between the concepts of ‘poison people equally’ and ‘stop poisoning people, period!’”<sup>92</sup>

No matter how much the EPA scientists and technical experts might crave the capacity to measure risks distributed across populations, it seems no one wanted to frame the objective as “poison people equally.” A new framework would thus be needed, a framework that might seek to elevate underserved communities rather than seek lowest common denominators; a framework that might even recognize that environmental protection is but one part of a healthy and just society. What we want, the collective mind seemed to agree, is environmental justice.

### III. DEFINING “ENVIRONMENTAL JUSTICE”

To say that we want “environmental justice,” of course, is not to say we agree what it means. As Robert Kuehn noted 20 years ago in his influential *Taxonomy of Environmental Justice*, “[e]nvironmental justice’ means many things to many people.”<sup>93</sup> Over time, scholars have continued to emphasize this ambiguity, describing “environmental justice” as “amorphous, [with] multiple meanings and interpretations.”<sup>94</sup> President Clinton’s signing of the Executive Order on Environmental Justice in 1994 established a few solid understandings. Among these, environmental justice involves protections for both racial minorities and low-

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92. Mike Ewall, *Legal Tools for Environmental Equity vs. Environmental Justice*, 13 SUSTAINABILITY DEV. L. & POL’Y 4 (2012).

93. Robert R. Kuehn, *A Taxonomy of Environmental Justice*, 30 ELR 10681, 10681 (2001).

94. Tonya Lewis & Jessica Owley, *Symbolic Politics for Disempowered Communities: State Environmental Justice Policies*, 29 BYU J. PUB. L. 183, 188 (2014). See also Rachael E. Salcido, *Reviving the Environmental Justice Agenda*, 91 CHI.-KENT L. REV. 115, 119 (2016) (“The definition of environmental justice is not uniform”); Jonathan C. Augustine, *Environmental Justice and Eschatology in Revelation*, 58 LOY. L. REV. 325, 327 (2012) (“[T]he term environmental justice remains inherently ambiguous—implying and meaning different things to different groups such as citizens, corporate entities, and governmental regulators”).

income communities;<sup>95</sup> environmental justice extends responsibilities to all federal agencies;<sup>96</sup> and environmental justice may require deliberate investigation and planning.<sup>97</sup> Beyond that, it has been largely left to the EPA to devise a standard definition that may or may not be adopted by other interested parties. However, the EPA has not made a standard definition easy to adopt, in part, because the EPA (or individual EPA staff members cycling through EPA offices) has changed its definition over time and in fact, continues to present minor variations. This Part will explore the evolution of the EPA's definition of "environmental justice," as well as consider the definition of "environmental justice" from other perspectives.

### A. EARLY DEFINITIONS

One of the first major attempts to define "environmental justice" emerged from one of the major moments in the history of environmental justice, the First National People of Color Environmental Leadership Summit, held in Washington, D.C., over four days in October 1991.<sup>98</sup> More than 650 activists and leaders attended the event, from all across the country and as far away as Mexico, Chile, and the Marshall Islands. The Summit "broadened the environmental justice movement beyond its early anti-toxics focus to include issues of public health, worker safety, land use, transportation, housing, resource allocation and community empowerment."<sup>99</sup> Given this extraordinary breadth of participation and range of concerns, the Summit unsurprisingly resulted in a conception of "environmental justice" with breathtaking scope, represented in 17 "Principles of Environmental Justice." The 17 Principles included the following:

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95. E.O. 12,898, *supra* note 32.

96. *Id.* Sec. 1-101 ("[E]ach Federal agency shall make achieving environmental justice part of its mission by identifying and addressing, as appropriate, disproportionately high and adverse human health or environments of its programs").

97. *Id.* Sec. 1-103 ("[E]ach Federal agency shall develop an agency-wide environmental justice strategy . . . that identifies and addresses disproportionately high and adverse human health or environmental effects of its program, policies, and activities on minority populations and low-income populations").

98. By some estimates, "[t]he 1991 Summit was probably the most important single event in the [EJ] movement's history." Robert D. Bullard et al., *Toxic Wastes and Race at Twenty: Why Race Still Matters After All of These Years*, 38 ENV'T L. 371, 376-77 (2008).

99. *Id.*

1. Environmental justice affirms the sacredness of Mother Earth, ecology unity and the interdependence of all species, and the right to be free from ecological destruction.
2. Environmental justice demands that public policy be based on mutual respect and justice for all peoples, free from any form of discrimination or bias.
3. Environmental justice mandates the right to ethical, balanced and responsible uses of land and renewable resources . . .
4. Environmental justice calls for universal protection from nuclear testing, extraction, production and disposal of toxic/hazardous wastes and poisons and nuclear testing that threaten the fundamental right to clean air, land, water and food . . .
6. Environmental justice demands the cessation of the production of all toxins, hazardous wastes, and radioactive materials . . .
9. Environmental justice protects the right of victims of environmental injustice to receive full compensation and reparations for damages as well as quality health care . . .
11. Environmental justice must recognize a special legal and natural relationship of Native Peoples to the U.S. Government through treaties, agreements, compacts, and covenants affirming sovereignty and self-determination . . .
15. Environmental justice opposes military occupation, repression and exploitation of lands, peoples and cultures, and other life forms . . .<sup>100</sup>

While reflecting many important issues and aspirations for grassroots activists and community leaders, the 17 Principles — sprawling across an expanse of social justice concerns — obviously required some refinement in order to provide a coherent agenda for the pursuit of environmental justice.<sup>101</sup> Perhaps recognizing

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100. PRINCIPLES OF ENVIRONMENTAL JUSTICE, PROCEEDINGS, THE FIRST NATIONAL PEOPLE OF COLOR ENVIRONMENTAL LEADERSHIP SUMMIT (Oct. 24-27, 1991), *reprinted in* VILLA ET AL., *supra* note 31, at 28-30.

101. Considering just Principle 6, demanding “the cessation of the production of all toxins,” one wonders how any community activists would function without electronics such as cell phones and the Internet, which depend on the production of such ubiquitous “toxins” as copper.



the unworkability of the 17 Principles, Robert Bullard attempted to distill the essence of environmental justice by providing a "framework" with five basic characteristics: (1) protect all individuals from environmental degradation; (2) adopt a public health model of prevention of harm; (3) shift the burden of proof to polluters who do harm; (4) consider disparate impacts rather than demanding proof of intent to discriminate; and (5) "redress disproportionate impacts through targeted action and resources."<sup>102</sup>

While narrowing the scope of "environmental justice," Bullard's five objectives, including "the principle of the 'right' of all individuals to be protected from environmental degradation," still carried remarkable aspiration and challenges for implementation. What does it mean, for example, to protect all individuals from environmental degradation? Where should we even start with that? Critics took Bullard and the drafters of the 17 Principles to task for their vague pleas and "fanciful and self-contradictory" demands.<sup>103</sup> Most significantly, critics pointed out that pervasive fears and refusals to place any one issue above another essentially guaranteed that priorities would be "impossible to implement."<sup>104</sup>

A third approach to "environmental justice" was soon suggested by Bunyan Bryant, attempting to describe "environmental justice" not through a list of principles or objectives, but through a carefully crafted narrative definition. According to Professor Bryant, "environmental justice" could be described as "those cultural norms and values, rules, regulations, behaviors, policies, and decisions to support sustainable communities, where people can interact with confidence that their environment is safe, nur-

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102. Robert D. Bullard, *Environmental Justice for All: It's the Right Thing to Do*, 9 J. ENV'T L. & LITIG. 281, 307 (1994).

103. CHRISTOPHER H. FOREMAN, JR. THE PROMISE AND PERIL OF ENVIRONMENTAL JUSTICE 117 (1998). As one potentially "self-contradictory" demand, the 17 Principles called for both "the cessation of the production of toxins" (Principle 6) and respect for the sovereignty of Native Peoples (Principle 11). In Alaska, for example, Native Peoples might choose to develop natural resources such as copper, a ubiquitous metal that in sufficient concentrations may be particularly toxic to fish. See Geoffrey Y. Parker et al., *Pebble Mine: Fish, Minerals, and Testing the Limits of Alaska's "Large Mine Permitting Process"*, 25 ALASKA L. REV. 1, 17-18 (2008) (noting that "copper is highly toxic to freshwater aquatic organisms" in amounts that "can be difficult to predict").

104. FOREMAN, *supra* note 103, at 117. Of course, every critic may have his critic. For a powerful response to Professor Foreman, see Alan Ramo, *Book Review, The Promise and Peril of Environmental Justice*, 40 SANTA CLARA L. REV. 941 (2000).

turing, and productive.”<sup>105</sup> On its face, this definition features many admirable elements. It recognizes that environmental justice depends on more than just legal requirements, but also upon other factors such as “cultural norms and values.” It positions environmental justice as a contributor to “sustainable communities,” implicitly recognizing that sustainability may encompass far broader concerns than environmental protection.<sup>106</sup> It further acknowledges that community well-being depends on more than physical safety but also “confidence” in their safety, without which community members may languish in anxiety or confusion.<sup>107</sup>

Of course, any definition of “environmental justice” will be subject to critique. One concern raised by Bryant’s definition is that community members may “interact with confidence that their environment is safe” even when their environment is demonstrably not safe.<sup>108</sup> Another concern might again be utilitarian, with Bryant’s definition pointing to “norms” or “rules” to support “sustainable communities,” with little guidance for devising such norms or rules. For whatever reasons, Bryant’s definition failed to capture popular support or usage.

### B. CLINTON EPA DEFINITIONS (1992-2000)

Given the lead role of the EPA on environmental matters within the federal government, it is perhaps natural that other federal, state, and tribal governments, plus other interested parties, would look to the EPA for guidance in defining and pursuing environmental justice. The EPA’s first reference to “environmen-

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105. BRYANT, *supra* note 78, at 6.

106. For a thorough introduction to the concept of sustainability and sustainable development, see JOHN DERNBACH, *ACTING AS IF TOMORROW MATTERS: ACCELERATING THE TRANSITION TO SUSTAINABILITY* (2012).

107. “As is well-documented in the psychological literature, an individual’s perceived sense of control over life events and over him- or herself can have a strong, positive effect on both physical and psychological well-being, even leading to increased longevity.” Nina A. Kohn, *Vulnerability Theory and the Role of Government*, 26 *YALE J. L. & FEMINISM* 1, 15 (2014).

