ESSAYS

ENVIRONMENTAL ~~IN~~JUSTICE AND THE ~~LIMITS OF~~ POSSIBILITIES FOR ENVIRONMENTAL LAW

BY

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Climate change and extreme inequality combine to cause disproportionate harms to poor communities throughout the world. Further, unequal resource allocation is shot through with the structures of racism and other forms of discrimination. This Essay explores these phenomena in two different places in the United States, and traces law's role in constructing environmental and economic vulnerability. The Essay then proposes that solutions, if there are any to be had, lie in expanding our notions of what kinds of laws are relevant to achieving environmental justice, and in seeing law as a possible tactic for instigating broader social change but not as a sole means of achieving it. To achieve environmental justice, it will take first more than environmental law, and then more than law.

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I. INTRODUCTION

Can we use law to make the planet a more just and equitable place for human and non-human communities? Can we, in other words, deploy law in the effort to tackle global environmental problems and widespread environmental injustice? The short answer for impatient readers is yes, but it will take more than environmental law, and more than law, and that still might not be enough. This Essay, adapted from a lecture at Lewis & Clark Law School, will discuss the connections between a political economy that produced progress for many and yet simultaneously increased inequality and caused widespread and enduring environmental harm. It will examine those trends at the planetary scale, but also in two local places.

Starting at the planetary level, climate change, caused by human emissions of carbon dioxide and other greenhouse gasses, has already resulted in increases in global average surface temperatures that have had effects all over the world. Many are already severe, such as the bleaching of two-thirds of the coral in the Great Barrier Reef, the flooding and destruction of coastal areas, the prolonged cycles of drought throughout the world, and the loss of glaciers and sea ice.[1] Many more changes are likely to come, and the latest report by the Intergovernmental Panel on Climate Change tells us that we have less time than we thought to avert dangerous conditions.[2] And that's not all. While we have been turning up the heat on planet Earth, wealth inequality in developed countries has increased, and despite some progress on global poverty, there are still billions of people living below basic human rights standards for health, education, and welfare.[3]

Further, environmental harms, just like harms of all sorts, fall hardest on the poor. As climate change worsens, the impacts on the poor will become increasingly disproportionate.[4] Finally, in the United States and throughout the world, the structures of unequal resource allocation (in other words, the doling out of environmental privileges and environmental harms) are shot through with the structures of racism and other forms of discrimination. Putting these together, if current trends continue, negative

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1 *See, e.g.*, R. Berkelmans & J.K. Oliver, *Large-Scale Bleaching of Corals on the Great Barrier Reef*, 18 CORAL REEFS 55 (1999).

2 *See* INTERGOVERNMENTAL PANEL ON CLIMATE CHANGE, GLOBAL WARMING OF 1.5°C: SUMMARY FOR POLICYMAKERS 6 (Valérie Masson-Delmotte et al. eds., 2018) [hereinafter IPCC] (stating that anthropogenic "[g]lobal warming is likely to reach 1.5°C" above pre-industrial levels "between 2030 and 2052 if it continues to increase at the current rate").

3 U.N. DEV. PROGRAMME, HUMAN DEVELOPMENT REPORT 2016: HUMAN DEVELOPMENT FOR EVERYONE 54 (2016).

4 IPCC, *supra* note 2, at 11.

impacts from climate change will be borne disproportionately by the poor, by people of color, and other groups, such as indigenous peoples, who have been subject to historic discrimination, and existing inequality will worsen or become entrenched.[5] By now some readers might want to throw up their hands in despair, or opt for pointless hedonism before the end-times. The hope, however, is that at least some readers see this as a call to reorient our legal, political, and economic systems toward a more just, equitable, and sustainable world.

To zero in on these issues, we will visit two places. Those two places are New York City and the four-corners area of the western United States. More specifically, they are New York City's public housing projects, where tenants have sued the New York City Housing Authority repeatedly about environmentally hazardous living conditions, and the Navajo Nation, where more than one-third of all households lack electricity, 30% do not have running water, and strip coal mines have scarred the land and depleted the aquifers.[6] The questions we will explore will be intensely local, but also intersect with the planetary scale. We will look at how environmental degradation and discrimination affect particular people and places and are nested within larger structures that perpetuate global environmental harms.

This Essay will interrogate, in other words, how economic, political, and legal structures have failed to address global environmental problems and also trap poor people in environmentally hazardous and economically oppressed communities. In the context of the two places we will visit, we will ask two questions. First, how is it that in one of the wealthiest cities in one of the wealthiest countries in the world, children in public housing suffer from lead poisoning, families face days without heat or hot water, and thousands live with infestations of mold and pests? Second, how is it that on the Navajo Nation, which produced vast amounts of electricity to support the growth of Phoenix, Los Angeles, and Las Vegas, there are thousands of households without running water or electricity and the community is economically dependent on a coal mine and coal fired power plant that polluted the air and water but provided no electricity to local homes? And how is it that several decades into a robust environmental regulatory state, law has come up short in addressing these issues?

We will then turn to potential responses. The "what can we do" part of the Essay. The answers will not be naively optimistic. At the same time, this Essay will not indulge in the self-serving pessimism that gives license for doing nothing, with the excuse that because we have not done enough to date, nothing we do now will matter. (Philosopher Stephen Gardner has

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[5] *Id.* at 5-10 (citing STEPHANE HALLEGATTE ET AL., SHOCK WAVES: MANAGING THE IMPACTS OF CLIMATE CHANGE ON POVERTY (2016)).

[6] Marian Wang, *NYC Public Housing: Fixing a Leak with a Bucket*, PROPUBLICA (Apr. 3, 2015), https://perma.cc/Y6PC-JNEG; Ibby Caputo, *Solar Power Makes Electricity More Accessible On Navajo Reservation*, NAT'L PUB. RADIO (Apr. 21, 2015), https://perma.cc/Q789-6RG2; *Providing Safe Drinking Water In Areas With Abandoned Uranium Mines*, U.S. ENVTL. PROTECTION AGENCY, https://perma.cc/BZT3-CXEM (last visited Feb. 16, 2019); Carol Berry, *Navajo Aquifer Concerns May Prove True*, INDIAN COUNTRY TODAY (Aug. 6, 2011), https://perma.cc/96CH-RUS5.

diagnosed this as climate change-specific moral corruption, which stems from our failure to do anything significant about the most important moral challenge of our time.[7]) Instead, it will suggest there are many legal tools that can and should be deployed to make the planet a more just, sustainable, and equitable place. Some of these tools fall neatly in the realm of laws and policies directly addressing greenhouse gas emissions and climate change impacts. But some fall outside of what we think of as environmental law, and others will not sound like law at all. To protect the most vulnerable communities, a recommitment to public investment and public provision of services should be paramount. The tools of anti-poverty law, anti-discrimination, and environmental law can be deployed toward these ends. But importantly, those with the training, privilege, and skills to bring legal tactics to bear should be aware of their limitations. Legal reforms depend on openings created by activism. Lawyers can and should be ready before and after those openings, but legal reforms can only go as far as the political economy in which they are embedded.

