

2022

The Cliodynamics of Mass Incarceration, Climate Change, and “Chains on Our Feet”

Nadia B. Ahmad

Follow this and additional works at: <https://ir.lawnet.fordham.edu/ulj>

Recommended Citation

Nadia B. Ahmad, *The Cliodynamics of Mass Incarceration, Climate Change, and “Chains on Our Feet”*, 49 Fordham Urb. L.J. 371 (2022).

Available at: <https://ir.lawnet.fordham.edu/ulj/vol49/iss2/3>

This Article is brought to you for free and open access by FLASH: The Fordham Law Archive of Scholarship and History. It has been accepted for inclusion in Fordham Urban Law Journal by an authorized editor of FLASH: The Fordham Law Archive of Scholarship and History. For more information, please contact tmelnick@law.fordham.edu.

THE CLIODYNAMICS OF MASS INCARCERATION, CLIMATE CHANGE, AND “CHAINS ON OUR FEET”¹

*Nadia B. Ahmad**

Introduction	371
I. Cliodynamics and Complexity	377
II. Sociolegal Patterns of Mass Incarceration in the United States.....	384
A. Historical Prison Trends	384
B. Preparedness of Legal Systems	387
C. Global South Variations.....	393
D. Rule of Law Initiatives as Importation of U.S. Carcerality Overseas.....	393
III. Climate Change Resistance Movements.....	396
A. Momentum of Environmental Defenders	396
B. Intersectional Environmental Injustice	397
Conclusion.....	398
Appendix A.....	400

INTRODUCTION

“What’s the urgency?”

1. See Melissa Bell, *‘They Put Chains on Our Feet’: Haitian Migrant on Experience at Border*, CNN, at 02:13, <https://edition.cnn.com/videos/politics/2021/09/23/haitian-migrant-deportations-lead-bell-dnt-vpx.cnn> [<https://perma.cc/4NX5-REAH>] (last visited Jan. 3, 2022).

* Associate Professor of Law, Barry University Dwayne O. Andreas School of Law; Visiting Associate Professor, Yale Law School; B.A., University of California, Berkeley; J.D., University of Florida Fredric G. Levin College of Law; LL.M. in Natural Resources and Environmental Law and Policy, University of Denver Sturm College of Law. Much appreciation extended to the research assistance of Chaandi Tillack and Liz Jacob. Thank you to Robin Kundis Craig, Michael Pappas, Cliff Villa, Katy Kuh, Wes Henricksen, Luis Inaraja Vera, and Adam Orfond for their comments and feedback on this paper. A note of gratitude to Akmal, Senan, Hanan, Jihan, my parents, and my siblings for their constant love. This paper is dedicated to the memory of Gloria Jean Watkins and Lani Guinier.

– U.S. Senator Joe Manchin²

“When they talk about the USA, they say it is a country with justice.
That’s a lie.”³

President Joe Biden stood at the podium during his address to the United Nations General Assembly (UNGA) in New York on September 21, 2021. He raised his hands in a classic power pose and said:

Instead of continuing to fight the wars of the past . . . we are fixing our eyes on devoting our resources to the challenges that hold the keys to our collective future: Ending this pandemic, addressing the climate crisis, managing the shifts in global power dynamics, shaping the rules of the world on vital issues like trade, cyber and emerging technologies, and facing the threat of terrorism as it stands today.⁴

In this sweeping statement, the President gave a nod to the “global power dynamics” shaping broader geosociopolitical changes in the world. He acknowledged the scope of the world’s problems and argued for the prioritization of “rebuilding our alliances, revitalizing our partnerships and recognizing they’re essential and central to America’s enduring security and prosperity.”⁵ President Biden’s UNGA speech revealed a clear understanding of what is known in strategic management and business organization studies as the idea of *complexity* through mentioning global power dynamics in relation to changes in trade, technology, climate

2. Jeff Goodell, *Joe Manchin Just Cooked the Planet*, ROLLING STONE (Oct. 1, 2021, 11:31 AM), <https://www.rollingstone.com/politics/political-commentary/joe-manchin-reconciliation-bill-big-coal-1235597/> [<https://perma.cc/X78S-3DMS>]. The \$3.5 billion infrastructure bill hangs in the balance with a group of small band of obstructionist Democrats.

But Manchin is f[*]cking it all up. To him, climate is a tomorrow problem. As he said recently on CNN’s *State of the Union*: ‘What’s the urgency?’ . . . Manchin is one of a small group of centrist Democrats who pretend to be motivated by fiscal restraint. They have pitched themselves as the sober adults in the room full of crazy Socialist progressives who are spending like drunken sailors on government programs. Manchin says he can only support \$1.5 trillion, that is the number that he believes is responsible, and he won’t go beyond that.

Id.

3. Jean Sacra Sean Roubens et al., *Haitian’s Monthlong Odyssey to America Leaves Him Right Back Where He Started*, CNN (Sept. 24, 2021, 1:11 PM), <https://www.cnn.com/2021/09/23/americas/haitian-migrants-texas-border-journey-intl/index.html> [<https://perma.cc/33NM-5BUR>].

4. Nahal Toosi & Quint Forgey, *Biden Declares ‘New Era’ of U.S. Diplomacy in U.N. Speech*, POLITICO (Sept. 21, 2021, 3:27 PM), <https://www.politico.com/news/2021/09/21/biden-diplomacy-united-nations-speech-513384> [<https://perma.cc/L7K8-J9SX>] (quoting President Biden’s State of the Union address).

5. *Id.* (quoting President Biden’s State of the Union address).

change, the pandemic, and terrorism. He added: “Our security, our prosperity and our very freedoms are interconnected, in my view, as never before. And so, I believe we must work together as never before.”⁶ His speech was a welcome reprieve from four years of the anti-globalist fatalism of President Donald Trump’s America First jingoism.

Still, President Biden’s 2021 UNGA speech rang hollow as a xenophobic scene unfolded at the Southern Border as immigration officials, reporters, and police met Haitian migrants seeking refuge with violence and anti-Black racism.⁷ “When we go to the U.S., they closed all the access points. And we could not go to buy food,” one Haitian migrant told CNN reporter Melissa Bell.⁸ In another instance Eddy Teverme, who was also deported to Haiti from the United States, said, “[w]hen we arrived in the U.S., the authorities put us on a bus and sent us to jail, and said we would be released in two days. They put chains on our feet, around our stomachs, and our hands. They put us in cars and took us to the airport.”⁹ The accounts of these Haitian migrants are indicative of the experiences of thousands of other migrants who showed up at the U.S. border seeking entry and refuge. There have been so many people that even the reporters cannot bother to capture the names of the migrants’ who they interview.¹⁰ The reporters profit off the migrants’ stories, but they could not manage to get the names of their interview subjects.¹¹ There were too many.