108. In mining districts and company towns across the country, the profound influence of industrial interests and local traditions may lull community members into a false sense of security in their environs. In his personal experience as an EPA attorney, for example, the author observed many residents of Idaho’s “Silver Valley” rejecting the dangers that lead contamination posed to public health in their local communities, even when the threats were supported by overwhelming evidence. See also JEDEDIAH PURDY, *THIS LAND IS OUR LAND* xi (2019) (“It is human to love the thing that is killing you, and to find peace in it”).

tal justice" appears to come from its *Environmental Equity* report in 1992, where the EPA expressed its preference for the term environmental "equity" as more readily lending itself to scientific risk analysis. By contrast, the EPA impliedly recognized that environmental "justice" would involve more intangibles, less susceptible to quantitative measures. In this supposition, the EPA proved clearly correct.

In one of the EPA's first attempts to define "environmental justice," pre-dating Executive Order 12,898, the agency asserted that environmental justice means "the fair treatment of people of all cultures, incomes, and educational levels with respect to protection from environmental hazards."<sup>109</sup> The element of "fair treatment"<sup>110</sup> would remain a consistent component throughout the EPA's evolving definitions of "environmental justice." By the end of 1995, the EPA had defined "environmental justice" to mean "the fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies."<sup>111</sup> The addition of "meaningful involvement" to this formulation signaled a significant shift in the EPA's conception of environmental justice. While "fair treatment" reflected the EPA's original focus on the distribution of risks across population groups (what Kuehn referred to as

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109. U.S. EPA, Availability of Report to Congress on Cement Kiln Dust; Request for Comments and Announcement of Public Hearing, 59 Fed. Reg. 709 (Jan. 6, 1994). It is curious that this definition from early 1994 made no mention of "race," even when related concerns originally invoked reference to "environmental racism." Before the year was out, however, "race" would become another staple of the EPA's definition, which had rapidly evolved to "the fair treatment of people of all *races*, cultures and income." U.S. EPA, Office of Environmental Justice Small Grants Program, Solicitation Notice for Fiscal Year 1995, 59 Fed. Reg. 192 (Oct. 5, 1994) (emphasis added).

110. The EPA has defined "fair treatment" to mean "no group of people should bear a disproportionate share of the negative environmental consequences resulting from industrial, governmental and commercial operations or policies. See EPA: LEARN ABOUT ENVIRONMENTAL JUSTICE, <https://www.epa.gov/environmentaljustice/learn-about-environmental-justice> (last visited Oct. 10, 2020). While this official definition focuses on distribution of environmental burdens, the EPA has also recently "expanded the concept of fair treatment to include not only consideration of how burdens are distributed across all populations, but the distribution of benefits as well." U.S. EPA, EJ 2020 ACTION AGENDA 55 (2020). Thus, "fair treatment" may now also include the equitable distribution of city parks, wilderness areas, and other environmental amenities.

111. EPA Office of Environmental Justice Small Grants Program, Solicitation Notice for Fiscal Year 1996, 60 Fed. Reg. 62322-433 (Dec. 6, 1995).

“distributional justice”),<sup>112</sup> “meaningful involvement”<sup>113</sup> recognized the essential role that community members should play themselves in the determination of environmental outcomes (what Kuehn referred to as “procedural justice”).<sup>114</sup>

Unfortunately, after acknowledging the twin pillars of “fair treatment” and “meaningful involvement,” the EPA often seemed to forget about “meaningful involvement.” In early 1997, the EPA defined environmental justice to mean “the fair treatment of people of all races, cultures, and incomes.”<sup>115</sup> In late December 1998, the head of the EPA Office of Environmental Justice defined environmental justice to mean the “fair treatment of people of all races, cultures, incomes, and educational levels.”<sup>116</sup> By 2000, however, the EPA had mostly settled upon “fair treatment” and “meaningful involvement” as core elements of its definition of environmental justice.<sup>117</sup>

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112. Kuehn, *supra* note 24.

113. The EPA has defined “meaningful involvement” to mean: –

- People have an opportunity to participate in decisions about activities that may affect their environment and/or health;
- The public’s contribution can influence the regulatory agency’s decision;
- Community concerns will be considered in the decision making process; and
- Decision makers will seek out and facilitate the involvement of those potentially affected.

See EPA: LEARN ABOUT ENVIRONMENTAL JUSTICE <https://www.epa.gov/environmentaljustice/learn-about-environmental-justice> (last visited Aug. 3, 2020).

114. *Id.*

115. EPA, Notice of Availability of FY 1997 Multimedia Environmental Justice Through Pollution Prevention Grant Funds, 62 Fed. Reg. 1113-14 (Jan. 8, 1997).

116. Memorandum from Barry E. Hill, Director, Office of Environmental Justice, EPA, to Deputy Regional Administrators, EPA et al. (Dec. 16, 1998), *cited in* Kuehn, *supra* note 24, at 10682-83 and n.8.

117. EPA Office of Environmental Justice Small Grants Program, Application Guidance FY 2001, 65 Fed. Reg. 81720 (Dec. 26, 2000). Even after settling upon “fair treatment” and “meaningful involvement,” the EPA continued to vacillate on the “regardless of” component of the definition, a vacillation that continues to this day. Compare U.S. EPA, OFFICE OF ENVIRONMENTAL JUSTICE, F.A.Q.: WHAT IS ENVIRONMENTAL JUSTICE? (2000) (“regardless of race, national origin, or income”); EPA Office of Environmental Justice Small Grants Program, Application Guidance FY 2001, 65 Fed. Reg. 81720 (Dec. 26, 2000) (“regardless of race, color, national origin, culture, education, or income”); EPA, EJ 2020 ACTION AGENCY 55 (2016) (“regardless of race, color, culture, national origin, income, and educational levels”).

### C. BUSH EPA DEFINITIONS (2000-2008)

Another core element of the EPA's definition of "environmental justice" — the most controversial — is the reference to "all people." On its face, "all people" is a commendable turn of phrase. It harkens directly back to the U.S. Constitution, which protects "the right of *the people* peaceably to assemble,"<sup>118</sup> "[t]he right of *the people* to be secure in their persons, houses, papers, and effects,"<sup>119</sup> and the right of "*any person*" to enjoy the "equal protection of the laws."<sup>120</sup> The term "all people" is inherently inclusive — it includes all men and women, young and old, rich and poor, all people of color, all nationalities, all citizens and noncitizens alike. "All people" is directly consistent with the conception of environmental justice by its original advocates, including Robert Bullard, the "Father of Environmental Justice," who observed: "No community, rich or poor, urban or suburban, black, brown, red, yellow, or white should be allowed to become an environmental 'sacrifice zone.'"<sup>121</sup> So, what could be the problem with including "all people" within the EPA definition of environmental justice?

In 2001, consistent with its "all people" definition of environmental justice, the EPA, under the Bush/Cheney administration and EPA Administrator Christine Todd Whitman, began an explicit program of "de-emphasizing minority and low-income populations and emphasizing the concept of environmental justice for everyone."<sup>122</sup> The de-emphasis program eventually drew the attention of the EPA Office of Inspector General (OIG), which issued a stinging report in March 2004. According to the Inspector General, the EPA's de-emphasis program effectively "returns the Agency to pre-Executive Order [12898] status . . . . It does not address the need to ensure that minority and low-income populations are protected from disproportionate environmental risks. It

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118. U.S. CONST. amend. I. (emphasis added).

119. U.S. CONST. amend. IV. (emphasis added).

120. U.S. CONST. amend. XIV, § 1 (emphasis added).

121. Robert D. Bullard, *Environmental Justice for All: It's the Right Thing to Do*, 9 J. ENV'T L. & LITIG. 281, 307 (1994). For a contemporary affirmation of the same sentiment, see OLUO, *supra* note 1, and accompanying text ("[I]f you believe in justice and equality, you believe in it . . . for *all people*") (emphasis added).

122. U.S. EPA OFFICE OF THE INSPECTOR GENERAL, EPA NEEDS TO CONSISTENTLY IMPLEMENT THE INTENT OF THE EXECUTIVE ORDER ON ENVIRONMENTAL JUSTICE, REP. NO. 2004-P-00007 10 (2004) [hereinafter "OIG 2004"] (citing Memorandum from Christine Todd Whitman, Administrator, U.S. EPA, to Assistant Administrators et al., "EPA's Commitment to Environmental Justice" (Aug. 9, 2001)).

poses the question of why is there a need for separate environmental justice efforts at EPA.”<sup>123</sup>

In response to the 2004 OIG report, the EPA essentially doubled down on its position. The agency “strongly disagree[d] with many of the major assertions” of the OIG and submitted voluminous comments on the OIG’s draft report.<sup>124</sup> Upon public issuance of the OIG’s final report, the EPA issued its own public statement. The EPA “agree[d] with the Inspector General on the intent of Executive Order 12898 which is to address environmental justice concerns in minority and/or low-income populations.”<sup>125</sup> However, the EPA also asserted its firm belief that “environmental justice belongs to *all people*,”<sup>126</sup> invoking this major component of the EPA’s definition of “environmental justice.”

In 2005, the EPA stirred further controversy when, consistent with “all people,” it dropped race as an explicit factor in developing strategic plans for pursuing environmental justice.<sup>127</sup> Commentators described this as a “major reversal,”<sup>128</sup> igniting a “firestorm of public resistance.”<sup>129</sup> While scholars urged continued

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123. *Id.* at 11.

124. Memorandum from John Peter Suarez, Assistant Administrator, Office of Enforcement and Compliance Assurance, to Kwai Chan, Assistant Inspector General for Program Evaluation (2004) (on file with author). While the EPA comments offered many legitimate observations and responses to the OIG, not all of the EPA’s responses appeared in good faith, in places purporting to quote the Executive Order but conspicuously omitting key language. *See id.* at 2 (purporting to quote text from E.O. 12898, Sec. 1-101, but omitting “on minority populations and low-income populations” erroneously and without indicating the omission).

125. U.S. EPA, AGENCY STATEMENT ON THE INSPECTOR GENERAL’S REPORT ON EPA’S ENVIRONMENTAL JUSTICE IMPLEMENTATION 1 (2004).

126. *Id.* (emphasis added).

127. *See* Manu Raju, *EPA’s Draft Equity Plan Drops Race as a Factor in Decisions*, INSIDE EPA (July 1, 2005), [http://www.precaution.org/lib/06/prn\\_epa\\_drops\\_race\\_from\\_ej\\_guide.050701.htm](http://www.precaution.org/lib/06/prn_epa_drops_race_from_ej_guide.050701.htm) (observing that: “EPA’s June 16 [2005] draft strategic plan defines environmental justice as the fair treatment and meaningful involvement of all people. . .”). *See also* Liza Featherstone, *EPA Says Race, Income Shouldn’t Be Environmental Justice Factors*, GRIST (Aug. 1, 2005), <https://grist.org/article/featherstone-ej/>; Bullard et al., *Toxic Wastes and Race at Twenty: Why Race Still Matters After All of These Years*, *supra* note 73, at 383 (“In July 2005, the EPA was met with a firestorm of public resistance when it proposed dropping race from its draft Environmental Justice Strategic Plan.”).