This Essay will proceed as follows. We will start at the planetary scale and ask a preliminary question. How are we doing as a planet? Are things getting better, or are things getting worse? Despite descriptions in the first paragraphs about climate change, poverty, and inequality, maybe things will get better, as they seem to have done according to many indicators over the past several centuries. We start here even though the point is that the question is a red herring. "Are things getting better or worse?" This is not the right question, even though the planetary scale itself matters tremendously, and trends about the planet's ability to support all of our lives certainly matter. But what we decide to do, and what we can do with legal tools, depend solely on our values about the planet and its inhabitants rather than any determinable conclusion about progress or its opposite.

Next, we will scale down, and look at the questions in the places mentioned above, New York City Public Housing, and the western side of the Navajo Nation. In both of these places, climate change and other environmental threats intersect with poverty and discrimination. At the same time, these places provide clues about tactics and legal tools that can be deployed to combat environmental and social injustice. These tools can achieve justice for some and can also result in a certain amount of ameliorative environmental improvement. To achieve more, however, they will have to contribute to a broader political movement that displaces our growth-dependent and profit-driven economic system with one that integrates the economy into the planet's boundaries while simultaneously ensuring justice and equality for its human inhabitants. The Essay concludes by suggesting that environmental law can play a role in instigating this broader movement, but that it will take much more than law reform to see it through.

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[7] *See* STEPHEN M. GARDINER, A PERFECT MORAL STORM: THE ETHICAL TRAGEDY OF CLIMATE CHANGE 301–02, 305 (2011) (arguing that moral corruption has contributed to a failure to take substantive steps to address climate change because the issue is considered insurmountable).

II. ARE THINGS GETTING BETTER OR WORSE?

We will start with the highest scale at which problems of environment and justice can be considered—the planetary scale. How are we doing as a planet? Are things getting better or worse? This is a question that is difficult to answer. Or, alternatively, it is easy to answer, but in ways that are wholly inconsistent.

A. Things Are Getting Better!

Harvard Psychology Professor Stephen Pinker's answer is a resoundingly positive one: things are getting better! In *Enlightenment Now: The Case for Reason, Science, Humanism and Progress* and other works, Pinker has argued that the world has gotten less violent, richer, safer, and healthier across the centuries, and particularly since the rise of Enlightenment values in the seventeenth and eighteenth centuries.[8] The heart of Pinker's analysis is a massive data crunch. *Enlightenment Now: The Case for Reason, Science, Humanism and Progress* has seventy-five graphs sprinkled across its 576 pages, and almost all are variations on the theme of improvement over time. Among the things that Pinker documents are life expectancy, child mortality, maternal mortality, infectious diseases, calorie intake, food availability, wealth, poverty, natural disasters, deaths, deaths by lightning, human rights, state executions, racism, sexism, homophobia, hate crimes, violence against women, child labor, literacy, education, IQ, hours worked, years in retirement, disposable spending, and leisure time.[9] And that's just a sample. All, according to Pinker, have been headed in the right direction, and enlightenment rationality explains the improvement.

Further, Pinker urges that optimism begets optimism, and if we would focus on the good news instead of getting mired in the bad, we would be able to continue on the path of inevitable improvement, applying reason and science to all of our problems.[10] Pinker's perspective and data are important, but they have received their share of criticism. One strand of critique addresses Pinker's inattention to the non-material aspects of human well-being and happiness.[11] Alison Gopnik, for example, argues that Pinker fails to appreciate how people and communities change their beliefs and are persuaded to act, so even if his data is right, he fundamentally misunderstands the primary roles of attachment and belonging in the

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8 *See generally* STEVEN PINKER, ENLIGHTENMENT NOW: THE CASE FOR REASON, SCIENCE, HUMANISM AND PROGRESS (2018) [hereinafter PINKER, ENLIGHTENMENT NOW] (providing statistical analysis and discussion of issues of violence, wealth, safety, and health); STEVEN PINKER, THE BETTER ANGELS OF OUR NATURE: WHY VIOLENCE HAS DECLINED (2011) (discussing the decreasing frequency of violence beginning in the seventeenth and eighteenth centuries).

9 *See* PINKER, ENLIGHTENMENT NOW, *supra* note 8, at xiii–xv.

10 *See id.* at 7–8.

11 *See* Alison Gopnik, *When Truth and Reason are no Longer Enough*, ATLANTIC (Apr. 2018), https://perma.cc/9TXJ-NP3S.

formation of human well-being and values.[12] Pinker also fails to reckon with how the same social and economic forces that resulted in material prosperity for many undermined social bonds in communities across the world.[13] Pinker's exasperation with anyone who does not sign on to his exhortations about progress is therefore just as likely to work against his cause as for it. If you feel badly now, because your mother lost her job, you cannot afford regular health care, and your hometown has been hollowed out by a changing economy, then you are unlikely to respond well to a pointy-headed liberal from Harvard telling you to perk up because everything is on an inevitable upward trajectory.

Another strand of critique addresses Pinker's failings as a historian.[14] Historian David Wootton, while admiring aspects of Pinker's data analysis, found two significant problems. First, Pinker's entire thesis rests on his graphs, yet he failed to say anything about the history of graphs and data, and how that history might prefigure Pinker's conclusions: "[t]his is a book of statistics about the age of statistics, a book of graphs about the age of graphs. . . . A society that has made a religion of quantification is the only sort of society in which progress will become the norm."[15] In other words, we may have measured nothing more than our desire to make everything measurable. Second, Wootton charges that the weakest aspect of Pinker's book is his view of causation. Pinker assumes, but does not otherwise document or try to substantiate (other than through the graphs themselves, which have the problem just described) that the scientific revolution and enlightenment have caused the progress that the graphs document.[16] From a historical perspective, Wootton rejects "the notion that it is ideas that change the world."[17] Rather, it is the "social and cultural conditions in which they thrive."[18] If those conditions are not present, the ideas to which they attach will not take hold. Further, past progress does not predict indefinite progress. Even if the cultural and social conditions are present to tackle today's formidable problems, such as climate change (already a big assumption), it might also be some elements of luck that brought technological change together with progress in the past. Maybe we were just "lucky that the Chinese invention of paper made possible the printing press, that the invention of spectacles made possible the telescope."[19] We may not luck into the technological fixes that can address today's challenges.

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12 *Id.* Dan Kahan's body of work makes much the same point. Kahan's studies show that in matters of social policy, people assess facts and expertise through their cultural identities. *See also, e.g.*, Dan M. Kahan et al., *Cultural Cognition of Scientific Consensus*, 14 J. RISK RES. 147 (2011).