The migrants remain a nameless mass, faces in a crowd of Black bodies that are rejected entry into the United States. Just one month before, a magnitude 7.2 earthquake rocked Haiti — leaving at least 2,200 dead, 12,200 injured, and more than 650,000 in need of assistance.¹² To date,

6. *Id.*

7. See Cristina Baussan et al., *When Climate Change and Xenophobia Collide*, NEW YORKER (Feb. 16, 2021), <https://www.newyorker.com/news/dispatch/when-climate-change-and-xenophobia-collide> [<https://perma.cc/9MKX-VD5T>]; see also Adrees Latif & Kristina Cooke, *U.S. Border Camp Cleared of Haitians, Thousands More on the Move*, REUTERS (Sept. 25, 2021, 1:49 AM), <https://www.reuters.com/world/us/us-border-camp-cleared-haitians-thousands-more-move-2021-09-25/> [<https://perma.cc/UTV9-6K3M>].

8. Bell, *supra* note 1.

9. *Id.*

10. See *id.* (interviewing several Haitian migrants and failing to list all of their names).

11. See *id.*

12. See OFF. OF THE COORDINATION OF HUMANITARIAN AFFS., UNITED NATIONS, HAITI: EARTHQUAKE SITUATION REPORT No. 6 (2021), https://reliefweb.int/sites/reliefweb.int/files/resources/2021-09-23_Haiti%20Earthquake_SitRep%20no.%206.pdf [<https://perma.cc/54Z3-E3EJ>]; see also Kathryn Reid, *Haiti Earthquake: Facts, FAQs, and How to Help* (Aug. 23, 2021), <https://www.worldvision.org/disaster-relief-news-stories/2010-haiti-earthquake-facts> [<https://perma.cc/YTK5-279Z>]. The science of how climate change will impact earthquakes is still unclear, but the frequency and intensity of earthquakes related to other climate change impacts is also important to consider. See Alan Buis, *Can Climate Affect Earthquakes, or Are the Connections Shaky*, NASA (Oct. 29,

this earthquake was both the deadliest natural disaster and earthquake of 2021.¹³ Approximately 754,200 people suffered from acute food insecurity in the three quake-affected areas.¹⁴ Driven by hunger, economic depravity, and sheer desperation, many migrants set out on perilous journeys — spanning seas and up to 12 countries for a chance at a new life in the United States.¹⁵ Without so much as an immigration or asylum application, the migrants were summarily returned to what is known as their country of origin.¹⁶ The migrants returned with no visa, no entry, and no immigration case numbers.¹⁷ Without these legal tools, the United States sought to render these people to be nothing more than numbers, numbers of people piling up at the border.

One of the migrants, Guerrier Antoine, said he traveled over a month through at least 11 countries from Haiti, “braving hostile authorities and violent bandits, being robbed of several years worth of savings, only to end up right back where he started: Haiti’s capital Port-au-Prince, where he was born.”¹⁸ He said, “[w]e left our families hungry in Haiti to go and look for work and a good life. . . . The path has been difficult. Every time we get close, misery catches up.”¹⁹ “‘When they talk about the USA, they say it is a country with justice. That’s a lie,’ Antoine said, sweeping his arm over his head as he emphasized the word ‘justice.’”²⁰ The U.S. Department of Homeland Security promised to continue these repatriations on a daily basis.²¹

2019), <https://climate.nasa.gov/news/2926/can-climate-affect-earthquakes-or-are-the-connections-shaky/> [<https://perma.cc/NTX5-SUCP>].

13. See Brianna Navarre, *10 of the Deadliest Natural Disasters in 2021*, U.S. NEWS (Dec. 23, 2021, 6:00 AM), <https://www.usnews.com/news/best-countries/slideshows/here-are-10-of-the-deadliest-natural-disasters-in-2021?slide=11> [<https://perma.cc/SCJ5-KDPW>] (listing the earthquake in Haiti as the most devastating natural disaster in 2021). For many of the Haitian migrants at the border today, the 2021 earthquake perpetuates the displacement from the 2010 earthquake in Haiti. The repeated earthquakes underscores the slow and compounding violence of natural disasters and the additional dangers that climate change poses. See Amber Phillips, *Why Are There Thousands of Haitian Migrants at the Texas Border?*, WASH. POST (Sept. 24, 2021, 10:14 AM), <https://www.washingtonpost.com/politics/2021/09/21/haiti-migrants-texas-border/> [<https://perma.cc/9HL7-6GRN>].

14. OFF. OF THE COORDINATION OF HUMANITARIAN AFFS., *supra* note 12.

15. See Bell, *supra* note 1.

16. See *id.*

17. See *id.*

18. See Roubens et al., *supra* note 3.

19. See *id.*

20. See *id.*

21. See Gessika Thomas & Daina Beth Solomon, *Angry Scenes in Haiti Airport Add to Biden Pressure over Expulsions*, REUTERS (Sept. 21, 2021, 11:05 PM), <https://www.reuters.com/world/americas/us-says-4000-haitian-migrants-moved-border-four-more-flights-come-mayorkas-2021-09-21/> [<https://perma.cc/5TJ2-KM5G>].

As a result of the earthquake and other existing factors, 10,000 migrants, most of whom were Haitian, set up impromptu camps under a bridge spanning the Rio Grande from Del Rio, Texas to Ciudad Acuna, Mexico.²² The U.S. authorities removed at least 4,000 people from the site for processing in detention centers, while over 500 Haitians were deported right back to Haiti on four flights.²³ Of the numbers showing up at the border, an almost equal number were turned back to their country of origin. The migrants were sent back with no process and no entry — just chains around their feet, stomach, and their hands.

On September 21, 2021, the variables of climate change and carcerality collided on the world stage. This Essay continues the discussion in my earlier article, *Climate Cages: Connecting Migration, the Carceral State, Extinction Rebellion, and the Coronavirus Through Cicero and 21 Savage*, where I access the unmapped linkage of mass incarceration and engagement as responses to climate change and the coronavirus.²⁴ I coined the phrase, climate cages, to illustrate how public policy responses to atmospheric dynamics restrict mobility, worsen prison conditions, and increase carcerality.²⁵ The crisis that Haitian migrants experienced in September 2021 at the U.S. border painfully depicts this phenomenon of climate cages based on displacement due to a natural disaster resulting in detention, chains, cages, and deportation.²⁶ The governmental responses from the halls of Congress to the Oval Office are woefully inadequate in responding to the climate crisis because it restricts mobility and incarcerates “Black and Brown people to maximize available land and space for those who are either more affluent and/or of the more preferred race, religion, and national origin.”²⁷ In this milieu, the idea of corporatism is at play where, “a system of interest and/or attitude representation, a particular modal or ideal-typical institutional arrangement for linking the associationally organized interests of civil society with the decisional structures of the state.”²⁸ The consequences of corporatism also spill into the space of climate change concerns to silence environmental justice efforts and to further exacerbate adverse impacts of climate change on

22. *See id.*

23. *See id.*

24. *See* Nadia B. Ahmad, *Climate Cages: Connecting Migration, the Carceral State, Extinction Rebellion, and the Coronavirus Through Cicero and 21 Savage*, 66 *LOY. L. REV.* 293 (2020).