128. Christine M. Foot, *Scrutinizing Strict Scrutiny: Environmental Justice after Adarand Constructors, Inc. v. Peña*, 11 BERKELEY J. AFRICAN-AM. L. & POL’Y 123, 131 (2009).

129. Bullard et al., *supra* note 73, at 383. *See also* Letter to U.S. EPA from Golden Gate University Environmental Law and Justice Clinic (July 15, 2005) (“Neither the

use of “race-conscious tools to deal with environmental inequities,”<sup>130</sup> the EPA’s reversal may have reflected concern for the constitutionality of environmental justice programs in light of Supreme Court cases on Equal Protection and affirmative action decided after the 1994 Executive Order on Environmental Justice.<sup>131</sup> Specifically, in 1995, the U.S. Supreme Court decided the case of *Adarand Constructors, Inc. v. Peña*,<sup>132</sup> which concerned minority preferences in federal contracting and held that all federal race-based decision-making must be subjected to the “strict scrutiny” standard of judicial review. In order to withstand strict scrutiny, the race-based action must be “narrowly tailored” to meet a “compelling government interest,”<sup>133</sup> a vigorous standard often characterized as “strict in theory, fatal in fact.”<sup>134</sup>

Perhaps reacting to the *Adarand* decision, the EPA asserted in a 2002 internal memo that “the environmental justice program is not an affirmative action program or a set-aside program [for] minority communities and/or low-income communities.”<sup>135</sup> In 2005, the EPA made this connection explicit:

EPA’s use of racial classifications as a basis for making decisions would raise significant legal issues. Several Supreme Court decisions, such as *Adarand Constructors, Inc. v. Pena*,

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Strategic Targets nor any of the twelve proposed national environmental justice priorities address the interests of minority and low-income populations as is required by Section 1-103 [of Executive Order 12898]), reprinted in VILLA ET AL., at 357.

130. See, e.g., Clifford Rechtschaffen, *Strategies for Implementing the Environmental Justice Vision*, 1 GOLDEN GATE ENV’T L. J. 321, 324 (2008).

131. See, e.g., Salcido, *supra* note 94, at 121 (“Beyond 2005, the EPA continued to de-emphasize race, perhaps due to Supreme Court precedent”).

132. *Adarand Constructors, Inc. v. Peña*, 515 U.S. 200 (1995).

133. *Id.* at 227 (“[W]e hold today that all racial classifications . . . must be analyzed by a reviewing court under strict scrutiny. In other words, such classifications are constitutional only if they are narrowly tailored measures that further compelling governmental interests”).

134. See, e.g., *Fullilove v. Klutznick*, 448 U.S. 448, 519 (1980) (Marshall, J., concurring in judgment) (citing Gerald Gunther, *The Supreme Court, 1971 Term—Foreword: In Search of Evolving Doctrine on a Changing Court: A Model for a Newer Equal Protection*, 86 HARV. L. REV. 1, 8 (1972)). Importantly, the Supreme Court has not always embraced this “strict in theory, fatal in fact” supposition. See, e.g., *Adarand* at 237 (“Finally, we wish to dispel the notion that strict scrutiny is ‘strict in theory, but fatal in fact’”). In fact, in rare cases, the Court has upheld government actions subject to strict scrutiny. See, e.g., *Grutter v. Bollinger*, 539 U.S. 306 (2003) (upholding race-conscious admissions scheme to the University of Michigan Law School); *Burson v. Freeman*, 504 U.S. 191, 211 (1992) (upholding against Free Speech challenge restrictions on campaigning near polling places).

135. OIG 2004 at 10.

515 U.S. 200, 227 (1995), and *Grutter v. Bollinger*, 539 U.S. 306, 326 (2003), provide that, whenever a racial classification is used as a basis for any federal, state, or local government decision, courts must apply a strict scrutiny standard of review. To survive strict scrutiny, the government must demonstrate that it uses the racial classification to achieve a compelling governmental interest and that the use of the racial classification is narrowly tailored to serve that interest.

The compelling governmental interests for most EPA decisions are protecting human health and the environment . . . . To pass the narrow-tailoring test, the Agency would have to show that no race-neutral alternative is available to achieve those compelling interests. However, in general, EPA has race-neutral alternatives for achieving its compelling governmental interests.<sup>136</sup>

While *Grutter* did appear to apply strict scrutiny,<sup>137</sup> the Supreme Court found that the race-conscious admissions scheme of the University of Michigan Law School actually survived this review—a precedent that might have helped the EPA defend a race-conscious program for setting environmental priorities. If *Adarand* was really the reason for the EPA's policy reversal, then why, as one observant commentator noted, did this reversal come about “nearly ten years after that decision” and the government's analysis of it?<sup>138</sup> Even more tellingly, why had there been no cases, on either federal or state levels, striking down environmental justice policies as a violation of Equal Protection?<sup>139</sup> Scholars answered this question in slightly different ways, but all generally concurred that principles of judicial deference and agency discretion would allow some consideration of race in agency decision-making, as long as it was neither mandated nor a “predominant

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136. U.S. EPA, DRAFT ENVIRONMENTAL JUSTICE STRATEGIC PLAN THEMATIC RESPONSE TO RESPONSE (2005).

137. Justice Thomas, in a notable dissent, critiqued “[t]he strict scrutiny standard that the Court purports to apply in this case,” *Grutter v. Bollinger*, 539 U.S. at 351, leading some commentators to suggest that “strict scrutiny” in affirmative action cases might be less “strict” than in other cases involving public race discrimination. See, e.g., NOAH FELDMAN & KATHLEEN SULLIVAN, CONSTITUTIONAL LAW 709-710 (20<sup>th</sup> ed. 2019) (discussing “strict scrutiny minus”).

138. Foot, *supra* note 128, at 131.

139. See Sheila R. Foster, *Environmental Justice and the Constitution*, 39 ENV'T L. REP. 10347, 10349 (2009) (noting that “it remains a bit of a mystery why there have been no challenges to the many race-conscious environmental justice policies that have proliferated, on both federal and state level, over the past decade or two”).



factor” in the agency calculus.<sup>140</sup> As Professor Sheila Foster succinctly concluded, environmental justice policies “are easily able to avoid a collision with the Equal Protection Clause . . . because, unlike the racial presumptions in a case like *Adarand*, the policies do not force regulators to assume harm or the need for more environmental protection solely or predominantly on the basis of race.”<sup>141</sup>

As the Bush/Cheney EPA continued, investigators continued to criticize the agency’s flagging dedication to environmental justice. For example, in 2005, the Government Accounting Office (GAO) determined that in “drafting three significant clean air rules between fiscal years 2000 and 2004, the EPA generally devoted little attention to environmental justice.”<sup>142</sup> A year later, in 2006, the OIG issued another report, following up on their 2004 report that the EPA strongly rejected. The OIG’s 2006 report noted a number of affirmative measures that the EPA had taken to improve their environmental justice performance. However, the OIG also noted that the “EPA program and regional offices have not performed environmental justice reviews in accordance with Executive Order 12898” and there remained a clear “need for further guidance on conducting these reviews.”<sup>143</sup>

#### D. OBAMA EPA DEFINITIONS (2008-2016)

After the Presidential election of Barack Obama in 2008, the EPA once again began to prioritize the pursuit of environmental justice.<sup>144</sup> Among other things, the Obama EPA, led by EPA Administrator Lisa Jackson, produced an updated version of its strategic plan for achieving environmental justice, as required by

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140. See, e.g., David F. Coursen, *Equal Protection, Strict Scrutiny, and Actions to Promote Environmental Justice*, 39 ENV’T L. REP. 10201, 10201-03 (2009); Foster, *supra*, note 139, at 10349; Foot, *supra* note 128, at 141-143.

141. Sheila R. Foster, *Environmental Justice and the Constitution*, 39 ENV’T L. REP. 10347, 10351 (2009).

142. U.S. GOV’T ACCOUNTABILITY OFFICE: ENVIRONMENTAL JUSTICE: EPA SHOULD DEVOTE MORE ATTENTION TO ENVIRONMENTAL JUSTICE WHEN DEVELOPING CLEAN AIR RULES 3 (2005). Among other things, the GAO found that members of workgroup assigned to drafting the Clean Air Act rules “received no guidance on how to identify potential environmental justice problems” and completed no “environmental justice analyses” to evaluate potential environmental justice impacts. *Id.* at 4.

143. U.S. EPA OFFICE OF THE INSPECTOR GENERAL, EPA NEEDS TO CONDUCT ENVIRONMENTAL JUSTICE REVIEWS OF ITS PROGRAMS, POLICIES, AND ACTIVITIES, REP. NO. 2006-P-00034 5 (2006).

144. See generally Rachael E. Salcido, *Reviving the Environmental Justice Agenda*, 91 CHI.-KENT L. REV. 115 (2016).

E.O. 12898. The updated plan, known as *Plan EJ 2014*, formed part of an unprecedented surge of EPA activity on environmental justice, promoting strategies for integrating environmental justice into core EPA functions such as research, rulemaking, permitting, and enforcement.<sup>145</sup> While widely welcomed by advocates for environmental justice, the EPA's renewed emphasis on environmental justice retained the definition as applying to "all people."<sup>146</sup> The EPA also continued to receive scrutiny from investigators who challenged the EPA's approach to identifying environmental justice concerns. Accepting the EPA's "all people" definition of environmental justice,<sup>147</sup> the GAO highlighted "one principal, long-standing challenge: the agency's lack of standard and consistent definitions for key environmental justice terms."<sup>148</sup> In particular, the GAO criticized the EPA for its consistent failure to define "key environmental justice terms" such as "minority" and "low-income communities" for purposes of targeting agency resources and measuring results.<sup>149</sup>

In reality, the EPA has had a long history of defining terms such as "minority" or "low-income" populations.<sup>150</sup> The problem, from the perspective of the GAO and some community advocates, was the EPA's refusal to develop criteria to clearly identify what in common usage became known as an "environmental justice community." Initially, the EPA tried. In 2000, for example, the EPA Office of Environmental Justice advised the following:

To be classified as an environmental justice community, residents must be a minority and/or low-income group excluded

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145. U.S. EPA, PLAN EJ 2014 i-iv (2011) [hereinafter, "Plan EJ 2014"].