13 Gopnik, *supra* note 11.

14 *See* Stuart Carroll, *Thinking with Violence*, 55 HIST. & THEORY 23, 24, 38 (2017) (accusing Pinker and others of writing "comfort history").

15 David Wootton, *Comfort History*, TIMES LITERARY SUPPLEMENT (Feb. 14, 2018), https://perma.cc/SP3Y-KDZ8.

16 *Id.*

17 *Id.*

18 *Id.*

19 *Id.*

A third criticism is with aspects of the data itself, or more accurately the data that Pinker is too quick to marginalize.[20] Pinker gives a nod to a few trajectories that are not in line with his progress narrative, such as emissions of greenhouse gases, but insists that these will eventually be enveloped within the larger rational-enlightenment progress narrative.[21] They will be a small blip on the progress line in a subsequent graph, because that is how the enlightenment goes, so long as we stop getting in our own way.

B. Things Are Getting Worse (on the Path to Hothouse Earth?)

Other experts do not see it this way. Those who study the Earth's natural and environmental systems, including Swedish Scientist Will Steffen and his co-authors, have their own graphs. They tend to show that many things are getting worse. Since the rise of industrialization (roughly the end of the Eighteenth Century, the same as Pinker's starting point), rates of degradation of natural systems and resources have steadily increased, with dramatic upticks since the 1950s.[22] The following run-down is the counter-point to Pinker's list: since industrialization, and in particular since the "great acceleration" of the 1950s, we have lost half of the world's tropical forests and half of the world's wetlands; 90% of large predator fish are gone; 75% of marine fisheries are overfished or fished to capacity; coral reefs are dying at unprecedented rates (half of the Great Barrier Reef is dead, and by 2050 90% of the worlds' coral reefs will be gone).[23] "Species are disappearing at rates about 1,000 times faster than normal."[24] Toxic chemicals can be found by the dozens in all of our bodies.[25]

Steffen and other scientists believe their graphs raise the question: have we pushed earth systems beyond the brink of conditions under which humanity and other species have flourished?[26] For 10,000 years, the

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20 *See* Gopnik, *supra* note 11.

21 *See* PINKER, ENLIGHTENMENT NOW, *supra* note 8, at 291.

22 *See id.* at 7–8; *see also* JAMES GUSTAVE SPETH, THE BRIDGE AT THE EDGE OF THE WORLD: CAPITALISM, THE ENVIRONMENT, AND CROSSING FROM CRISIS TO SUSTAINABILITY 1 (2008) (citing to and reproducing graphs from WILL STEFFEN ET AL., GLOBAL CHANGE AND THE EARTH SYSTEM: A PLANET UNDER PRESSURE (2004), https://perma.cc/9JHD-4HG9) (discussing graphs showing, among others, biodiversity declines, fishery declines, and ozone depletion since 1750, along with corresponding increases in human populations and resource use).

23 SPETH, *supra* note 22, at 1–2; *Why is So Much of the World's Coral Dying*, ECONOMIST (Mar. 21, 2018), https://perma.cc/3NH3-JGSS ("Some experts believe that there is now just half the amount of coral that was in the oceans 40 years ago. The northern third of Australia's Great Barrier Reef has lost more than a third of its coral since 2015."); Scott F. Heron et al., *Warming Trends and Bleaching Stress of the World's Coral Reefs 1985–2012*, NATURE: SCI. REP. (Dec. 6, 2016), https://perma.cc/AGZ5-FDWT (predicting 98% of coral reefs will be gone by 2050); Laura Parker & Craig Welch, *Coral Reefs Could Be Gone in 30 Years*, NAT'L GEOGRAPHIC (June 23, 2017), https://perma.cc/9S94-L9GM.

24 SPETH, *supra* note 22, at 1–2.

25 *Id.* at 2.

26 *See* Will Steffen et al., *Trajectories of the Earth System in the Anthropocene*, 115 PROC. NAT'L ACAD. SCI. U.S. AM. 8252, 8252 (2018) (describing justifications of the proposed new geologic epoch of the Anthropocene and its features); *see also* Johan Rockström et al., *A Safe Operating Space for Humanity*, 461 NATURE 472, 472 (2009); Johan Rockström et al., *Planetary*

Holocene's stable climactic conditions allowed for incredible advances in human civilizations. Has our wild success as a species pushed us beyond these salutary planetary circumstances? Climate change is the signature issue here, although not the only earth system boundary at risk. Others include global biodiversity, the nitrogen cycle, ozone depletion, atmospheric aerosol loading, global freshwater depletion, land use changes, and chemical pollution.[27] But climate can stand in for the other systems. For years, the scientific consensus has been that to keep temperature increases below two degrees Celsius, beyond which there could be "dangerous" warming, the relevant boundaries are between 350–450 parts per million of greenhouse gas equivalents.[28] We surpassed 400 ppm a few years back, and the levels continue to rise.[29]

Steffen and his co-authors recently issued a new paper, blandly titled *Trajectories of the Earth System in the Anthropocene*.[30] In the paper, they conclude that if steps are not taken soon, the greenhouse gases already in the atmosphere and the feedback mechanisms currently in place may result in pushing "the Earth System toward a planetary threshold that, if crossed, could prevent stabilization of the climate . . . and cause continued warming on a "Hothouse Earth" pathway even as human emissions are reduced."[31] The "Hothouse Earth" scenario could result in run-away temperature increases and devastating effects on vast portions of the planet. The authors state "Hothouse Earth is likely to be uncontrollable and dangerous to many, particularly if we transition into it in only a century or two, and it poses severe risks for health, economies, political stability . . . (*especially for the most climate vulnerable*), and ultimately, the habitability of the planet."[32]

The article soon became known in the press as "Hothouse Earth," and many dire headlines followed, such as this one in Rolling Stone magazine: *Hothouse Earth is Merely the Beginning of the End: Not the end of the Planet, but Maybe the end of its Inhabitants*.[33] Steffen and his co-authors, and many other commentators, were quick to respond that they had not stated anything new about the science. Rather they were framing possible scenarios in order to highlight that human stewardship is necessary to create

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Boundaries: Exploring the Safe Operating Space for Humanity, 14 ECOLOGY & SOC'Y, 24 Sept. 2009, at 32, 32.

27 *See* Rockström et al., *A Safe Operating Space for Humanity*, *supra* note 26, at 472.

28 *See* Will Steffen et al., *Planetary Boundaries: Guiding Human Development on a Changing Planet*, 347 SCIENCE 1259855-1, 1259855-3 (2015).

29 *Greenhouse Gas Concentrations Surge to New Record*, WORLD METEOROLOGICAL ORG. (Oct. 30, 2017), https://perma.cc/V5JD-2KJL.

30 *See generally* Steffen et al., *Trajectories of the Earth System in the Anthropocene*, *supra* note 26.