25. *See generally id.*

26. *See, e.g.,* Bell, *supra* note 1.

27. *See* Ahmad, *supra* note 24, at 294.

28. *See id.* at 302 (citing Philippe C. Schmitter, *Still the Century of Corporatism?*, 36 *REV. Pol.* 85, 86 (1974)).

frontline communities.²⁹ In other words, vulnerable communities, which are located in “sacrifice zones,” are constructed by state actions to have less of a right to be here — in the United States or on the planet — and, therefore, require less of a need for a clean environment, including clean air, clean water, and energy access.³⁰ U.S. immigration and carceral machines respond to the climate crisis with deportations, detentions, and increased incarceration. These solutions should not be the preferred strategy for climate change adaptation for a border crisis. The mistreatment of Black asylum seekers follows the rampant anti-Blackness in U.S. society that “kills, maims and incarcerates Black people in great numbers.”³¹ The situation at the border is indicative of the “historical ‘discomfort’ of American political elites — whose prosperity derived from the enslavement and exploitation of Black people — with a Black-led revolution overthrowing colonial rule and slavery and establishing a republic so close to American shores.”³²

President Biden’s UNGA address acknowledged the idea of visionary thinking and mutual cooperation, but the actions of the U.S. Department of Homeland Security at the southern border on his watch painted an alternate reality.³³ This Essay is an observation of that essential disconnect between the vision and the execution. This Essay proceeds in three Parts. Part I provides the background of the science of cliodynamics and why it is instructive for discussion on climate change and mass incarceration. Part II considers sociological patterns of mass incarceration in the United States. Part III assesses the climate change resistance movements and concludes with normative and intersectional solutions, including the Green New Deal, the Civilian Climate Corps, and the prison abolition movement.

The tsunami of the problems arising from the carceral state and extractivist economy will require a different vantage point. Most

29. *See id.*

30. *Id.* (citing Robert D. Bullard, *Sacrifice Zones: The Front Lines of Toxic Chemical Exposure in the United States*, ENV’T HEALTH PERSP. (June 2011), <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3114843/> [<https://perma.cc/8FWZ-89NL>] (reviewing STEVE LERNER, SACRIFICE ZONES (2010))).

31. Edna Bonhomme, Opinion, *The Border Violence Against Haitians Reflects US Racial Ideology*, ALJAZEERA (Sept. 29, 2021), <https://www.aljazeera.com/opinions/2021/9/29/the-violence-against-haitians-reflects-us-racial-ideology> [<https://perma.cc/F4VC-LT32>].

32. *Id.*

33. *See* Andrew Restuccia & Ken Thomas, *Biden Urges Global Cooperation on Covid-19, Climate Change*, WALL ST. J. (Sept. 21, 2021, 6:16 PM), <https://www.wsj.com/articles/biden-to-stress-importance-of-alliances-in-u-n-speech-11632216602> [<https://perma.cc/ZA6M-6SP7>] (“President Biden outlined a U.S. foreign-policy vision rooted in global alliances during his first address to the United Nations as commander-in-chief . . .”).

environmental and social justice advocates observe situations through a microscopic lens, buried in academic silos. Without stepping back to see the full, big picture, policymakers will also be lost in how to respond to the situation. The same way that astronauts stare down at the Earth, policymakers will have to carve out solutions with an ultra-wide lens. Seeing the intricate dynamics at play through systems theory will show how to better manage the global climate crisis. This Essay considers how the internal and external factors involving carcerality and climate change will lead to a worsening crisis of migration, criminalization, and dire climate change impacts. I offer observations on these systems so that others can establish the mechanisms to expand the scope of climate and carceral state responsiveness. Climate modeling and carceral rates can only provide snapshots of the looming crises, but examining the past and reassessing current predictions will show how swiftly and furiously policymakers, innovators, and scientists must work to broaden the scope of impact to frontline communities and delicate ecosystems.

I. CLIODYNAMICS AND COMPLEXITY

This Part explores the sociolegal dimensions of mass incarceration and climate change through the lens of a field of study known as cliodynamics.³⁴ The term “cliodynamics” originates from the name of the Greek muse of history, Clio.³⁵ The field of cliodynamics included theories that are developed from general principles and then empirically analyzed by comprehensive databases.³⁶ Seeing the sociolegal patterns of cliodynamics offers a means to rework narratives surrounding the carceral state and atmospheric dynamics. This Essay also analyzes how understanding cliodynamics can be used toward reducing mass incarceration and climate change impacts.

Considering complexity and organizational theory can provide insights into this phenomenon. Since the 1960s, an open systems view of organizations saw that *complexity* was a central construct for organization scientists.³⁷ Nobel Laureate Philip Anderson, also referred to as the “Gruff Guru of Physics and Complexity Research,” worried that some complexity

34. See Peter Turchin, *Cliodynamics: Can Science Decode the Laws of History?*, CONVERSATION (Aug. 16, 2012, 4:37 PM), <https://theconversation.com/cliodynamics-can-science-decode-the-laws-of-history-8626> [<https://perma.cc/8GP5-4EJ9>].

35. See *id.*

36. See *id.*

37. See Philip Anderson, *Complexity Theory and Organization Science*, 10 *ORG. SCI.* 216 (1999).

theorists would put too much faith in computer simulation models.³⁸ Anderson propositioned that “[c]omplex organizations exhibit surprising, nonlinear behavior.”³⁹ He noted that “[o]rganization theory has treated complexity as a structural variable that characterizes both organizations and their environments.”⁴⁰ According to Anderson, “[i]n nonlinear systems, intervening to change one or two parameters a small amount can drastically change the behavior of the whole system, and the whole can be very different from the sum of the parts.”⁴¹ Anderson’s analysis of complexity theory paved that way for another field known as cliodynamics, which examines the science and math of history through linear and nonlinear systems changes.⁴² Recognizing the cliodynamics of climate change and mass incarceration will prove useful in addressing the twin assaults. While some have critiqued cliodynamics as creating numbers and data sets for social movements without capturing the heart of the matter, cliodynamics has benefits given the enormity of the climate crisis as a way of managing the numbers displaced and incarcerated with more precise data analysis. Providing narratives and storytelling of the climate crisis in tandem with assessments of cliodynamics can provide a clearer, more human-centric view of the world.