146. *Id.* at 3 ("Definition of Environmental Justice").

147. U.S. GOV'T ACCOUNTABILITY OFFICE, ENVIRONMENTAL JUSTICE: EPA NEEDS TO TAKE ADDITIONAL ACTIONS TO HELP ENSURE EFFECTIVE IMPLEMENTATION 1 (2011) [hereinafter "GAO 2011"].

148. *Id.* at 22.

149. *Id.* at 23-24.

150. See, e.g., U.S. EPA, ENVIRONMENTAL EQUITY, *supra* note 86, at 9 (adopting the definition of "minority populations" as used in the 1987 *Toxic Wastes and Race* report); U.S. EPA, GUIDANCE ON CONSIDERING ENVIRONMENTAL JUSTICE DURING THE DEVELOPMENT OF REGULATORY ACTIONS 6 (2015) (defining "Minority and Indigenous Peoples" and "Low-Income Populations"). In general, EPA defines "low-income" communities as "populations characterized by limited economic resources," as determined by annual poverty measures of the U.S. Census Bureau. EPA defines "minority populations" as "individuals who are members of the following population groups: American Indians or Alaskan Native; Asian or Pacific Islanders; Black, not of Hispanic origin; or Hispanic." U.S. EPA, EJ 2020 ACTION AGENDA 55 (2016) (defining "Low-Income" and "Minority Populations").

from the environmental policy setting and/or decision-making process; subject to a disproportionate impact from one or more environmental hazards; and experience a disparate implementation of environmental regulations, requirements, practices and activities in their communities.<sup>151</sup>

While elements of this definition remained consistent with the E.O. 12898 references to "minority" and "low-income" populations, other elements suggested the definition would eventually prove unworkable. How, for example, could any environmental regulator determine whether a particular neighborhood in Oakland, Chicago, or New Orleans had been "excluded from the environmental policy setting and/or decision-making process," on any level of government, over perhaps decades of time?

Inherently understaffed and overworked, environmental regulators needed a quick and reliable means to identify "environmental justice communities" for purposes of targeting limited enforcement resources. To meet this need, the EPA, in the 2000s, began to develop a series of Geographic Information System (GIS) tools to combine environmental data and community demographics.<sup>152</sup> At first, the EPA's objective with these GIS tools appeared to be creation of a system that would provide an instant identification of any "environmental justice community" in the country.<sup>153</sup> While such ready information could be greatly useful to regulators for purposes of enforcement targeting and other appropriate purposes, it could also prove dangerous.

Some community advocates argued for designations of "environmental justice communities," anticipating that such recognition would secure the agency attention and resources their communities needed and deserved.<sup>154</sup> Other community advocates, however, may have feared the potential downsides of such com-

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151. U.S. EPA OFFICE OF ENVIRONMENTAL JUSTICE, F.A.Q.: WHAT IS ENVIRONMENTAL JUSTICE? (2000).

152. The EPA "Smart Enforcement Targeting Strategy" (EJSETS) was replaced by the EJ Strategic Enforcement Tool (EJSEAT), which was eventually replaced by "EJSCREEN," discussed *infra*. See Foot, *supra* note 128, at 7 (describing transition from "EJSETS" to "EJSEAT").

153. Indeed, the EPA's EJSEAT tool, which remained for the EPA's use only, would mark "EJ communities" with big red-shaded areas on digital maps. A publicly released version known as "EJVIEW" offered many of the same capabilities.

154. See, e.g., Multicultural Alliance for a Safe Environment (undated, on file with author) (arguing that New Mexico's "Grants Mining District must be designated as an *Environmental Justice Zone* by all regulators").

munity labeling, including potential impacts on property values, tax base, and community spirit. Perhaps of equal concern, such a hard classification scheme would create possibilities for overlooking communities who may need government attention the most.<sup>155</sup> These may include both underserved communities who fail to meet certain demographic thresholds and communities who may have the most urgent environmental concerns.<sup>156</sup>

In order to address competing concerns and develop the most useful GIS tool possible, the EPA engaged experts on statistical analysis and geographical systems through the auspices of the National Environmental Justice Advisory Council (NEJAC).<sup>157</sup> The NEJAC spent three years conducting a careful examination of the EPA's then-prevailing GIS tool, known as "EJSEAT." At the conclusion of this review, the NEJAC submitted a number of specific findings, including the following:

When it comes to allocating future resources, . . . EJSEAT by itself can only be a very coarse screen, identifying areas of concern rather than a tool to specifically categorize a community as being an "environmental justice community" or "not an environmental justice community." This is because . . . EJSEAT is not able to capture sufficient information to assure comprehensive identification of all environmental justice communities . . . . [I]f the agency undertakes to compile an annual EJSEAT priority list, such a list must be supplemented by additional analysis . . . and public comment in order to identify sites where communities have significant environmental justice concerns.

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155. According to EPA officials interviewed by the GAO for their 2011 report, some "communities do not want EPA to establish any strict definitions for environmental justice terms for fear that as a result they might be excluded from EPA's decision-making process. GAO 2011 at 24.

156. See, e.g., Lewis & Owley, *supra* note 94, at n.98 (noting concerns that even Love Canal, one of the most infamous environmental disasters in U.S. history, might have failed to meet criteria for an "environmental justice community").

157. See NATIONAL ENVIRONMENTAL JUSTICE ADVISORY COUNCIL, NATIONAL CONSISTENT ENVIRONMENTAL JUSTICE SCREENING APPROACHES (2010) [hereinafter "NEJAC 2010"]. Experts on the workgroup producing this report included Paul Mohai of the University of Michigan, who had done some of the earliest statistical work on disparate impacts and contributed substantially to the advancement of analytical methods over the next two decades. See RACE AND THE INCIDENCE OF ENVIRONMENTAL HAZARDS (Bunyan Bryan & Paul Mohai, eds., 1992); *Toxic Wastes and Race at Twenty*, *supra* note 73.

Communities particularly susceptible to being overlooked by EJSEAT include small rural communities, Native American areas, and areas burdened by many unpermitted facilities.

Important populations often omitted or undercounted by census procedures include Native Americans and Hispanics, and especially migrant workers and immigrants.

Data sources may not reflect actual monitoring but rely on modeling that may not be adjusted for local conditions.

EJSEAT data may also not capture environmental issues outside of the EPA's statutory authority such as problems with the built environment; e.g., a lack of grocery stores, sidewalks, or recreational open space.<sup>158</sup>

Taking these and many other critiques into consideration, the EPA eventually replaced EJSEAT with a new GIS tool that came to be known as EJSCREEN. Released for public use in 2015,<sup>159</sup> EJSCREEN now allows any user to collect and overlay environmental and demographic information about any community or location in the United States.<sup>160</sup> Thus, the EJSCREEN tool allows regulators to collect quick information for permitting and enforcement targeting purposes, and allows local activists to learn more about the nature of environmental concerns in their communities. EJSCREEN also allows instant comparison of selected areas to averages within the same state, EPA Region, or nationally. One thing this powerful tool will not do, however, is identify "environmental justice communities." As explained by the technical documentation accompanying EJSCREEN:

EJSCREEN is a pre-decisional screening tool, and was not designed to be the basis for agency decision-making or determination regarding the existence or absence of EJ concerns. It also should not be used to identify or label an area as an "EJ Community." Instead, EJSCREEN is designed as a starting point, to highlight the extent to which certain loca-

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158. NATIONAL ENVIRONMENTAL JUSTICE ADVISORY COUNCIL, NATIONAL CONSISTENT ENVIRONMENTAL JUSTICE SCREENING APPROACHES 5-7 (2010).

159. EJSCREEN development began in late 2010 and initial use by EPA staff in 2012. After rounds of peer review in 2014, the EPA released EJSCREEN for public use in 2015. U.S. EPA, EJSCREEN TECHNICAL DOCUMENTATION 8 (2019), [https://www.epa.gov/sites/production/files/2017-09/documents/2017\\_ejscreen\\_technical\\_document.pdf](https://www.epa.gov/sites/production/files/2017-09/documents/2017_ejscreen_technical_document.pdf).

160. To launch and explore the EJSCREEN tool, simply go to <https://www.epa.gov/ejscreen> and follow the online prompts.

tions may be candidates for further review or outreach. EJSCREEN's initial results should be supplemented with additional information and local knowledge wherever appropriate, for a more complete picture of a location.<sup>161</sup>

Consistent with these important "caveats and limitations," there remains no EPA definition of an "environmental justice community" and the EPA's definition of "environmental justice" itself continues to apply to "all people." What does this mean today, when COVID-19 and our changing climate may threaten disparate impacts in any number of demographic dimensions? The final part of this article will begin to explore this important question, on the way to suggesting a new framework based upon original principles of environmental justice.

#### IV. A NEW HOPE: ENVIRONMENTAL JUSTICE MEETS VULNERABILITY THEORY

For some people, 2020 felt like living in a sci-fi saga set in a dystopian future. We survived the Y2K Bug, the Great Recession of the mid-2000s, and Hurricanes Katrina, Sandy, Harvey, and Maria, only to find our entire country haunted by a killer virus that, months later, continued to threaten catastrophic fallout to our public health and economic systems. At the same time, the horrific killings of George Floyd,<sup>162</sup> Breonna Taylor,<sup>163</sup> and so many other Black victims of police violence elevated the Black Lives Matter movement into a fight for the soul of our nation. Peaceful protests, unfortunately, triggered even more state-sanctioned violence to suppress the exercise of rights to assembly and free speech.<sup>164</sup>

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161. U.S. EPA, EJSCREEN TECHNICAL DOCUMENTATION 9 (2019).

162. For details on the killing of George Floyd at the hands of Minneapolis police officers on May 25, 2020, see Evan Hill et al., *How George Floyd Was Killed in Police Custody*, N.Y. TIMES (May 31, 2020) (updated July 28, 2020), <https://www.nytimes.com/2020/05/31/us/george-floyd-investigation.html>.

163. For details on the killing of Breonna Taylor at the hands of Louisville police officers on March 14, 2020, see Richard A. Oppel Jr. & Derrick Bryson Taylor, *Here's What You Need to Know About Breonna Taylor's Death*, N.Y. TIMES (July 31, 2020), <https://www.nytimes.com/article/breonna-taylor-police.html>.