31 *Id.* at 8252.

32 *Id.* (emphasis added).

33 Jeff Goodell, *Hothouse Earth is Merely the Beginning of the End: Not the End of the Planet, but Maybe the End of its Inhabitants*, ROLLING STONE (Aug. 9, 2018), https://perma.cc/E76P-64ZU; *see also* Steven Salzburg, *Think It's Hot Now? Wait Until We Reach Hothouse Earth*, FORBES (Aug. 9, 2018), https://perma.cc/94PY-LT5X; Matt McGrath, *Climate Change: 'Hothouse Earth' Risks Even if CO2 Emissions Slashed*, BBC NEWS (Aug. 6, 2018), https://perma.cc/WP6P-LEH4.

a pathway that directs the Earth away from the Hothouse scenario and toward a Stabilized Earth pathway.[34] So there is still time to ensure that Earth stays within the boundaries of a stable operating system, but not much. (And maybe even less than Steffen and his co-authors assumed in their paper.)[35]

Can Pinker's optimism save us?[36] Right now it does appear so. The United States, long a foot-dragger on international efforts to address climate change, made some progress under the Obama Administration. But nearly all of that has been erased since the 2016 Presidential Election. The Trump Administration withdrew from the Paris climate accords, which themselves did not do enough achieve the goal of stability at two degrees or less of temperature increase, but were an important step in the right direction.[37] Domestically, the Trump Administration seems to be taking every step possible to move in the opposite direction. Trump's United States Environmental Protection Agency: 1) withdrew the Clean Power Plan rules, which would have required reductions in carbon dioxide emissions according to state-based plans; 2) amended other power plant rules (known as new source review rules) in ways that are likely to increase emissions of all kinds; 3) stated its intent to revoke higher vehicle fuel efficiency standards and to make it impossible for states to have their own lower standards; and 4) announced plans to roll back methane emissions rules.[38] At the same time, the Administration announced a plan for achieving domestic "energy dominance," which entails maximizing fossil fuel production, reviving a dying coal extraction economy, and propping up nuclear energy.[39] These are but a handful of regressive actions on climate and the environment generally.[40] It is astonishing to consider all of the Administration's actions at once in this regard. I challenge even Steven Pinker to be optimistic after reading the legal environmental news every day. (But maybe he would come up with a chart tracking the increasing progress we have made in liberating greenhouse gases.)

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34 *See* Steffen et al., *Trajectories of the Earth System in the Anthropocene*, *supra* note 26, at 8254.

35 *See* IPCC, *supra* note 2, at 6–7 (stating "[g]lobal warming is *likely* to reach 1.5°C between 2030 and 2052 if it continues to increase at the current rate").

36 *See also* DAVID R. BOYD, THE OPTIMISTIC ENVIRONMENTALIST, at xxiii, 199 (2015). Boyd's approach is different from Pinker's; it is more clear-eyed about the risks and less sanguine about scientific rationality alone as the solution to global environmental challenges. But Boyd uses recent progress on environmental protection to argue that environmental advocacy matters. *Id.* at xxiii.

37 *See* Brady Dennis & Chris Mooney, *Countries Made Only Modest Climate-Change Promises in Paris. They're Falling Short Anyway*, WASH. POST (Feb. 19, 2018), https://perma.cc/RKN8-4VXZ.

38 Nadja Popovich et al., *78 Environmental Rules on the Way Out Under Trump*, N.Y. TIMES, https://perma.cc/F3G7-ENLZ (last updated Dec. 28, 2018).

39 *See* U.S. DEP'T OF THE INTERIOR, FINAL REPORT: REVIEW OF THE DEP'T OF THE INTERIOR ACTIONS THAT POTENTIALLY BURDEN DOMESTIC ENERGY 3 (2017), https://perma.cc/R88W-K99Z (stating goal of the U.S. achieving "energy dominance").

40 For a running list of all of the anti-environmental actions and deregulations under the Trump Administration, see generally Popovich et al., *supra* note 38.

C. "Things" Do Not Just Get Better or Worse: Environment, Equality, and Political Economy

Where does this leave us? Are things getting better and worse? Maybe there is another way to think about it, and to be fair to Steffen and his colleagues, I believe they fall into this camp. The "Hothouse," as Steffen says, is not inevitable.[41] It is a product of choices we have made and are making still, to perpetuate an economic system based on perpetual growth, heedless to other indicia of well-being, happiness, or justice.

"Things" don't just get better or worse. We—human societies—make choices that have certain sets of effects. Of course, as individuals, we are not each consciously choosing to perpetuate larger societal effects. But invisible hand-like forces, whether of progress or its opposite, are not at work either. Rather, powerful human constituencies have shaped political and economic structures that have served their interests. Up to a point, these structures have resulted in many of the *successes* of the post-Enlightenment era. But these same structures also created the deeply unequal human and non-human terrain that served those ends, and have set us on a path, not an inevitable one, but a path nonetheless, to Hothouse Earth.

The link between Pinker's world and Hothouse Earth world, then, is this: the imperative of growth in our economic system—the very thing that delivered many but not all of the positives in the Pinker graphs—makes all other values and goals subordinate or at best ameliorative in nature.[42] The political and economic systems of post-industrial capitalism create, as others have described it, a "production treadmill" that operates in the following way: growth is basic to its economic logic, which requires constantly increasing profits.[43] Profits can be gained either from increasing production or reducing the costs of production. As Michael M'Gonigle and Louise Takeda have put it, "[i]n a free and competitive market economy, capital demands a *return*, whether in interest payments or returns on investment. Thus, under capitalism, growth has a life of its own."[44] And *on its own*, growth is attentive neither to equality nor environmental degradation.[45] In a liberal democracy such as ours, which promises formal equality, economic mobility, and allows for political participation, people apply intermittent pressure to address such things. Within the logics of market capitalism, the solution is to increase growth. More growth results in more

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41 *See* Steffen et al., *Trajectories of the Earth System in the Anthropocene*, *supra* note 26, at 8256 ("[O]ur analysis argues that human societies and our activities need to be recast as an integral, interacting component of a complex, adaptive Earth System. . . . The present dominant socioeconomic system, however, is based on high-carbon growth and exploitative resource use.").

42 *See* Michael M'Gonigle & Louise Takeda, *The Liberal Limits of Environmental Law: A Green Legal Critique*, 30 PACE ENVTL. L. REV. 1005, 1061–62 (2013); Angela P. Harris, *The Treadmill and the Contract: A ClassCrits Guide to the Anthropocene*, 5 TENN. J. RACE, GENDER & SOC. JUST. 1, 8 (2016).

43 M'Gonigle & Takeda, *supra* note 42, at 1063.

44 *Id.* at 1062.