In 2012, geophysicist Brad Werner addressed the Fall Meeting of the American Geophysical Union, which was packed with 24,000 earth and space scientists.⁴³ He presented his paper titled, *Is Earth Fucked? Dynamical Futility of Global Environmental Management and Possibilities for Sustainability via Direct Action Activism*. Author Naomi Klein was in the audience and described the session as a discussion about “system boundaries, perturbations, dissipation, attractors, bifurcations and a whole bunch of other stuff largely incomprehensible to those of us uninitiated in complex systems theory.”⁴⁴ Werner was observing that mass uprising of

38. See John Horgan, Opinion, *Philip Anderson, Gruff Guru of Physics and Complexity Research, Dies*, SCI. AM. (Mar. 30, 2020), <https://blogs.scientificamerican.com/cross-check/philip-anderson-gruff-guru-of-physics-and-complexity-research-dies/> [https://perma.cc/3LBG-RQDF].

39. Anderson, *supra* note 37, at 216.

40. *Id.*

41. *Id.* at 217. “Complex systems change inputs to outputs in a nonlinear way because their components interact with one another via a web of feedback loops.” *Id.*

42. See Turchin, *supra* note 34.

43. See Naomi Klein, *Naomi Klein: How Science Is Telling Us to Revolt*, GREEN LEFT (Nov. 8, 2013), <https://www.greenleft.org.au/content/naomi-klein-how-science-telling-us-all-revolt> [https://perma.cc/UCU8-9RGA].

44. *Id.* Naomi Klein observed:

But the bottom line was clear enough: global capitalism has made the depletion of resources so rapid, convenient and barrier-free that “earth-human systems” are becoming dangerously unstable in response. When pressed by a journalist for a

people would occur and create friction in economic systems, arguing that these social movements were a geophysics problem.⁴⁵ He argued that the instability in the climate would produce unrest that needed to be observed as a geophysical phenomenon.

The intensity of global warming and increasing carbon emissions have limited the available natural resources to live, work, learn, and play, leading to migration, displacement, and incarceration. Robust science indicates that the world is already on its way to four degrees Celsius of warming by the end of the twenty-first century. Legal scholars J.B. Ruhl and Robin Kundis Craig argue that this magnitude of temperature shift is “a governance game changer, taking the multiple interconnected and complex systems that define U.S. society across thresholds and tipping points into cascades of transformational change.”⁴⁶ This Essay synthesizes how the study of cliodynamics can provide a means to address these rapid changes related to mass incarceration and climate change.

Cliodynamics is useful for understanding how social change movements are associated with climate change and mass incarceration. Cliodynamics integrates “historical macrosociology, cultural and social evolution, economic history/cliometrics, mathematical modeling of long-term social processes, and the construction and analysis of historical databases.”⁴⁷

Some scholars have considered how climate issues may have impacted the rise and fall of civilizations, including the Mesopotamians over 4,000 years ago, the Mayans over 3,000 years ago, and Vikings in Greenland over 500 years ago.⁴⁸ Professor Peter Turchin, one of the co-founders of the

clear answer on the “are we fucked” question, Werner set the jargon aside and replied, “More or less.” There was one dynamic in the model, however, that offered some hope. Werner termed it “resistance” — movements of “people or groups of people” who “adopt a certain set of dynamics that does not fit within the capitalist culture.”

Id.

45. *See id.*

46. J.B. Ruhl & Robin Kundis Craig, *4° Celcius* (Univ. of Utah College of L., Research Paper No. 428, 2021), https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3806040 [<https://perma.cc/8RLB-5KH2>]. “[T]he United States, with strong leadership and funding from the federal government, needs to initiate anticipatory governance practices now to facilitate redesign adaptation in the future, beginning with a new national foresight research program.” *Id.*

47. *Cliodynamics*, U.C. RIVERSIDE, https://escholarship.org/uc/irows_cliodynamics/3/2 [<https://perma.cc/D2R9-Q636>] (last visited Oct. 23, 2021).

48. *See* Emily Sohn, *Climate Change and the Rise and Fall of Civilizations*, NASA (Jan. 20, 2014), <https://climate.nasa.gov/news/1010/climate-change-and-the-rise-and-fall-of-civilizations/> [<https://perma.cc/RT8D-KF7E>]; *see also* Sean Fleming, *Climate Change Helped Destroy These Four Ancient Civilizations*, WORLD ECON. F. (Mar. 29, 2019), <https://www.weforum.org/agenda/2019/03/our-turn-next-a-brief-history-of-civilizations-that-fell-because-of-climate-change/> [<https://perma.cc/R6H3-B3XX>].

study of cliodynamics, has argued that “[d]espite its trappings of ‘hard science’ current research on the influences of climate on history lavishes all scientific rigor on the first part of the job, reconstructing past climates, and then turns ‘soft’ when it gets to the climate impact on historical societies.”⁴⁹ For example, according to Turchin, the decline of the Mogul Empire, the genocide in Darfur, the protests of the Arab Spring, and the rise of climate movements are gateways for understanding how cliodynamics works.⁵⁰ Cliodynamics shows to what extent climate change has impacted rates of mass incarceration and vice versa.

In 2012, Peter Turchin predicted that based on previous historical trends and cycles, the 2020s would be a period of massive social unrest.⁵¹ Turchin’s hypothesis played out as the COVID-19 pandemic shuttered businesses and became a public health, world-ending disaster scenario, coupled with worldwide movements for social justice following the police killing of George Floyd in Minnesota.⁵²

Turchin spent the last 20 years studying the crises and structural defects in the United States, which he notes showed signs of spiraling this decade toward upheaval.⁵³ Turchin argues that the United States has faced stretches of turmoil every 50 years since 1870 during the tensions of the Reconstruction Era to the 1970s following the assassination of Martin Luther King, Jr. In 2012, Turchin published an analysis of political violence by classifying 1,590 incidents, including riots, lynchings, any political event that killed at least one person — from 1780 to 2010.⁵⁴ As a whole, historians remain skeptical of Turchin’s claims, insisting that the field of history is complex, and the diversity of human activity prevents

49. Peter Turchin, *The Rise and Demise of Complex Societies. The Effect of Climate. Science*, CLIODYNAMICA (Nov. 4, 2012), <http://peterturchin.com/cliodynamica/the-rise-and-demise-of-complex-societies-the-effect-of-climate-science/> [<https://perma.cc/D8PG-9W29>].

50. *See id.*

51. *See* Melissa Chan, *This Researcher Predicted 2020 Would Be Mayhem. Here’s What He Says May Come Next*, TIME (June 16, 2020, 11:26 AM), <https://time.com/5852397/turchin-2020-prediction/> [<https://perma.cc/QRZ3-64XP>].