164. See U.S. CONST. amend. I ("Congress shall make no law . . . abridging the freedom of speech, or of the press; or the right of the people peaceably to assemble. . ."). For one eyewitness account of the violence perpetrated by federal agents to suppress the exercise of First Amendment rights in Portland, Oregon, see Charles Davis, *A journalist who's worked with PBS and National Geographic tells us what it was like being shot in the eye by law enforcement in Portland*, BUSINESS INSIDER (Ju-

Meanwhile, twenty years after grassroots activists wrote to President Bush asking for action on climate change,<sup>165</sup> and more than 30 years after Bill McKibben's prophetic *The End of Nature*,<sup>166</sup> climate change has proceeded from scientific theory to sober reality to geologic history. Here in the Anthropocene, scholars and activists have embraced the term "climate justice" to explain the disparate impacts of our changing environment on vulnerable populations.<sup>167</sup> Paralleling the variable definitions of "environmental justice," the term "climate justice" has also been subject to various narrative definitions<sup>168</sup> as well as wide-ranging principles.<sup>169</sup> And yet, as broad as climate justice may reach, it cannot

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ly 28, 2020), <https://www.businessinsider.com/portland-journalist-recounts-being-shot-in-the-face-by-police-2020-7>.

165. See Letter, Circa Earth Day 2001, to George W. Bush, President of the United States of America (Apr. 19, 2001), *reprinted in* VILLA, ET AL., ENVIRONMENTAL JUSTICE: LAW, POLICY, AND REGULATION CHAP. 1 (3rd ed. 2020).

166. BILL MCKIBBEN, *THE END OF NATURE* (1989).

167. The term "climate justice" has been in use at least since 1999. See CORPWATCH, *Greenhouse Gangsters vs. Climate Justice* (1999), <https://www.iicat.org/wp-content/uploads/2012/03/Greenhouse-Gangsters-vs-Climate-Justice-1999.pdf>. The term picked up widespread popularity with publication of the *Bali Principles of Climate Justice* (Aug. 29, 2002) by the International Climate Justice Network comprised of 14 organizations from around the world. See Alice Kaswan, *Environmental Justice and Domestic Climate Change Policy*, 28 ENV'T L. REP. NEWS & ANALYSIS 10287 and n.18 (2008). For further examples of scholarship on climate justice, see, e.g., Daniel A. Farber, *Review, Climate Justice*, 110 MICH. L. REV. 985 (2012); Alice Kaswan, *Greening the Grid and Climate Justice*, 39 ENV'T L. 1143 (2009); Maxine Burkett, *Just Solutions to Climate Change: A Climate Justice Proposal for a Domestic Clean Development Mechanism*, 56 BUFF. L. REV. 169 (2008).

168. For one simple definition, see Rachel Jean-Baptiste, *et al.*, *Recent Developments in Climate Justice*, 47 ENV'T L. REP. 11005 (2017) ("Climate justice can be defined generally as addressing the disproportionate burden of climate change impacts on poor and marginalized communities"). Other scholars have submitted that "[a]s an extension of environmental justice, climate justice is understood to focus on 'equal rights and opportunities [for] every individual to seek a high quality of life under the impacts of global climate change.'" Uma Outka & Elizabeth Kronk Warner, *Reversing Course on Environmental Justice under the Trump Administration*, 54 WAKE FOREST L. REV. 397, 417 (2019). Professor Carmen Gonzalez offered a "four-part definition of climate justice consisting of: distributive justice, procedural justice, corrective justice, and social justice." Carmen G. Gonzalez, *Climate Justice and Climate Displacement: Evaluating the Emerging Legal and Policy Responses*, 36 WISC. INT'L L.J. 366, 372 (2019).

169. Modeled upon the 1991 *Principles of Environmental Justice*, the 2002 *Bali Principles on Climate Justice*, for example, include such wide-ranging principles as opposition to "military action, occupation, repression and exploitation of lands, water, oceans, peoples and cultures" and support for "the right of all workers employed in extractive, fossil fuel and other greenhouse-gas producing industries to a safe and

address every concern within the scope of environmental justice. For example, climate change cannot fully explain the toxic air pollutants that weaken pulmonary systems and leave victims susceptible to COVID-19. Climate change cannot explain the poisoned drinking water in Flint, Michigan,<sup>170</sup> nor the uranium contamination on indigenous lands of the Southwest,<sup>171</sup> nor the overpowering impacts from swine waste in the Southeast.<sup>172</sup> In 2020, it seems we still need an “environmental justice” definition to help us comprehend and address a world of concerns for disparate impacts on human health and the environment.

So now, in 2020, what should environmental justice mean? After 20 years of extending environmental justice to “all people,” it seems unlikely that the EPA will entertain any radical narrowing of its standard definition. The EPA’s definition of environmental justice poses no legal constraint on definitions by any state, tribe, community, organization, or interested individual. However, many of these independent definitions have closely tracked the EPA’s definition.<sup>173</sup> Most recently, for example, the State of New York passed legislation in 2019 adopting every substantive element of the EPA definition, declaring “the policy of this state that *all people*, regardless of race, color, religion, national origin or income, have a right to fair treatment and meaningful involvement in the development, implementation and enforcement of [environmental] laws, regulations and policies.”<sup>174</sup>

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healthy work environment.” *Bali Principles of Environmental Justice*, reprinted in VILLA, ET AL., *supra* note 31, at 500-504.

170. See, e.g., ANNA CLARK, *THE POISONED CITY: FLINT’S WATER AND THE URBAN AMERICAN TRAGEDY* (2018).

171. See, e.g., Eric Jantz, *Environmental Racism with a Faint Green Glow*, 58 NAT. RESOURCES J. 247 (2017).

172. See, e.g., Marianne Engelman Lado, *No More Excuses: Building a New Vision of Civil Rights Enforcement in the Context of Environmental Justice*, 22 U. PENN. J. LAW & SOC. CHANGE 281, 291-294 (2019) (describing severe impacts from swine waste on communities in eastern North Carolina).

173. In 1999, for example, California legislated a definition of “environmental justice” embracing “*all races*, cultures, and incomes.” Omitting “meaningful involvement,” the State of California by statute in 1999 defined “environmental justice” to mean “the fair treatment of people of all races, cultures, and incomes with respect to the development, adoption, implementation, and enforcement of environmental laws, regulations, and policies.” Cal. Pub. Res. Code § 65040.12 (1999) (emphasis added). In 2000, the City of Newark, New Jersey, established an environmental justice policy to “[p]rotect the health of *all residents*, regardless of race, culture, or income, from exposure to pollution.” Currently codified at NEWARK, N.J., CODE § 41:20-2(1) (2016).

174. N.Y. ENV’T CONSERV. Law 48 § 48-0103 (McKinney 2019) (emphasis added).



While such congruence may provide some relief from historical cacophony, it leaves open the question of whether now, in the age of global pandemics and climate disruption, we should remain committed to the endeavor of defining “environmental justice.”<sup>175</sup> To be useful, any definition must clearly include some things and exclude others. What things now should “environmental justice” exclude? Should environmental justice ignore the human needs for nutrition or health care? Should environmental justice disregard access to safe shelter after the next flood or wildfire? Assuming that environmental justice should remain concerned with climate change, may environmental justice concern itself with only certain victims of climate change? Should we say one thing (“all people”), but do another? Or if environmental justice moving forward from 2020 really means to protect “all people” from harm, where do we begin?

There can be no doubt that the contemporary collision of climate change, a global pandemic, and systemic racism presents one of the most complex set of challenges in human history. When confronted with complex challenges throughout history, humans have often turned to the use of *heuristics*.<sup>176</sup> Described as “simple mental shortcuts,” heuristics allow ordinary people to manage complexity and uncertainty despite limited time and attention to a problem.<sup>177</sup> The pioneers in the field originally identified three “general-purpose heuristics”: availability, representativeness, and anchoring and adjustment.<sup>178</sup> The “availability heuristic” posits that people will attempt to comprehend new phenomena based upon whatever related experiences they may find most readily

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175. Like much else in this article, this is not an original idea, only a reconsidered one. See, e.g., Aelita Neimanis et al., *Examining the Place of Ecological Integrity in Environmental Justice: A Systematic Review*, 17 INT’L J. JUST. & SUSTAINABILITY 349, 358 (2012) (considering all the limitations of the EPA’s definition, “it may indeed be time to revisit and re-conceptualise” the definitional endeavor).

176. For an accessible introduction to heuristics, see Cass R. Sunstein, *Moral Heuristics and Moral Framing*, 88 MINN. L. REV. 1556 (2004). For deeper study, considering heuristics from many different perspectives for different purposes, see HEURISTICS AND BIASES: THE PSYCHOLOGY OF INTUITIVE JUDGEMENT (Thomas Gilovich et al., eds., 2002) [hereinafter HEURISTICS AND BIASES].

177. Jeffrey J. Rachlinski, *Selling Heuristics*, 64 ALA. L. REV. 389, 390 (2012) (“One of the basic lessons of cognitive psychology over the last four decades has been that people use simple mental shortcuts, known as heuristics, to manage complexity and uncertainty”).

178. HEURISTICS AND BIASES, *supra* note 176, at 2.

“available.”<sup>179</sup> The existence of climate change, for example, may be supported by personal memories of tornadoes or hurricanes — or could be denied by the next pleasant spring day.<sup>180</sup> The “representativeness heuristic” projects attributes of a sample upon a broader population; seeing a robin, for example, we know something about birds.<sup>181</sup> The “anchoring and adjustment heuristic” helps people determine unknowns based upon things we do know; we may not know, for example, when George Washington became President of the United States, but we may rationally surmise that it was after 1776, when our “Founding Fathers” signed the Declaration of Independence.<sup>182</sup>

From these three original heuristics, deep thinkers and casual observers have spun a world of heuristics for our purported benefit. For example, the “Scalia heuristic,” will predict that anyone who loved the last judicial opinion they read by the late Justice Antonin Scalia will similarly cheer the next opinion they read by Justice Scalia.<sup>183</sup> Similarly, the “Bernie heuristic” might predict that any supporter of Bernie Sanders would support legislation promoting action on social welfare and climate change. Heuristics can obviously prove misleading and dangerous, as theorists widely acknowledge.<sup>184</sup> And yet, while heuristics misfire at times, most scholars agree that these “simple rules of thumb . . . often work well . . . .”<sup>185</sup>

In 2008, feminist legal theorist Martha Albertson Fineman proposed a heuristic that has succeeded in inspiring new waves of investigation across diverse areas of societal problems. In her widely cited article, *The Vulnerable Subject: Anchoring Equality*

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179. *Id.* at 98 (“[O]ne basis for the judgment of the likelihood of an uncertain outcome is cognitive availability; that is, the ease with which this outcome can be pictured or constructed”).