45 *See id.* at 1102.

profits, which can be used to employ more workers or to pay them more, or in a liberal democratic state with some commitment to a social safety net, to collect as taxes which can be used for social programs, infrastructure, and benefits. Growth is still the answer. But growth exacerbates environmental degradation, and while growth can sometimes ameliorate poverty, it certainly does not, on its own, address inequality.[46]

This gets us to another piece of the planetary puzzle. In terms of addressing inequality, we are doing very poorly. In *Capital in the Twenty First Century*, the French Economist Thomas Piketty argues that since industrialization, with a brief exception for the disruptions and government interventions following the two world wars, capital income (wealth) has grown at a faster pace than the economy.[47] The quick punchline to this is that wealth begets more wealth, and income earners (and non-income earners) fall further and further behind those who hold preexisting wealth. Today, this pattern means that inequality is increasing in ways that hearken back to times of monarchical inherited wealth.[48]

Dramatic increases in inequality within developed nations have also been accompanied by inequalities across nations, often described as the global north and south divide.[49] So as the world limps closer to the Hothouse Earth scenario, our choices about how to generate and keep wealth are resulting not just in an environmental catastrophe, but a deeply unequal and unjust one. The most recent report by the Intergovernmental Panel on Climate Change, a body of hundreds of experts convened by the U.N. Environment Programme, examined the effects of different temperature increase scenarios on the world's poor.[50] The report examines the marginal difference between 1.5 and two degrees of warming, noting that the various risks associated with climate change are not only higher, but that they are "greatest for people facing multiple forms of poverty, inequality and marginalization."[51] As a journalist paraphrased this, "[e]ither way, the outlook is dire, especially for the poor."[52]

None of this erases the Pinker story entirely though. Rather, these stories live uneasily together. As many things get better and better at a macro-scale, two things happen. For one, the risks that we will cross the Earth's planetary boundaries increase. And for another, for certain of Earth's communities, human and non-human, things get worse, either on a relative scale or an absolute scale, or both.

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46 *See* THOMAS PIKETTY, CAPITAL IN THE TWENTY-FIRST CENTURY 1 (Arthur Goldhammer trans., 2014) (return on capital is higher than growth, so wealth accumulates and grows faster than income, which entrenches inequality).

47 *See id.*

48 *Id.* at 96.

49 Carmen G. Gonzalez, *Environmental Justice, Human Rights, and the Global South*, 13 SANTA CLARA J. INT'L L. 151, 154–55, 173 (2015).

50 IPCC, *supra* note 2, at 11–12.

51 John H. Cushman Jr., *1.5 Degrees Warming and the Search for Climate Justice for the Poor*, INSIDECLIMATE NEWS (Jan. 12, 2018), https://perma.cc/G6R7-U7DE.

52 *Id.* (reporting on early leaked draft of IPCC Report).

Another way to put this is that for many people, it is not possible to assess whether things are getting or worse at high levels of abstraction. It would be quite meaningless, if not cruel, for example, to try to argue rationally with families displaced by massive flooding in Bangladesh about how everything is getting better. Closer to home, poor communities of color that have still not recovered from Hurricane Hugo are unlikely to feel chipper about Pinker's "decreasing poverty" graph.[53] Friends and relatives of the Jewish worshippers murdered at the Tree of Life Temple in Pittsburgh will not be soothed by the "people are inflicting less violence" graph.[54] Broad temporal and geologic scales intersect with and deeply affect the local, but we experience our life in our neighborhoods and communities. So we now turn to two local places to answer our big question about environmental justice and the possibilities for environmental law.

III. ENVIRONMENT AND INEQUALITY IN PLACE

A. Environmentally Hazardous Housing in New York City

New York City has the nation's largest stock of publicly funded housing in the country. Almost 400,000 people live in the 325 developments owned and operated by the New York City Housing Authority (NYCHA).[55] NYCHA's residents are predominately black and brown: 45.6% are Black, 44.5% Hispanic, 4.8% White, 4.5% Asian, and 0.5% Other.[56] They are all low- and moderate-income, either working poor or recipients of public benefits.[57]

Today, NYCHA is embroiled in multiple lawsuits challenging the environmental and health conditions it provides for its residents. Mirabel Baez, represented by the Natural Resources Defense Council, brought a class action case alleging failure to remediate pervasive mold and other health violations.[58] Stories and photographs reveal apartments that are barely habitable, with paint peeling off of the walls and mold visibly colonizing bathrooms and kitchens.[59] Other lawsuits, three in total, challenge the NYCHA's multiple failures to address, remediate, and test for lead.[60] In

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53 PINKER, ENLIGHTENMENT NOW, *supra* note 8, at 87 fig.8-4.

54 *Id.* at 220; *see* Campbell Robertson et al., *11 Killed in Synagogue Massacre; Suspect Charged with 29 Counts*, N.Y. TIMES (Oct. 27, 2018), https://perma.cc/WF9Y-8YU6.

55 *See* N.Y.C. HOUS. AUTH., NYCHA 2018 FACT SHEET 1 (2018), https://perma.cc/KCP2-9QES.

56 N.Y.C. HOUS. AUTH., SPECIAL TABULATION OF RESIDENT CHARACTERISTICS, at iv-1 (2015), https://perma.cc/H7HW-DMZS.

57 *See* N.Y.C. HOUS. AUTH., *supra* note 55, at 1–2.

58 *See* Baez et al., v. New York City Housing Authority, No. 13-CV-8916, 2018 WL 6242224 (S.D.N.Y. Nov. 29, 2018), Modified Amended Stipulation and Order of Settlement, July 24, 2018.

59 *See, e.g.*, Mireya Navarro, *Judge to Appoint Monitor for Mold Repairs in New York Public Housing*, N.Y. TIMES (Dec. 15, 2015), https://perma.cc/QKY3-VNXY; Marian Wang, *NYC Public Housing: Fixing a Leak with a Bucket*, PROPUBLICA (Apr. 3, 2015), https://perma.cc/9WFF-376P.