52. *See id.*

53. *See id.*

54. *See* Graeme Wood, *The Next Decade Could Be Even Worse*, ATLANTIC (Dec. 2020), <https://www.theatlantic.com/magazine/archive/2020/12/can-history-predict-future/616993/> [<https://perma.cc/T2DT-Z8J3>]. “Turchin excludes the ultimate violent incident, the Civil War, as a ‘sui generis event.’ The exclusion may seem suspicious, but to a statistician, ‘trimming outliers’ is standard practice. Historians and journalists, by contrast, tend to *focus* on outliers — because they are interesting — and sometimes miss grander trends.” *Id.*

attempts to create predictive results.⁵⁵ Critics reject the idea that history can create causal patterns.⁵⁶

The massive global solidarity movement for Black Lives Matter against the backdrop of climate change, raging wars, and political conflict may all appear to be isolated events, but taken together, these events have a collective sociolegal impact on what is acceptable, what is able to be endured, and what will be rejected.⁵⁷ The economic instability, market fluctuations, and social tensions provided an opening for the global climate movement as well as the movement for prison abolition. While Turchin is concerned with the crises created by revolution, riots, and protests, these resistance movements offer a means for reimagining problematic societal configurations of the past. A reimagining of the past will lead to emancipatory processes to encourage climate change adaptation efforts and efforts to decrease carcerality.

Cliodynamics analyzes patterns in history as a mathematical science. Seeing how civilizations respond to variables and shifts, however slight, can have long-term and lasting consequences. The cliodynamics of climate change is based on studies that examine the rise and fall of civilizations as well as patterns of rapid change related to atmospheric dynamics. Geographer Jared Diamond detailed the various scenarios that caused previous societal decline based on historical and archaeological data in *Collapse: How Societies Choose to Fail or Succeed*.⁵⁸ Diamond chronicled how environmental degradation, climate change, globalization, population growth, and political factors led to a demise in societies across the planet and through history, noting how some societies found solutions and carried forward.⁵⁹ In a similar vein, through computer modeling, international environmental scientists Donella Meadows, Jorgen Randers, and Dennis Meadows provided a view of environmental overshoot and risks posed by climate change in *Limits to Growth: The 30-Year Update* (LTG30), analyzing global resource consumption and production.⁶⁰ The initial publication of their work sent shockwaves and served as a warning about the overextending resource use beyond the planet's carrying capacity.⁶¹

55. *See id.*

56. *See id.*

57. *See Black Lives Matter Movement*, HOW. UNIV. LIBR., <https://library.law.howard.edu/civilrightshistory/BLM> [<https://perma.cc/A4RF-764F>] (last visited Oct. 23, 2021).

58. *See generally* JARED DIAMOND, *COLLAPSE: HOW SOCIETIES CHOOSE TO FAIL OR SUCCEED* (2005).

59. *See id.*

60. *See generally* DONELLA H. MEADOWS, JORGEN RANDERS & DENNIS L. MEADOWS, *LIMITS TO GROWTH: THE 30-YEAR UPDATE* (2005).

61. *See id.*

They showed the criticality of reaching sustainable levels of population, consumption, and pollution.⁶² LTG30 demonstrates how each risk is not only dynamic but part of a broader dynamic.⁶³ Positive feedback loops enhance the possibility that small changes in initial conditions can have huge effects as events develop.⁶⁴

Furthermore, Turchin explains that nonlinear interactions can produce mathematical chaos due to “internally driven irregular behavior.”⁶⁵ Through the study of mathematics, scientists have determined that two sources of dynamic systems impacted by cyclic behavior may appear to be behaving chaotically but are instead completely internally generated.⁶⁶ “A system’s complexity can force it to evolve to increasingly complex states that are increasingly unstable — until the equivalent of an avalanche occurs.”⁶⁷ Legal scholars have noted that Professor John William Draper notes that even “one significant discontinuity” can have a cascading effect.⁶⁸ For example, looking at the world economy shows how human civilization is “an unstable system all the more subject to avalanche, especially as humanity is deep in environmental overshoot.”⁶⁹ Discontinuity or disconnect in a system makes it difficult to predict if a system is on the edge of the cliff or approaching a significant crash.⁷⁰ Based on this volatility, some legal scholars and economists argue that humanity should proceed with precaution, slow down and steady itself.⁷¹

Clidynamics engages complexity theory at its core. Complexity theory research entails “how systems and organizations function.”⁷² Policy analyst Cheryl Sullivan observes, “[o]rganizations are no longer believed to be simple, linear, independent systems tightly controlled to ensure stable

62. *See id.*

63. *See id.*

64. *See id.*

65. John William Draper, *Why Law Now Needs to Control Rather than Follow Neo-Classical Economics*, 33 PACE ENV'T. L. REV. 157, 165 (2016) (quoting PETER TURCHIN, *WAR AND PEACE AND WAR: THE RISE AND FALL OF EMPIRE* (2007)).

66. *See id.*

67. *Id.* at 165.

68. *Id.*

69. *Id.*

70. *See id.*

71. *See, e.g., id.*

72. Cheryl G. Sullivan, *Exposure to Complex Environmental Health Challenges: Agent Orange and Sodium Dichromate*, 17 IND. HEALTH L. REV. 153, 155–56 (2020). Jeffrey Goldstein, an editor who launched the journal *Emergence: Complexity and Organization* (E:CO) in 2004, claimed that “complexity research has decidedly demonstrated that thriving organizations are better understood as com-plex [sic], nonlinear, far-from-equilibrium, and in vital contact with multiple environments.” Jeffrey Goldstein et al., *Editors’ Introduction*, 6 EMERGENCE v, v (2004).

environments.”⁷³ In linking complexity theory to capabilities of changing organizations, researchers concluded that “[c]ontinuously changing organizations are likely to be complex adaptive systems with semi-structures that poise the organization on the edge of order and chaos and links in time that force simultaneous attention and linkage among past, present, and future.”⁷⁴ The more systems are able to adapt to change, the more resilient they will become.

Complexity theory indicates that systems that are evolving continuously, are noted by “partial order, and lie between the extremes of very rigid and highly chaotic organization.”⁷⁵ The ways that the law works to move, evolve, and change can be understood through complexity theory and systems dynamics.⁷⁶ This theoretical framework is significant because it offers a modality that has been successful in other business and entrepreneurial settings, including sustainable development, and can be successful in the context of prison divestment, institutional racism, inequity, injustice, and climate change adaptation. Yet, the changes and the potential for change require a fluid understanding of how law and business operate versus an absolute linear understanding of the progression of the law and business.⁷⁷ Sustainability experts David Lubin and Daniel Esty recognized early that most executives would be “flailing around, launching a hodgepodge of initiatives without any overarching vision or plan.”⁷⁸ Essential to responding to the climate crisis is the need to develop distinct sustainability strategies that are able to “increasingly adopt open-source approaches that engage outsiders.”⁷⁹

73. Sullivan, *supra* note 72, at 156 (quoting Jeffrey Goldstein et al., *supra* note 72, at v).

74. *Id.* (quoting Shona L. Brown & Kathleen M. Eisenhardt, *The Art of Continuous Change: Linking Complexity Theory and Time-Paced Evolution in Relentlessly Shifting Organizations*, 42 ADMIN. SCI. Q. 1, 32 (1997)).