180. See, e.g., Jeffrey J. Rachlinski, *Selling Heuristics*, 64 ALA. L. REV. 389, 390-91 (2012) (noting, “Exceptionally warm seasons, especially if accompanied by vivid, disastrous weather that includes hurricanes and tornadoes, can increase the public perception that climate change is a real phenomenon”). See also, Cass Sunstein, *The Availability Heuristic, Intuitive Cost-Benefit Analysis, and Climate Change*, 77 CLIMATE CHANGE 195, 200-03 (2006).

181. HEURISTICS AND BIASES, *supra* note 176, at 22.

182. *Id.* at 5, 119. The answer, according to Siri, is 1789.

183. Sunstein, *supra* note 176, at 1559.

184. HEURISTICS AND BIASES, *supra* note 176, at Preface (“heuristics typically yield accurate judgements but can give rise to systematic error”).

185. Sunstein, *supra* note 176, at 1558.

in *the Human Condition*,<sup>186</sup> Fineman gives us an “anchoring and adjustment heuristic” based upon the observation that every single person, of any age, is “vulnerable” in some sense. As Fineman explains:

Vulnerability initially should be understood as arising from our embodiment, which carries with it the ever-present possibility of harm, injury, and misfortune from mildly adverse to catastrophically devastating events, whether accidental, intentional, or otherwise . . . . Our embodied humanity carries with it the ever-present possibility of . . . disease, epidemics, resistant viruses, or other biologically-based catastrophes. Our bodies are also vulnerable to other forces in our physical environment. There is the constant possibility that we can be injured and undone by errant weather systems, such as those that produce flood, drought, famine, and fire.<sup>187</sup>

From recognition of this shared vulnerability, Fineman proposes “an alternative to traditional equal protection analysis,” one that does not rely upon finding state discrimination against a “suspect class,” but instead affirmatively promotes a “post-identity” inquiry.<sup>188</sup> Age, for example, is not a suspect class traditionally recognized by courts for purposes of triggering strict scrutiny,<sup>189</sup> and yet we know that children and the elderly may be exceptionally vulnerable segments of any community.<sup>190</sup> By focusing on vulnerability, in any dimension, Fineman leads us to see new issues and seek concomitant solutions.

Anchoring heuristics begin with things we likely know – as most Americans likely know when the Declaration of Independence was signed. As every human experiences throughout life

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186. Martha Albertson Fineman, *The Vulnerable Subject: Anchoring Equality in the Human Condition*, 20 YALE J. L. & FEMINISM 1 (2008) [hereinafter Fineman, *Vulnerable Subject*] (explicitly noting: “[T]he concept of vulnerability can act as a heuristic device, pulling us back to examine hidden assumptions and biases that shaped [] original social and cultural meanings”).

187. *Id.* at 9.

188. *Id.* at 1.

189. See, e.g., *City of Dallas v. Stanglin*, 490 U.S. 19, 25 (1989); *United States v. Flores-Villar*, 536 F.3d 990, 998 (9th Cir. 2008). Citing both *Stanglin* and *Flores-Villar*, Judge Ann Aiken, who had previously ruled in favor of youth plaintiffs on a Due Process right to a stable climate system, ruled that the youth plaintiffs were not a suspect class for purposes of Equal Protection analysis. *Juliana v. United States*, 339 F. Supp. 3d 1062, 1103 (D. Or. 2018); 217 F. Supp. 3d 1224, 1249 (D. Or. 2016).

190. Fineman, *Vulnerable Subject*, *supra* note 186, at 8 (“Children and the elderly are prototypical examples more sympathetic vulnerable populations”).

some sort of hazards — physical, emotional, financial, or otherwise — we also likely know something about human vulnerability. Our comprehension of vulnerability has been expanded in recent years by a vast literature reflecting research in many arenas, particularly to include the contexts of climate change,<sup>191</sup> natural disasters,<sup>192</sup> and global pandemics.<sup>193</sup> As with “environmental justice” and “climate justice,” the term “vulnerability” may be subject to many different conceptions and definitions.<sup>194</sup> In some senses, “vulnerability” could represent a stigmatizing label, used to single out certain “vulnerable populations” for enhanced monitoring or supervision.<sup>195</sup> More generally, the Intergovernmental Panel on Climate Change (IPCC) defines vulnerability as: “The propensity or predisposition to be adversely affected.”<sup>196</sup> The IPCC definition recognizes that vulnerability may reflect a range of factors including some discrete “susceptibility to harm” as well as a “lack of capacity to cope and adapt.”<sup>197</sup> The capacity to cope and adapt to changing environments represents what the IPCC and other researchers recognize as the concept of “resilience.”<sup>198</sup> Thus, at least in the construction of the

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191. See, e.g., Hans-Martin Füssel, *Vulnerability: A Generally Applicable Conceptual Framework for Climate Change Research*, 17 GLOBAL ENV'T CHANGE 155 (2007).

192. See Susan L. Cutter & Christopher T. Emrich, *Moral Hazard, Social Catastrophe: The Changing Face of Vulnerability Along the Hurricane Coasts*, ANNALS AM. ACAD. POL. & SOC. SCI. 102 (2006). In the context of disasters, Cutter and her colleagues have attempted to distinguish and evaluate the contributions of both “physical vulnerability” and “social vulnerability.” Under this framework, physical vulnerability might include environmental conditions such as living within a floodplain or in an area of active seismicity. Social vulnerability, by contrast, might include such considerations as the availability of health care, flood insurance, or family support. See generally Robert R.M. Verchick, *Disaster Justice: The Geography of Human Capability*, 23 DUKE ENV'T L. & POL'Y F. 23, 38-50 (2012) (summarizing Cutter's research in this area).

193. See *supra* notes 15-17 and accompanying text.

194. See, e.g., Angela P. Harris, *Vulnerability and Power in the Age of the Anthropocene*, 6 WASH. & LEE J. ENERGY, CLIMATE, & ENV'T. 96, 141 (2014) (“the term [vulnerability] is widely used but has no agreed-upon meaning”).

195. *Id.* at 140-143 (2014).

196. INTERGOVERNMENTAL PANEL ON CLIMATE CHANGE, CLIMATE CHANGE SYNTHESIS REPORT 128 (2014).

197. *Id.*

198. See *id.* at 127 (defining “resilience” as “[t]he capacity of social, economic, and environmental systems to cope with a hazardous event or trend or disturbance, responding or reorganizing in ways that maintain their essential function, identity and structures, while also maintaining the capacity for adaptation, learning and transformation”).

IPCC, and with all else being equal, vulnerability goes down as resilience goes up.

Critics of Fineman's vulnerability theory have pointed out the potential pitfalls of overgeneralization. To observe a relation between aging and dementia, for example, would not necessarily indicate a need for governmental interventions to deprive every octogenarian of financial independence.<sup>199</sup> Properly understood, vulnerability theory may serve as a "helpful framework for thinking about social structures."<sup>200</sup> For a more refined understanding of individual needs, it is important to recall that the "anchoring and adjustment" heuristic is not just about "anchoring"; rather, it explicitly assumes the need for adjustments around the known data point to locate an individual truth. Thus, what might be known about octogenarians in general must be adjusted for each individual of the class. To formulate a policy addressing the needs of each individual would likely fall beyond the resources of any public entity. However, what might be achieved is formulating helpful *questions*.<sup>201</sup>

The questions that vulnerability theory might encourage us to ask are not necessarily new. At the same time that Fineman was developing her theory of vulnerability, researchers in environmental justice were already reflecting upon twenty years of empirical analysis and attempting to distill the essence of the environmental justice inquiry. In 2007, Robert Bullard, together with Paul Mohai, Robin Saha, and Beverly Wright (all luminaries of environmental justice in their own right), articulated "the questions that go to the heart of environmental injustice." Most saliently, these questions included the following: "*What groups are most affected? Why are they affected? . . . What can be done to remedy the problem?*"<sup>202</sup>

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199. See, e.g., Nina A. Kohn, *Vulnerability Theory and the Role of Government*, 26 YALE J. L. & FEMINISM 1 (2014). An expert in elderly law, Professor Kohn advises, "Chronological age (outside the context of youth) is a poor proxy for need or vulnerability." Specifically addressing questions of mental capacity, Kohn notes that "less than five percent of people in their seventies [and] only a quarter of those in their eighties . . . have dementia." *Id.* at 25.

200. *Id.* at 13.

201. *Id.* at 24 ("[I]t is necessary to ask about the conditions, both internal to the individual and external to the individual, [that] increase or decrease [] vulnerability").

202. *Toxic Wastes and Race at Twenty: Why Race Still Matters After All these Years*, *supra* note 73, at 379-380 (emphasis added).

Further questions may always be generated for more specific contexts.<sup>203</sup> However, taking just these three questions to heart allows us to make some important observations. First, consistent with Fineman's vulnerability theory, these questions allow a "post-identity" inquiry. By asking, *What groups are most affected*, we are compelled to think critically about our own assumptions and give proper consideration to unique circumstances and individual cases. For example, while the federal government identifies Puerto Ricans as a "minority" population,<sup>204</sup> to be Puerto Rican in Puerto Rico hardly explains what groups were most affected by Hurricane Maria. In the case of Hurricane Maria, the groups *most affected* included people over the age of 65 and people suffering from heart disease and diabetes.<sup>205</sup> In the case of the Camp Fire in northern California, the group *most affected* includ-

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203. For example, in 1996, Professor Rob Verchick compared "the woman question" posed by feminists challenging male bias with questions that might be posed by any advocate for environmental justice: *How does environmental law fail to take into account the experiences and values of environmentally threatened people? How might some features of the law reflect nonneutral values associated with white patriarchy*. Verchick, *supra* note 35, at 36-37.