60 *See* Paige v. N.Y.C. Hous. Auth., No. 17 Civ. 7481, 2018 WL 3863451, at *1 (S.D.N.Y. Mar. 9, 2018) (proposed class against NYCHA for failure to conduct lead paint inspections resulting in lead exposure in children); City Wide Council of Presidents v. N.Y.C. Hous. Auth., No.

the most prominent of these cases, the United States Attorneys' Office filed a civil complaint after several years of investigations, alleging that NYCHA

> [C]overed up its actions, training its staff on how to mislead federal inspectors and presenting false reports to the government and to the public about its compliance with lead-paint regulations. The failures endangered tenants and workers for years . . . and potentially left more children than previously known poisoned by lead paint in their apartments.[61]

NYCHA entered into an historic consent decree this past summer, agreeing to oversight by a court-appointed monitor.[62] In addition the City of New York agreed to spend $1 billion annually over the next four years and $200 million per year after that to address the problems in NYCHA's housing stock.[63] This sounds like a lot, but by some estimates NYCHA requires tens of billions of dollars of repair, so many residents, like Trinese Cropper, who lives in the Bronx River Houses, are skeptical: "'I don't think things are going to change and get better even if there is oversight,' she said, 'Who's going to oversee the overseers?'"[64]

How did New York City's Public Housing come to this? The answer is a microcosm of the political-economic and planetary forces discussed earlier. New York's public housing was created in the 1930s to house the City's lower income residents after the depression.[65] "But NYCHA developments were not poorhouses."[66] They excluded most welfare recipients "by screening applicants using a list of moral factors," which included single motherhood and irregular work history.[67] This of course had discriminatory effects on African Americans and other minorities who were excluded from the workplace by racial discrimination. A current Latina resident describes that when her mother came in the 1950s, "only white people lived here."[68]

By the late 1960s, civil rights laws against housing discrimination and public pressure to accept residents on public assistance resulted in significant demographic changes. Before long, minority residents outnumbered whites, and the number of residents on some form of public

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100283/18, 2018 WL 1911926, at *1 (N.Y. Sup. Ct. Apr. 23, 2018); *see also* Navarro, *supra* note 59 (discussing an earlier decision in 2015).

61 Benjamin Weiser & J. David Goodman, *New York City Housing Authority, Accused of Endangering Residents, Agrees to Oversight*, N.Y. TIMES (June 11, 2018), https://perma.cc/4YKL-498S.

62 *Id.*

63 *See* Consent Decree at 13, United States v. N.Y.C. Hous. Auth., No. 18 Civ. 5213, (S.D.N.Y. June 11, 2018); *see also* Weiser & Goodman, *supra* note 61.

64 Weiser & Goodman, *supra* note 61.

65 For a history of New York City's public housing, see AFFORDABLE HOUSING IN NEW YORK: THE PEOPLE, PLACES, AND POLICIES THAT TRANSFORMED A CITY 4 (Nicholas Dagen Bloom & Matthew Gordon Lasner eds., 2016).

66 Luis Ferré-Sadurní, *The Rise and Fall of New York Public Housing: An Oral History*, N.Y. TIMES (July 9, 2018), https://perma.cc/R3NH-RFBR.

67 *Id.*

68 *See id.*

assistance doubled by the 1970s.[69] Throughout that period, staff and funding increased to meet demand, and NYCHA maintained its developments notwithstanding various social challenges. According to one expert, "as New York falls apart in the 1970s . . . the housing authority's projects were anchors of stability and safety."[70] But this would not last. "By the turn of the [Twenty-First] [C]entury, the idea of government as landlord went out of fashion."[71] "In all but two years since 2002, the federal government has provided less funding than agencies were due under the operating fund, triggering pro rata cuts to each agency's funding. Inadequate capital funding has contributed to a backlog of unmet renovation needs that reached $26 billion by 2010."[72] The decline in support for public housing and public infrastructure had acute impacts on New York's poor and minority residents.

Then, Superstorm Sandy hit. Thousands of public housing residents, many of whom were elderly and disabled or non-English speakers and most of whom were people of color, were stranded in NYCHA buildings without electricity, heat, or hot water for weeks.[73] Forty-five percent of the NYCHA's buildings are in evacuation zones, and the precarious conditions of the housing stock exacerbated the problems.[74] As one representative of NYCHA put it, "Sandy's effect on NYCHA put the icing on the cake. NYCHA was in decay already. Hurricane Sandy and the developments that it hit really devastated the properties, because the boilers and electricity were located in the basements. Sandy came in and really finished the job."[75]

The defunding of public housing and other public services happened during the same period when high-end wealth in the city was exploding. A report by New York City's independent budget office (IBO) affirmed the pattern: the rich were getting richer as the poor were getting poorer. The IBO reviewed a sample of 770,700 tax returns from 2006–2014 and found that median income for the bottom half of the City's income earners dropped by 13%, from $14,153 to $12,360 per year.[76] At the same time, the City's top 1% of income earners saw tremendous income growth, with the most occurring for the top 0.1% of earners.[77] In 2014, for example, the top 0.1% (roughly 3,700 tax filers with incomes higher than $5.2 million) brought home almost 24% of New York City's total income.[78] The very rich got very much richer, while the NYCHA got increasingly poorer, along with its residents. The poor are much

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69 *See id.*

70 *Id.*

71 *Id.*

72 *Policy Basics: Public Housing*, CTR. BUDGET & POL'Y PRIORITIES, https://perma.cc/U2MJ-WHX9 (last updated Nov. 15, 2017).

73 *See* Eric Lipton & Michael Moss, *Housing Agency's Flaws Revealed by Storm*, N.Y. TIMES (Dec. 9, 2012), https://perma.cc/2ZEE-B7MZ; Ferré-Sadurní, *supra* note 66.

74 Lipton & Moss, *supra* note 73; Ferré-Sadurní, *supra* note 66.

75 *See* Ferré-Sadurní, *supra* note 66 (quoting Greg Floyd, President of Teamster Local 237).

76 *See* Rachel Sugar, *New Report Lays Out the Depressing Reality of Income Disparity in NYC*, CURBED N.Y. (Apr. 21, 2017), https://perma.cc/3PYS-LKTH.

77 *Id.*

78 *See* Debipriya Chatterjee, *How has the Distribution of Income in New York City Changed Since 2006?*, N.Y.C. INDEP. BUDGET OFF. (Apr. 19, 2017), https://perma.cc/MS65-QRHT.

more vulnerable to extreme weather events, which will be increasingly common due to climate change. So, as New York gets richer, its poor get poorer. At the same time, the world moves further from being able to reign in greenhouse gas emissions in time to avert dangerous effects on the world's most vulnerable populations.[79] Can laws, including the several lawsuits filed against NYCHA, be part of the environmental justice solution for low-income people in New York City? We will return to that question in Part IV below.

B. Environmental Degradation and Economic (Under) Development on the Navajo Nation

Two thousand miles from New York City's troubled public housing, tens of thousands of Navajo Nation tribal members live without electricity or running water, even though they are surrounded by one of the country's most extensive energy and water infrastructure development projects.[80] Further, nearly all of the pollution effects from those projects affect Navajo people and their landscapes, leaving the energy beneficiaries in big cities throughout the west relatively untouched.[81] The story behind this state of affairs is long and complicated, but the short of it is that the Navajo Nation and Hopi Tribe's coal resources were required to provide power and water to Phoenix, Arizona and other southwestern cities.[82] Phoenix now has 1.5 million residents who live in a desert with no nearby water source.[83] Their city would not exist without the deliberate underdevelopment and over-pollution of vast portions of the Navajo Nation.[84]

Phoenix gets its water from the Central Arizona Project (CAP), a 336-mile long aqueduct of pipelines and canals that runs from Lake Havasu to central and southern Arizona.[85] The aqueduct's route is not downhill, so it takes enormous amounts of energy to pump the water from its source to its users. The federal government acquired 24% of the power generated at Navajo Generating Station, a coal-fired power plant located on the Navajo Nation, so that it could sell the energy to CAP to make its water flow uphill.[86] The coal that fuels Navajo Generating Station is mined from vast deposits

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79 *See* IPCC, *supra* note 2, at 11.