75. *Id.*

76. See Jeffrey Rudd, *J.B. Ruhl’s “Law-and-Society System”: Burying Norms and Democracy Under Complexity Theory’s Foundation*, 29 WM. & MARY ENV’T L. & POL’Y REV. 551, 569 (2005).

77. See generally Nadia Ahmad, *Transnational Energy Law Regimes and Systems Dynamics: Calibrating the International Renewable Energy Agency and the Energy Charter Treaty*, in RESILIENCE IN ENERGY, INFRASTRUCTURE AND NATURAL RESOURCES LAW: DEFINING LEGAL PATHWAYS FOR SUSTAINABILITY IN TIMES OF DISRUPTION (Oxford University Press, forthcoming).

78. David A. Lubin & Daniel C. Esty, *The Sustainability Imperative*, HARV. BUS. REV. (May 2010), <https://hbr.org/2010/05/the-sustainability-imperative> [<https://perma.cc/R7AE-5ZWL>].

79. *Id.*

II. SOCIOLEGAL PATTERNS OF MASS INCARCERATION IN THE UNITED STATES

“Our movements are stronger when we connect the dots. What Indigenous peoples are providing is a roadmap for our allies and supporters to adopt as a way to address the climate crisis.”

– Dallas Goldtooth, Indigenous Environmental Network organizer⁸⁰

The legacy of mass incarceration cannot simply be defined through datasets and policy.⁸¹ The decades-long damage of the rise of the carceral state cannot be measured simply in prison and jail statistics.⁸² As incarceration burgeoned, a parallel shift toward more punitive conditions of confinement occurred while policymakers and courts focused on “institutional safety over the dignity and rights of incarcerated people.”⁸³ The effects extend far beyond prison walls to families and communities and in the lives of those who were returning from prison or jail.⁸⁴ These types of intergenerational impacts cannot be quantified or redressed.⁸⁵ By recognizing these constraints, one can use the numbers to show potential patterns for change and add fuel to the fire to push for that change.

A. Historical Prison Trends

In the past 40 years, rates of incarceration have increased 500%, as 2 million people are currently imprisoned in the United States.⁸⁶ Crime rates do not account for this staggering rise, instead, changes in law and policy explain most of the increase in the number of incarcerated. The rise in carcerality is correlated with sentencing policies of the War on Drugs era, resulting in steep growth in incarceration for drug offenses.⁸⁷ The number of U.S. residents imprisoned for drug offenses skyrocketed from 40,900 in 1980 to 430,926 in 2019.⁸⁸ Moreover, strict sentencing rules, including

80. Adam Mahoney, *Study: Indigenous Resistance Has Staved Off 25% of U.S. and Canada's Annual Emissions*, GRIST (Sept. 10, 2021), <https://grist.org/protest/indigenous-resistance-has-cut-u-s-and-canadas-annual-emissions/> [<https://perma.cc/GS7C-LZ42>].

81. See JACOB KANG-BROWN ET AL., VERA INST. OF JUST., *THE NEW DYNAMICS OF MASS INCARCERATION* (2018), <https://www.vera.org/downloads/publications/the-new-dynamics-of-mass-incarceration-report.pdf> [<https://perma.cc/Z42L-UWQE>].

82. *See id.*

83. *Id.*

84. *See id.*

85. *See id.*

86. *See Criminal Justice Facts*, SENT'G. PROJECT, <https://www.sentencingproject.org/criminal-justice-facts/> [<https://perma.cc/GW25-G283>] (last visited Oct. 20, 2021).

87. *See id.*

88. *See id.*

mandatory minimums, kept those convicted of drug offenses in prison for extended periods. For example, in 1986, people released for a federal drug offense spent an average of 22 months in prison.⁸⁹ By 2004, people convicted on federal drug offenses were expected to serve almost three times that length: 62 months in prison.⁹⁰

President Ronald Reagan ushered in a renewed era of law-and-order policing in the 1980s, known as the War on Drugs. Historians note decades worth of punitive crime control laws that ratcheted up the rate of incarceration in the United States, including Reagan's Anti-Drug Abuse Acts, which set mandatory minimum sentences for drug possession, and President Lyndon Johnson's Safe Streets Act of 1968, which enlarged the stream of federal funds to local and state police.⁹¹ By the time President Bill Clinton signed the Violent Crime Control and Law Enforcement Act in 1994, the prison population had tripled in the previous two decades before the legislation was enacted.⁹² Provisions of President Clinton's crime bill widened the net of incarceration "including a 'three strikes' mandatory life sentence for repeat offenders, money to hire 100,000 new police officers, \$9.7 [billion] in funding for prisons, and an expansion of death penalty-eligible offense."⁹³ It also dedicated \$6.1 billion to prevention programs based on input from experienced police officers; "however, the bulk of the funds were dedicated to measures that are seen as punitive rather than rehabilitative or preventative."⁹⁴ At the federal level, people incarcerated on a drug conviction constitute nearly half the prison population.⁹⁵ At the state level, the number of people in prison for drug offenses increased nine-fold since 1980, although the numbers have started to dip.⁹⁶ Most individuals, who are incarcerated, are not high-level actors in the drug trade, and most lack a prior criminal record for a violent offense.⁹⁷

The Global Financial Crisis of 2008, fused with the election of President Barack Obama, ushered new goals of criminal justice reform for both Democrats and Republicans.⁹⁸ The economic crisis spotlighted the

89. *See id.*

90. *See id.*

91. *See* Jessica Lussenhop, *Clinton Crime Bill: Why Is It So Controversial?*, BBC NEWS (Apr. 18, 2016), <https://www.bbc.com/news/world-us-canada-36020717> [<https://perma.cc/7JFH-WRCD>].

92. *See id.*

93. *Id.*

94. *Id.*

95. *See Criminal Justice Facts*, *supra* note 86.

96. *See id.*

97. *See id.*

98. *See* Meghan J. Ryan, *Framing Individualized Sentencing for Politics and the Constitution*, 58 AM. CRIM. L. REV. 1747, 1753–54 (2021).

government resources that were expended on incarcerating millions of people in the United States,⁹⁹ a country with the highest incarceration rate in the world by a landslide.¹⁰⁰ The COVID-19 pandemic has spotlighted the high costs of the penal system, as “the convergence of societal and budgetary impacts of over-incarceration has carved out a window of opportunity for substantive reforms which prioritize efficiency and fairness over partisan politics.”¹⁰¹ Movement activism pushed the development of these new goals (considering especially from the early BLM movement and other abolitionist struggles) to the discussion of the summer of 2020’s movements for racial justice that were catalyzed by the murder of George Floyd.