204. See, e.g., 48 C.F.R. § 52.222 (2015) (Federal Acquisition Regulations) ("Minority means . . . Hispanic (all persons of Mexican, Puerto Rican, Cuban, Central or South American, or other Spanish culture or origin, regardless of race); 24 C.F.R. § 81.2 (2004) (Housing and Urban Development) ("Minority means any individual who is included within any one or more of the following racial and ethical categories . . . Hispanic or Latino – a person of Cuban, Mexican, Puerto Rican, South or Central American, or other Spanish culture or origin, regardless of race False")

205. The precise number of fatalities in Puerto Rico from Hurricane Maria has been subject to much controversy and debate. Based on data from death certificates, the official death count was 64 lives. However, all subsequent studies have found the official count to underestimate the likely number of deaths from Hurricane Maria by at least one full order of magnitude. In a study by the Harvard School of Public Health, using data and extrapolations from surveys of households in Puerto Rico, researchers estimated a total of 4,645 "excess deaths" between September 20 and December 31, 2017, attributable to Hurricane Maria. Nishant Kishore et al., *Mortality in Puerto Rico after Hurricane Maria*, 379 N. ENGL. J. MED. 162, 162 (2018) [hereinafter, Harvard 2018]. The Harvard study was soon criticized by other researchers relying upon data from records of vital statistics, which estimated excess deaths of 1,139 lives. Alexis R. Santos-Lozada & Jeffrey T. Howard, *Use of Death Counts from Vital Statistics to Calculate Excess Deaths in Puerto Rico Following Hurricane Maria*, 320 J. AM. MED. ASS'N 1491, 1492 (2018). The most recent study examined the specific causes of these deaths attributed to Hurricane Maria along with specific demographics. According to this most recent study, Hurricane Maria was responsible for 1,205 excess deaths, 86.1% of whom were age 60 or older. Raul Cruz-Cano & Erin L. Mead, *Causes of Excess Deaths in Puerto after Hurricane Maria: A Time-Series Estimation*, 109 AM. J. PUB. HEALTH 1050, 1052 (2019). The 2019 study also found that the leading cause of excess deaths was heart disease (253 deaths), followed by "other" (204 deaths), and then diabetes (195 deaths). *Id.* at 1050.

ed people over the age of 50 years old.<sup>206</sup> As noted in the Introduction to this article, the groups *most affected* by COVID-19 include Blacks, Latinos, and indigenous peoples.<sup>207</sup> Accordingly, the groups *most affected* by environmental injustice thus may or may not be distinguished by traditional concerns for race, ethnicity, or income.

The second question then seeks to understand *Why* these groups are most affected. For Hurricane Maria, researchers from the Harvard School of Public Health found that “interruption of medical care was the primary cause of sustained high mortality rates in the months after the hurricane,” representing one-third of the “excess deaths” beyond baseline mortality levels from before the hurricane.<sup>208</sup> In the case of older residents affected by the fires in northern California, lack of mobility — either by driving or running — may have been a significant factor.<sup>209</sup> The same factors may also help explain the disparate effects of Hurricane Katrina on older populations, where roughly 71% of the fatalities were age 60 or older.<sup>210</sup> For COVID-19, racial and ethnic minorities may be more vulnerable to infection for many reasons, including limited access to healthcare,<sup>211</sup> jobs that do not allow for

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206. See *supra* note 14 and accompanying text.

207. *Supra* notes 7-9 and accompanying text.

208. Nishant Kishore et al., *Mortality in Puerto Rico after Hurricane Maria*, 379 N. ENGL. J. MED. 162, 162, 168 (2018).

209. Commenting on the disparate impacts of Hurricane Katrina on elderly persons, one report to Congress observed: “The elderly are more likely to live alone, and less likely to own a car, or be able to drive. Some may have been more isolated, living alone, or homebound due to frailty or disability.” Thomas Gabe et al., HURRICANE KATRINA: SOCIAL-DEMOGRAPHIC CHARACTERISTICS OF IMPACTED AREAS 17 (2005).

210. Myles Maltz, *Caught in the Eye of the Storm: The Disproportionate Impact of Natural Disasters on the Elderly Population in the United States*, 27 ELDER L. J. 157, 158-159 (2019). For an introduction to the growing literature on the effects of climate change on the aging population, see Gary Haq, *Growing Old in a Changing Climate*, 27 PUB. POL’Y & AGING REP. 8 (2017); Jason L. Roades et al., *Developing an In-Depth Understanding of Elderly Adult’s Vulnerability to Climate Change*, 58 GERONTOLOGIST 567 (2017); Bruce A. Carnes et al., *Impact of Climate Change on Elder Health*, 69 J. GERONTOLOGY 1087 (2014); David Filiberto, et al., *Older People and Climate Change: Vulnerability and Health Effects*, 33 J. AM. SOC. ON AGING 19 (2010).

211. See CENTERS FOR DISEASE CONTROL AND PREVENTION, HEALTH EQUITY CONSIDERATIONS AND RACIAL AND ETHNIC MINORITY GROUPS (2020), <https://www.cdc.gov/coronavirus/2019-ncov/community/health-equity/race-ethnicity.html>.

distance working,<sup>212</sup> and tendency to live in communities with degraded air quality.<sup>213</sup>

Once we develop a finer understanding of the root causes of disparate impacts, we can begin to answer the third question: *What can be done to remedy the problem?* Fineman argues for a “responsive state,” where shared vulnerabilities demand more active government interventions to keep people safe.<sup>214</sup> Remedies for the disparate impacts of diabetes in Puerto Rico, for example, might include more proactive disease prevention by local health authorities, plus more focused disaster planning by agencies such as the Federal Emergency Management Agency,<sup>215</sup> nongovernmental organizations such as the Red Cross, and individual households to maintain supplies of insulin.<sup>216</sup> Remedies for the protection of older people from the threat of wildfires might include better community evacuation and transportation planning, to ensure assistance for people unable to drive or walk.<sup>217</sup> Remedies to keep people safer in the next pandemic may include more stringent standards for air quality or better enforcement to assure compliance with existing standards.<sup>218</sup> To keep people safe in

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212. See, e.g., Shawn Hubler et al., *Many Latinos Couldn't Stay Home. Now Virus Cases Are Soaring in Their Communities*, N.Y. TIMES (June 26, 2020), <https://www.nytimes.com/2020/06/26/us/corona-virus-latinos.html>.

213. See, e.g., Alina Hernandez, *Environmental Law Clinic analysis: Air pollution in Louisiana tied to higher COVID-19 Impact* (Apr. 28, 2020) (study by Tulane Environmental Law Clinic finding that within Louisiana's infamous “Cancer Alley,” the communities “most affected [by COVID-19] tend to be predominantly in African-American neighborhoods”), <https://law.tulane.edu/news/environmental-law-clinic-analysis-air-pollution-louisiana-tied-higher-covid-19-impact>.

214. Martha Albertson Fineman, *The Vulnerable Subject: Anchoring Equality in the Human Condition*, 20 YALE J. L. & FEMINISM 1, 19-20 (2008).

215. For an introduction to all the programs of community and individual assistance managed by the Federal Emergency Management Agency (FEMA), see the FEMA website at <https://www.fema.gov/>.

216. Specific suggestions for diabetic households on how to prepare for emergencies and disasters are available online at the following link: <https://www.diabeteselfmanagement.com/managing-diabetes/general-health-issues/disaster-preparedness-diabetes/>. See also FEMA website at <https://www.fema.gov/disaster/4339/hurricane-preparedness> (navigate to “Reminders for older adults with diabetes”).

217. For an excellent compilation of suggestions, see the CENTERS FOR DISEASE CONTROL AND PREVENTION, EMERGENCY PREPAREDNESS FOR OLDER ADULTS, <https://www.cdc.gov/features/older-adult-emergency/index.html> (last visited March 10, 2020).

218. National standards for air quality in the United States largely derive from the federal Clean Air Act, 42 U.S.C. §§ 7401 *et seq.* Under the Clean Air Act, the U.S. EPA establishes National Ambient Air Quality Standards (NAAQS) for “criteria pollutants,” which include the fine particulate matter (PM<sub>2.5</sub>) associated with adverse



the future will require all the courage and creativity with which our species has been blessed. But, it begins with a critical question: *Which groups are most affected?* And then must be followed with a critical inquiry: *Why?*

## V. BLACK LIVES STILL MATTER: REMAKING “ENVIRONMENTAL JUSTICE” FOR ALL

As Bullard, *et al.*, concluded after 20 years of increasingly sophisticated empirical analysis relating hazardous waste sites to community demographics: “[R]ace still matters after all of these years.”<sup>219</sup> As Justice Sonia Sotomayor later observed so eloquently in dissent to the demise of race-conscious admissions programs:

Race matters. Race matters in part because of the long history of racial minorities’ being denied access to the political process. And although we have made great strides, “voting discrimination still exists; no one doubts that.”

Race also matters because of persistent racial inequality in society – inequality that cannot be ignored and that has produced stark socioeconomic disparities.

And race matters for reasons that really are only skin deep, that cannot be discussed any other way, and that cannot be wished away.<sup>220</sup>

We might try to wish it away, but in truth, we are not entering some “post-identity” world where Fineman’s vulnerability theory could function on its own.<sup>221</sup> Race and class must remain a part of

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COVID-19 outcomes. *See supra* note 15 (Harvard, 2020); *see also*, 40 C.F.R. § 50.7 (NAAQS for PM<sub>2.5</sub>). Importantly, whether or not air quality standards are strengthened, enforcement of *existing* standards can improve health outcomes. As indicated by one early study by researchers from American University, enforcement of Clean Air Act standards can result in positive COVID-19 outcomes; conversely, lax air enforcement can result in adverse COVID-19 outcomes. *See* Claudia Persico & Kathryn R. Johnson, *The Effects of Increased Pollution on COVID-19 Cases and Deaths* (Am. U. Sch. Pub. Aff., June 22, 2020), [https://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=3633446](https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3633446).

219. *See* Robert D. Bullard et al., *Toxic Wastes and Race at Twenty: Why Race Still Matters After All of These Years*, 38 ENV’T L. 371 (2008).

220. *Schuette v. Coalition to Defend Affirmative Action*, 572 U.S. 291, 380 (2014).

221. For a thorough examination of historical race discrimination in housing in the United States, and the pervasive legacy for American communities today, *see* RICHARD ROTHSTEIN, *THE COLOR OF LAW* (2017). For examination of the racist origins and devastation caused by mass incarceration in the United States, *see* MICHELLE ALEXANDER, *THE NEW JIM CROW* (2010).

the environmental justice inquiry if we are to see *Which groups are most affected?* and *Why?*

At the same time, as both the COVID crisis and the Anthropocene worsen, we can no longer avoid the disparate impacts being visited upon any dimension of diversity in this new age. Simply being over the age of 65 may not tell us about who is most likely to contract the coronavirus. Similarly, being “Hispanic” in Puerto Rico will not tell us about who survives the next hurricane. Neither race nor ethnicity may predict who escapes the next fire in northern California. That gap may point precisely to the potential for vulnerability theory to become an essential component of a new framework to guide the continued pursuit of environmental justice in the “no-analogue” future.

What would that framework look like? Let’s revisit for a moment the EPA’s standard definition of “environmental justice”:

Environmental Justice (EJ) is the fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income with respect to the development, implementation, and enforcement of environmental law, regulations, and policies.<sup>222</sup>

The phrase “race, color [or] national origin” finds textual support in federal law including the Civil Rights Act, Title VI.<sup>223</sup> Inclusion of “income” here reflects the command of Executive Order 12898 to address environmental justice in “low-income” populations.<sup>224</sup> Occasionally, as we have seen already,<sup>225</sup> the EPA injects into the definition such other words as “culture” and “educational levels.”<sup>226</sup> Nothing in the EPA’s various definitions of “environmental justice” has appeared to trigger the requirements for notice and comment rulemaking. Accordingly, it would

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222. U.S. EPA, ENVIRONMENTAL JUSTICE (2020).