80 *See* Sarah Krakoff, *Sustainability and Justice*, *in* RETHINKING SUSTAINABILITY TO MEET THE CLIMATE CHANGE CHALLENGE 199, 214–15 (Jessica Owley & Keith Hirokawa eds., 2015).

81 *See id.* at 215.

82 For further discussion, see *id.* at 218–24.

83 *See* Robert Roy Britt, *Where Our Water Comes From*, N. PHOENIX NEWS (Apr. 6, 2017), https://perma.cc/R8CF-NSJP (discussing Phoenix's reliance on the Central Arizona Project); *see also Quick Facts: Phoenix City, Arizona*, U.S. CENSUS BUREAU, https://perma.cc/PS2C-HGB5 (listing Phoenix's population approximately 1.6 million as of July 1, 2017).

84 *See* ANDREW NEEDHAM, POWER LINES: PHOENIX AND THE MAKING OF THE MODERN SOUTHWEST 180–82 (2014); DANA E. POWELL, LANDSCAPES OF POWER: POLITICS OF ENERGY IN THE NAVAJO NATION 10 (2018).

85 *Projects & Facilities: Central Arizona Project*, U.S. BUREAU RECLAMATION, https://perma.cc/UBB6-ZLD6 (last visited Feb. 16, 2019).

86 *See* Benjamin Storrow, *A Coal Company and Interior Teamed up to Save a Power Plant*, E&E NEWS (Aug. 15, 2018), https://perma.cc/WPQ3-TB6Z.

underneath Black Mesa, an uplift that spans the Navajo and Hopi Reservations.[87] Peabody Coal owns the coal leases, and the process by which Peabody secured its mining operation was divisive and destructive. It spawned decades of litigation between the Hopi Tribe and the Navajo Nation, caused conflicts within both tribes, and resulted in a forty-year freeze, imposed by the federal government, on all development on a vast portion of the Navajo Nation's reservation.[88]

Today, the coal-fired power plant that gave birth to Phoenix is scheduled to close in 2019, barring subsidies or other last-ditch efforts from the Trump Administration.[89] Together the power plant and coal mine employ roughly 750 Navajo and Hopi tribal members.[90] These communities depend on coal to support their economies, but they have also suffered the environmental ravages of coal mining and coal-fired generation, which include ground water depletion and contamination, air pollution, dislocation, and land scarring. They will also bear disproportionate burdens from climate change.[91] The effects of climate change will disrupt and threaten their cultural and spiritual landscapes and put their economies at even greater risk. These and other communities are therefore triply vulnerable to the convergence of today's most potent ecological-economic crises.[92] That triple vulnerability consists of 1) degradation of land and water due to fossil fuel extraction; 2) heightened vulnerability to climate change; and 3) economic disruption caused by the (necessary) decline in the market for coal.[93]

Natural resources law, federal Indian law, and even environmental law all played a hand in constructing this triple vulnerability for Navajo people. Federal Indian law established a framework for self-governance that displaced traditional Navajo governance, and also pitted the Navajo Nation

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87 Leslie Macmillan, *Black Mesa Mines: Native Americans Demand Return of Their Ancestors' Bones*, GUARDIAN (Dec. 10, 2014), https://perma.cc/PC5H-UEYU.

88 *See* Krakoff, *supra* note 80, at 218–24; *see also* EMILY BENEDEK, THE WIND WON'T KNOW ME: A HISTORY OF THE NAVAJO-HOPI LAND DISPUTE 136–37, 296 (1st ed., 1992) (discussing litigation between the Hopi Tribe and Navajo Nation over areas of the Bennett Freeze).

89 Peter Maloney, *Navajo Coal Plant Nears 2019 Closure with Arizona Water Agency Decision*, UTILITY DIVE (June 8, 2018), https://perma.cc/6R8W-CXVP.

90 *See* Ryan Randozzo, *When Coal-Fired Power Plant Closes, This Mine Will Die. So Will a Lifeline for One Native American Tribe*, AZ CENTRAL (Feb. 23, 2017), https://perma.cc/QN82-4EUR.

91 ASSESSMENT OF CLIMATE CHANGE IN THE SOUTHWEST UNITED STATES 389–90, 392–93, 396–98 (Gregg Garfin et al. eds., 2013), https://perma.cc/V3UZ-PDPM.

92 I use the term "vulnerability" in ways sympathetic to Angela Harris' project of developing a theory of "ecological vulnerability," which recognizes human embeddedness in the natural world and at the same time the ways that power relations have structured unequal positions within that world. *See* Angela Harris, *Vulnerability and Power in the Age of the Anthropocene*, 6 WASH. & LEE J. ENERGY, CLIMATE, & ENV'T 98, 107–08 (2014).

93 "Triple vulnerability" parallels what Kevin P. Gallagher and Jayati Ghosh describe as the "Triple Crisis" affecting the interconnected global systems of finance, development, and environment. Kevin P. Gallagher & Jayati Ghosh, *Introducing the Triple Crisis Blog*, TRIPLECRISIS (Feb. 1, 2010), https://perma.cc/87BS-SK6P; *see also* Harris, *supra* note 42, at 5 (also citing Gallagher & Javati and adding the "'triple crisis,' in turn is concurrent with a series of disparate crises involving violence, political instability, and migration exploding through the human world").

against its neighbor, the Hopi Tribe.[94] A prolonged battle over coal resources resulted in a heavy-handed executive order that froze all development, even fixing an outhouse, on the entire western portion of the Navajo Nation.[95] It took more than forty years for the freeze to be lifted. Natural resources law prioritized coal leasing over traditional land use, and gave free reign to uranium mining companies with virtually no requirements for reclamation.[96] Environmental law prioritized protecting nearby off-reservation landscapes, including Marble Canyon in Grand Canyon National Park, over protecting Navajo and Hopi residents from the ravages of strip coal mining or uranium.

Right now, Pinker's optimistic vision recedes further and further away. Given these complicated frameworks, which have been constructed in part by law's participation in constructing a growth-dependent economy, what can we do to make the world a more just, equitable and sustainable place? How does the big story connect up with these more local stories, and why, given the big story, should we do anything other than despair?