In 2018, a bipartisan congressional coalition passed the First Step Act of 2018, which included a range of sentencing reforms.¹⁰² Later, George Floyd’s murder in Minneapolis in May 2020 ignited the most massive racial justice protest since the Civil Rights Movement of the 1960s.¹⁰³ As decisionmakers and policy makers were inching toward reform in Congress

99. See *id.* (citing ACLU, PROMISING BEGINNINGS: BIPARTISAN CRIMINAL JUSTICE REFORM IN KEY STATES 5 (2012), <https://www.aclu.org/report/promising-beginnings-bipartisan-criminal-justice-reform-key-states> [<https://perma.cc/SD83-N9KT>]).

100. See *id.* (citing *Highest to Lowest — Prison Population Rate*, WORLD PRISON BRIEF, https://www.prisonstudies.org/highest-to-lowest/prison_population_rate?field_region_taxonomy_tid=All [<https://perma.cc/BRC8-GAC7>] (last visited Oct. 22, 2021) (listing the United States as having an incarceration rate of 629 per 100,000 persons — or 0.629% — and Turkmenistan, the country with the next highest incarceration rate, as having a rate of 576 per 100,000 persons — or 0.576%); see also *Countries With the Most Prisoners per 100,000 Inhabitants, as of May 2021*, STATISTA, <https://www.statista.com/statistics/262962/countries-with-the-most-prisoners-per-100-000-inhabitants/> [<https://perma.cc/U7BK-QAFK>] (last visited Jan. 3, 2022) (listing the United States as having an incarceration rate of 639 per 100,000 persons and El Salvador as having an incarceration rate of 562 per 100,000 persons).

101. Ryan, *supra* note 98 (citing ACLU, PROMISING BEGINNINGS: BIPARTISAN CRIMINAL JUSTICE REFORM IN KEY STATES (2012), <https://www.aclu.org/report/promising-beginnings-bipartisan-criminal-justice-reform-key-states> [<https://perma.cc/KYJ5-5H77>]).

102. See Pub. L. No. 115-391, 132 Stat. 5194 (codified as amended in scattered sections of 18, 21, and 34 U.S.C.); see also Ryan, *supra* note 98, at 1754 (stating the First Step Act included “reducing the applicability of some mandatory minimum sentences, making retroactive a previous reduction of sentencing disparities between crack and powder cocaine drug offenses, and expanding the availability of sentencing reductions in some circumstances. The Act also made some strides in improving certain prison conditions by, for example, prohibiting the use of solitary confinement for juveniles and limiting the shackling of women delivering babies” (citations omitted)); Ames Grawert, *What Is the First Step Act — And What’s Happening with It?*, BRENNAN CTR. FOR JUST. (June 23, 2020), <https://www.brennancenter.org/our-work/research-reports/what-first-step-act-and-whats-happening-it> [<https://perma.cc/7RSP-BSMP>].

103. See Jason Silverstein, *The Global Impact of George Floyd: How Black Lives Matter Protests Shaped Movements Around the World*, CBS NEWS (June 4, 2021, 7:39 PM), <https://www.cbsnews.com/news/george-floyd-black-lives-matter-impact/> [<https://perma.cc/2KLV-G53M>].

and state legislatures, the street protests moved political will on the issue of criminal justice in ways unfathomed previously: “Crossing continents and cultures, Black activists saw Floyd’s death as a symbol of the intolerance and injustice they face at home.”¹⁰⁴ What may appear as a response to social upheaval was actually the response to racial justice along with factors of economic uncertainty, housing insecurity, and the public health crisis, combined with the ongoing climate concerns. The mathematical probability of all these factors appeared to create chaos but was also a change agent, exposing that the constraints of the law were ill-equipped to handle.

B. Preparedness of Legal Systems

Similarly, legal systems will have to respond to changes in the earth and climate systems. Law professor Eric Biber observes that humans will have to respond to the age of the Anthropocene as a new geologic time period because of human influence on the entire planet.¹⁰⁵ Biber notes government law and regulations will have to constantly be updated to respond to changes in oceans, climate, biodiversity, and other critical functions.¹⁰⁶ These changes to the legal doctrines will be similar to the revolutionary legal changes associated with industrialization and the formation of the national economy in the nineteenth and twentieth centuries.¹⁰⁷ Attorney and researcher Rachel Shaw argues that in the context of prisons, emergency preparedness would take the form of changes to mandatory incarceration for minor offenses based on concerns for evacuation from natural disasters like earthquakes, hurricanes, and tsunamis.¹⁰⁸

During moments of natural disasters, like hurricanes, which are becoming more intense due to climate change, a disregard for the wellbeing of prisoners is an immediate consequence.¹⁰⁹ The federal government can encourage states to develop feasible evacuation plans for prison populations.¹¹⁰ Having these criteria in place for an evacuation strategy

104. *Id.*

105. See Eric Biber, *Law in the Anthropocene Epoch*, 106 *GEO. L.J.* 1 (2017).

106. See *id.*

107. See *id.*

108. See Rachel Shaw, *Up the Creek Without a Paddle: Consequences for Failing to Protect Prisoners During a Natural Disaster*, 9 *BARRY U. ENV’T. & EARTH L.J.* 55 (2019).

109. See generally Meghan Vumback, *Evacuating the Incarcerated: The Intricacies of Keeping Prisoner’s Eighth Amendment Rights Intact During Natural Disasters*, 11 *L.J. SOC. JUST.* 57 (2019).

110. See *id.*

will allow for the government to provide more human rights regimes for prisoners.¹¹¹

The concern for prisoners, especially in the context of the Black Lives Matter protests, can be understood through structural-demographic theory (SDT), which was first proposed by Jack Goldstone and later expanded and tested by an international collaboration of investigators, including Turchin.¹¹² SDT puts forward “that the causes of revolutions and major rebellions are in many ways similar to processes that cause earthquakes” with both evolutions and earthquakes, determining “pressures” — structural conditions which gradually form — from “triggers” — “sudden releasing events which immediately precede a social or geological eruption.”¹¹³

Following the George Floyd protests and the resurgence of the Black Lives Matter movement, many scholars also started to revisit the extent of their allyship to such solidary struggles. For instance, criminal law scholar Laurie Levenson shifted toward writing about minimalist efforts to reduce incarceration rates with constitutional challenges arising from changes associated with climate change.¹¹⁴ Professor Levenson noted the ways climate change challenges the criminal injustice system based on “altering the types of crimes committed, to detrimentally impacting prisons, jails, and other criminal justice institutions, to challenging traditional doctrines of criminal law such as the necessity and duress defenses and causation.”¹¹⁵ She appeared to indicate in her article that her connection of climate change and the criminal justice system was novel and unique, but concerns about incarcerated populations in response to climate and weather events have been considered since Hurricane Katrina in 2005.¹¹⁶ For example, the ACLU noted how in the five days after Hurricane Katrina, the Orleans Parish Prison fell into chaos as the water rose in the prison buildings.¹¹⁷ The deputies deserted their posts en masse fearing for their own lives, but leaving the prisoners locked in their cells for days “without power, food or water, some standing in sewage-tainted water up to their chests and

111. *See id.*

112. *See* Peter Turchin & Andrey Korotayev, *The 2010 Structural-Demographic Forecast for the 2010–2020 Decade: A Retrospective Assessment*, SOCARXIV PAPERS (Sept. 16, 2021), <https://doi.org/10.31235/osf.io/7ahqn> [<https://perma.cc/LL45-XFZL>].