223. Civil Rights Act § 601, 42 U.S.C. § 2000d (“No person in the United States shall, on the ground of race, color, or national origin, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving Federal financial assistance”).

224. See *supra* note 32 and accompanying text.

225. See *supra* notes 109 and accompanying text.

226. See, e.g., U.S. EPA, EJ 2020 ACTION AGENDA 55 (2016) (defining “environmental justice” as fair treatment and meaningful involvement of all people “regardless of race, color, culture, national origin, income, and educational levels”). See also EPA, Notice of Availability of FY 1997 Multimedia Environmental Justice Through Pollution Prevention Grant Funds, 62 Fed. Reg. 1113, 1114 (Jan. 8, 1997) (defining “environmental justice” as “fair treatment of all races, cultures, and incomes”).

not seem a stretch for the EPA to incorporate the notion of vulnerability theory in its next published definition of environmental justice.

A new definition for “environmental justice,” emphasizing the continued impacts of race discrimination and socio-economic disparities in our society, may read something like this:

Environmental Justice (EJ) is the fair treatment and meaningful involvement of all people, mindful of historical and continuing discrimination and disparities based upon race, color, ethnicity, national origin, income, age, gender, sexual orientation, health condition, or any other potential factor of vulnerability, with respect to the development, implementation, and enforcement of environmental law, regulations, and policies.

Such a definition would honor the longstanding EPA definition of “environmental justice” as applying to “all people” — a commitment consistent with the social contracts inherent in our U.S. Constitution. However, this new reframing would also help to focus the attention of policymakers toward some of the most urgent concerns for environmental protection, specifically to include continuing disparities based upon race and ethnicity, as observed with COVID-19. In other cases, as we have seen after Hurricane Maria and the Camp Fire, the most urgent concerns may reflect disparities related to age or health conditions, concerns that would be more clearly revealed now through vulnerability analysis.

By linking a new definition of “environmental justice” to the concept of vulnerability, future researchers will be able to tap into the growing literature of vulnerability theory in order to identify some root causes of environmental injustice and to learn from mistakes and successes in other fields. After introducing vulnerability theory in 2008, Martha Fineman has continued to develop her thesis in different contexts<sup>227</sup> and has invited contextual ap-

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227. See, e.g., Martha Albertson Fineman, *Vulnerability and Social Justice*, 53 VALPARAISO U. L. REV. 341 (2019); Martha Albertson Fineman, *Vulnerability, Resilience, and LGBT Youth*, 23 TEMP. POL. & CIV. RTS. L. REV. 307 (2014); Martha Albertson Fineman, “Elderly” As Vulnerable: *Rethinking the Nature of Individual and Social Responsibility*, 20 ELDER L. J. (2012); Martha Albertson Fineman, *Beyond Identities: The Limits of an Antidiscrimination Approach to Equality*, 92 B.U. L. REV. 1713 (2012); Martha Fineman, *The Vulnerable Subject and the Responsive State*, 60 EMORY L.J. 251 (2010).

plications and critiques by other scholars.<sup>228</sup> Many scholars have already accepted this invitation, applying vulnerability theory to such diverse concerns as disability,<sup>229</sup> gender,<sup>230</sup> housing,<sup>231</sup> and animal rights.<sup>232</sup> As Fineman herself observed: “Disaster discourse . . . routinely makes vulnerability central to its analysis,”<sup>233</sup> suggesting back in 2008 that vulnerability theory could offer insights and remedial responses to “flood, drought, famine, and fire.”<sup>234</sup> At the same time, Fineman also appeared to anticipate the COVID-19 pandemic, specifically noting the “ever-present possibility of . . . disease, epidemics, resistant viruses, or other biologically-based catastrophes.”<sup>235</sup>

So far, vulnerability theory has been explored lightly from a perspective of environmental justice. The first such exploration may have been by Professor Angela Harris, a scholar of critical race theory, who in 2014 emphasized the connection between social justice and environmental sustainability through a concept she called “ecological vulnerability.”<sup>236</sup> Harris stated: “The best example of an existing political project consonant with ecological vulnerability is the environmental justice movement,” where “care for the earth and for social justice simultaneously” highlighted the need for challenging oppressive power structures.<sup>237</sup> In 2017, Professor Sheila Foster, one early scholar of environmen-

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228. See Martha Fineman & Anna Grear, *Introduction: Vulnerability as Heuristic—An Invitation to Future Exploration*, in *VULNERABILITY: REFLECTIONS ON A NEW ETHICAL FOUNDATION FOR LAW AND POLITICS* (Martha Albertson Fineman & Anna Grear eds., Ashgate Pub. Co. 2013) [hereinafter *Fineman & Grear* (2013)].

229. Ani B. Satz, *Disability, Vulnerability, and the Limits of Antidiscrimination*, 83 WASH. L. REV. 513 (2008).

230. Fionnuala Ni Aolain, *Women, Vulnerability, and Humanitarian Emergencies*, 18 MICH. J. GENDER & L. 1 (2011).

231. Helen Carr, *Housing the Vulnerable Subject: The English Context*, in *Fineman & Grear* (2013).

232. Ani B. Satz, *Animals as Vulnerable Subjects: Beyond Interest-convergence, Hierarchy, and Property*, in *Fineman & Grear* (2013).

233. Fineman & Grear, *supra* note 227, at 1. See Susan S. Juo & Benjamin Means, *After the Storm: The Vulnerability and Resilience of Locally Owned Business*, in *Fineman & Grear* (2013).

234. See *supra* note 187 and accompanying text.

235. *Id.*

236. Angela P. Harris, *Vulnerability and Power in the Age of the Anthropocene*, 6 WASH. & LEE J. ENERGY, CLIMATE, & ENV'T 96 (2014).

237. Angela P. Harris, *Vulnerability and Power in the Age of the Anthropocene*, 6 WASH. & LEE J. ENERGY, CLIMATE, & ENV'T 96, 150-51 (2014).

tal justice,<sup>238</sup> suggested vulnerability theory as an alternative to antidiscrimination litigation, recognizing the growing reluctance of courts and agencies to engage in race-conscious decision-making.<sup>239</sup> In this context, Foster specifically posited that, “a fertile area of research for environmental justice scholars is figuring out how to utilize vulnerability metrics . . . to better protect populations and communities most susceptible to disproportional environmental pollution exposure.”<sup>240</sup> Finally, in 2018, Professors Rob Verchick and Sidney Shapiro applied vulnerability theory to designing a Green Economy premised on social resilience.<sup>241</sup> Verchick and Shapiro note: “For reasons that were both philosophical and strategic, the EJ movement generally emphasized the role of race, ethnicity, and income, over other social variables.”<sup>242</sup> By contrast, vulnerability theory “expand[s the] scope of social-resilience thinking”<sup>243</sup> in order to promote protection for everyone in our changing environment.

This brings us back to the year 2020, the dystopian present, where COVID-19 continues to ravage communities and climate change already happened and “all people” now experience threats to their health and environment in individual ways. Odds are, COVID-19 will not be the last pandemic we face in our lifetime. Hurricanes Laura, Delta, and Zeta, among a record number of named storms in 2020 to strike the United States,<sup>244</sup> demonstrat-

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238. See, e.g., LUKE COLE & SHEILA FOSTER, *FROM THE GROUND UP: ENVIRONMENTAL RACISM AND THE RISE OF THE ENVIRONMENTAL JUSTICE MOVEMENT* (2001).

239. Shelia R. Foster, *Vulnerability, Equality and Environmental Justice: The Potential and Limits of Law*, in *THE ROUTLEDGE HANDBOOK OF ENVIRONMENTAL JUSTICE* 136 (Ryan Holifeld, Jayajit Chakraborty, & Gordon Walker eds., 2018). See also *supra* note 136 and accompanying text (EPA rejection of environmental justice as affirmative action, reacting to Supreme Court cases including *Adarand* and *Grutter*).

240. *Id.* at 137.

241. Sidney A. Shapiro & Robert R.M. Verchick, *Inequality, Social Resilience, and the Green Economy*, 86 UMKC L. REV. 963 (2018). Shapiro and Verchick define “social resilience” as “a population’s capacity to survive, adapt, and grow in the face of misfortune and change.” *Id.* at 963-964.

242. *Id.* at 987.

243. *Id.* On the centrality of resilience for the protection of all people in the future, see Robert L. Fischman, *Letting Go of Stability: Resilience and Environmental Law*, 94 INDIANA L.J. 689 (2019).

244. See, e.g., *Zeta Knocks Out Power to 2 Million*, N.Y. TIMES (Oct. 29, 2020), <https://www.nytimes.com/2020/10/29/us/hurricane-zeta-louisiana-mississippi.html>; Jason Samenow & Ian Livingston, *Hurricane Delta by the Numbers: 101 mph Winds and 9.3-foot Surge in Coastal Louisiana*, WASH. POST (Oct. 12, 2020),

ed the growing frequency and intensity of future storms along the Gulf Coast and Eastern Seaboard. Meanwhile the Tubbs Fire, Camp Fire, and the devastating fire season of 2020 down the entire West Coast,<sup>245</sup> showed us what more to expect in the West. Now that we know, now that we see the shared vulnerabilities and unique threats to every person on the planet, perhaps we can focus our energies on remaking environmental justice in a way that keeps every person safe in the future.

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<https://www.washingtonpost.com/weather/2020/10/12/hurricane-delta-winds-surge-rain/>; Javier Fernandez & Jonah M. Kessel, *Hurricane Laura Swept Ashore as One of the Most Powerful Storms to Hit the U.S.*, N.Y. TIMES (Sept. 15, 2020), <https://www.nytimes.com/2020/08/27/us/hurricane-laura-update.html#link-76c6874d>.

245. In late summer 2020, record fires burned from Washington to California, in Colorado, and many other states across the West. For just one example, according to Cal Fire, the LNU Lightning Complex Fire, ravaging forests in northern California, was the second largest fire in California history, burning 314,000 acres in five counties including Sonoma and Napa. Andrew Freedman, *et al.*, *California Wildfires Reach Historic Scale and Are Still Growing*, WASH. POST (Aug. 22, 2020), <https://www.washingtonpost.com/weather/2020/08/22/california-wildfires-largest>. Additional fires burning at the same time in California left more than one million acres of the state charred, an area larger than the State of Rhode Island. *Id.*