IV. CONCLUSION: LEGAL TOOLS CAN CREATE SPACE FOR CHANGE

Here is why. Nested within the stories of lead exposure in New York City public housing and triple vulnerability on the Navajo Nation are other stories that provide clues about how to reorient our political and economic systems toward environmental and economic justice. In the NYCHA cases, one of the appalling facts is that children in public housing have elevated blood lead levels. That is one of the key allegations in the various lawsuits against NYCHA.[97] But here are some other facts about elevated blood lead levels in New York City's low-income children. Children living in public housing typically have *lower* rates of elevated blood levels than children in private housing.[98] Of the 5,317 children with elevated blood lead levels, 97% lived in private housing and 3% were associated with public housing.[99] Further, public housing, with all of its health hazards and flaws, is still one of the best bets for low-income New Yorkers. Without it, they would have to leave the City or be tyrannized by the private housing market. In NYCHA housing, residents pay rent of up to 30% of their income, the generally accepted rate for feasible household budgeting.[100] There is no such cap in the

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94 *See* BENEDEK, *supra* note 88, at 36–37.

95 *Justice Too Long Delayed on the Navajo Reservation: The "Bennett Freeze" as a Case Study in Government Treatment of Native* Americans, 6 HARV. HUM. RTS. J. 222, 223–26 (1993).

96 DINE POLICY INST., LAND REFORM IN THE NAVAJO NATION: POSSIBILITIES OF RENEWAL FOR OUR PEOPLE 20–22 (2017), https://perma.cc/S7H4-UCY8.

97 *See* Paige v. N.Y.C. Hous. Auth., No. 17 Civ. 7481, 2018 WL 3863451, at *1 (S.D.N.Y. Mar. 9, 2018); City Wide Council of Presidents v. N.Y.C. Hous. Auth., No. 100283/18, 2018 WL 1911926, at *1, *7–8 (N.Y. Sup. Ct. Apr. 23, 2018).

98 N.Y.C. DEP'T OF HEALTH, CHILDHOOD BLOOD LEAD LEVEL SURVEILLANCE QUARTERLY REPORT: QUARTERS 1 & 2, at 1 (2018).

99 *Id.*

100 N.Y.C. HOUS. AUTH., PUBLIC HOUSING RENT CALCULATION FREQUENTLY ASKED QUESTIONS, https://perma.cc/9Z3R-5J8R.

private market, and many residents of New York pay up to 50% or more of their income to keep roofs overhead.[101]

Second, the Navajo Nation has withstood centuries of laws and policies at best indifferent to the survival of the Navajo people, and at worst aimed to eliminate them. They have done this in part by accessing the same body of law that has often been used against them. Federal Indian law, with its treaty promises and protective shell of sovereignty, provides the terrain in which Navajo people can try, over and over again, to perpetuate their culture and their homelands.[102] The Navajo people have come back from imprisonment in New Mexico in the 1860's to reclaim vast portions of their aboriginal lands, and their population has grown at rates higher than the general population for the last several decades.[103] They have a well-developed judicial system, widespread Navajo language use, and a resurgence of interest in traditional culture and ecological knowledge. Options for their self-determination are constructed and often limited by the same legal structures that they have accessed to survive, but within those limitations a diverse and distinctly Navajo ecological-political movement has emerged.[104]

In short, as bad as things are, they are better than they would be without various forms of activism, including legal activism, that can map onto public accountability. The fact that the residents of public housing can sue the NYCHA under a variety of federal laws gives them more recourse than poor and minority residents of private housing. And the fact that the Navajo Nation and its citizens have a distinct political and legal status that allows Navajo people to fight, time and again, for their land and their political self-determination, enables their cultural survival, including the survival of their intimate and irreplaceable ecological knowledge.

This connects to the planetary dilemma in the following way. It may seem as if we are on an inevitable path to Hothouse Earth. Our political economy has many features that lock us on that path. But the openings created by laws that at least give the promise of public accountability allow people to demand much more. Public housing laws, lead paint laws, treaty rights, and pollution laws will not, and do not, themselves lead us to a just and sustainable planet. But they can form the basis for people realizing that they have the power to rise up and demand one. If they do, if you do, that

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101 *See* Justin Fox, *New York's Have and Have-Not Housing Market*, BLOOMBERG (Feb. 22, 2018), https://perma.cc/AF4R-9XRX.

102 *See* Sarah Krakoff, *A Narrative of Sovereignty: Illuminating the Paradox of the Domestic Dependent Nation*, 83 OR. L. REV. 1109, 1137, 1144 (2004) (discussing the impact of Supreme Court cases on Navajo sovereignty); *see also* POWELL, *supra* note 84, at 115–17 (describing tribal sovereignty's "double bind" of protecting Native self-determination while also serving as a constraint imposed by the supremacy of the US legal and economic system).

103 *See* Claire Caulfield, *Feds' Land Buyback Program Has Paid $175 Million to Arizona Tribes so Far*, CRONKITE NEWS ARIZ. PBS (Nov. 1, 2016), https://perma.cc/DWG9-WRYQ (portraying the amount of land the Navajo have reclaimed through a federal buyback program); *see also* NAVAJO DIV. OF HEALTH & NAVAJO EPIDEMIOLOGY CTR., NAVAJO POPULATION PROFILE 2010 U.S. CENSUS 50 (2013) (showing the discrepancy in growth rates between the Navajo and U.S. populations).

104 *See* POWELL, *supra* note 84, at 242–43 (discussing the blend of environmental culture in Navajo politics).

might make the difference between the complacency that leads to Hothouse Earth, and an engaged, active, no-holds-barred uprising that demands to avoid it.

What can we do, what can you do, to this end? A great deal. You can support poor communities so that they have the free attention to organize themselves. You can bring the lawsuits that keep hope of public provision of excellent services alive. You can be mindful, however, that lawsuits do not always aim at the right targets, and therefore also craft broader strategies to restore public funding of housing, education, and social services. You can work alongside indigenous peoples as they redress centuries of policies that undermined their cultures, their knowledge bases, and their land bases. Some of this work is environmental work, but not all of it. Some of it is straight up poverty law, and some is sustainable development law. Some of it is probably criminal law, because so many people caught up in the criminal justice system are poor people of color.

These may sound like small suggestions, and perhaps obvious ones. But the point is that giving up is a cop-out. If you give up because you think Pinker is right and humans will solve this problem because we are all about progress, you are unwittingly ensuring that we are not. And if you give up because you think avoiding Hothouse Earth is a lost cause, you are ensuring that it will be.

"Things" do not just get better or worse. People create constructs and systems that result in better or worse arrangements for certain people and certain groups. If your aim is to create a more just, equitable, and sustainable world, then take every possible step you can to do just that. And so in the end, my suggestion is actually quite big. It is to think of the law of environmental justice as being the law of everything. It is any and all laws that you can recruit to be on the side of poor people forcing the state to be and do better by them, in every sector. You may or may not get there, we may not get there, but none of us will ever get there if we don't try.