113. *Id.* at 1.

114. *See generally* Laurie Levenson, *Climate Change and the Criminal Justice System*, 51 ENV'T. L. 333 (2021).

115. *Id.* at 333.

116. *See id.*

117. *See Prison Conditions and Prisoner Abuse After Katrina*, ACLU, <https://www.aclu.org/other/prison-conditions-and-prisoner-abuse-after-katrina> [<https://perma.cc/Z4LL-93KC>] (last visited Oct. 23, 2021).

necks.”¹¹⁸ The ACLU documented the cases of thousands of men, women, and children in Orleans Parish Prison in the days after the storm as a part of its study.¹¹⁹

Levenson even incorrectly listed the years for Hurricane Hugo and Hurricane Katrina in the draft of her article posted on SSRN.¹²⁰ She notes that looting predictably happens after major weather events, including “Hurricane Hugo in 1985, Hurricane Katrina in 2008.”¹²¹ The published version of the article has corrected the year for Hurricane Katrina but not for Hurricane Hugo.¹²² This error may appear to be a minor quibble during a pandemic, but it is part of a larger structural academic problem. I remembered the years of the storms because growing up in Florida those storms could have just as easily come toward me.¹²³ I know that I was nine years old and not five years old when Hurricane Hugo came to the South. I know I was in the final semester of law school when Hurricane Katrina came. These were horrifying, monster storms. It’s not something I recall casually. As a child, I couldn’t waste time imagining zombies and bogeymen when these hurricanes were real monsters that I lived with that could destroy everything in their path. I saw them with my own eyes. I was an eyewitness to nature’s fury along with the millions of others in the Atlantic Ocean basin in the trajectory of all these powerful storms. I have also watched these storms become stronger and deadlier over time. We are running out of time. Levenson’s emphasis on the looting also demonstrates white fears of racialized minorities following disaster events.¹²⁴ Following an extreme weather event, I am aware that resources, including water, food, shelter, gasoline, etc., are precious commodities. My concern is about the unequal resource allocation and distribution, not the looting that happens as a symptom of these broader system inequalities.

118. *Id.*

119. *See id.*

120. *See* Laurie Levenson, *Climate Change and the Criminal Justice System* 10 (Loyola L. Sch., Los Angeles Legal Studies Research Paper No. 2020-22, 2020).

121. *See id.*

122. *See* Levenson, *supra* note 114, at 346.

123. First person narrative provides an opportunity to offer insights and new perspectives that may be subjective, but these accounts provide a layer of nuance that empirical evidence cannot. *See generally* Devon W. Carbado & Cheryl I. Harris, *Intersectionality at 30: Mapping the Margins of Anti-Essentialism, Intersectionality, and Dominance Theory*, 132 HARV. L. REV. 2193 (2019); Margaret E. Montoya, *HLS 200: A Latina’s Story About the Bicentennial*, 21 HARV. LATINX L. REV. 35 (2018); Saru M. Matambanadzo, *The Fourth Trimester*, 48 U. MICH. J.L. REFORM 117 (2014); Margaret E. Montoya, *Silence and Silencing: Their Centripetal and Centrifugal Forces in Legal Communication, Pedagogy and Discourse*, 33 U. MICH. J.L. REFORM 263 (2000).

124. *See* Levenson, *supra* note 114.

Levenson further wrote, “[b]ut while there has been a great deal of attention paid to issues of infrastructure sustainability, less attention has been focused on the impact of climate change on our criminal justice system.”¹²⁵ Levenson has overlooked nearly 40 years of recent social justice scholarship looking at environmental justice and incarceration in areas of social work, civil rights, and environmental sciences and the 15 years since Hurricane Katrina when the issue of natural disasters and prisons gained widespread attention.¹²⁶ Levenson’s oversight is illustrative of the broader dangers of academic silos, the need to look at the big picture, but also the erasure of scholarship of Black and Brown academics and the overemphasis on elite institutions.

In fact, the week before the pandemic lockdown, two legal symposiums were held on the same day addressing the intersections of environmental law, climate justice, environmental justice at the University of Detroit Mercy and Loyola Law School in New Orleans.¹²⁷ Levenson’s article is unique because it marks the turning point as to when the ivory tower decided to hit the panic button on climate change and the criminal justice because she saw that it was an issue and, according to her, no one else was addressing this issue. Yet, Levenson does not mention the terms “environmental justice” or “climate justice” once in her article. Nor does she recognize the work of Robert Bullard, the father of the field of environmental justice.¹²⁸ When Harvard Law School hosted the Harvard Law Review Prison Abolition Symposium in April 2019, it was welcomed in some circles, hailed in others, and outright rejected by those out of touch

125. *Id.* at 333.

126. See generally Robert D. Bullard, *Race and Environmental Justice in the United States*, 18 YALE INT’L L. 319 (1993). See also W. David Ball, *Redesigning Sentencing*, 46 McGeorge L. Rev. 817, 819 (2014); David Downes, *Visions of Penal Control in the Netherlands*, 36 CRIME & JUST. 93 (2007); Arie Freiberg, *The Road Well Traveled in Australia: Ignoring the Past, Condemning the Future*, 45 CRIME & JUST. 419 (2018); Alexi Nunn Freeman & Jim Freeman, *It’s About Power, Not Policy: Movement Lawyering for Large-scale Social Change*, 23 CLINICAL L. REV. 147 (2016); Carmen G. Gonzalez, *Migration as Reparation: Climate Change and the Disruption of Borders*, 66 LOY. L. REV. 401 (2020); Marie Gottschalk, *Bring It on: The Future of Penal Reform, the Carceral State, and American Politics*, 12 OHIO ST. J. CRIM. L. 559 (2015); Daniel S. Medwed, *Bar None? Prisoners’ Rights in the Modern Age*, 7 NE. U. L.J. 1 (2015); Ronald F. Wright, *Sentencing Climate Change and the Infrastructure of Finality*, 4 WAKE FOREST J.L. & POL’Y 1 (2014); Wyatt G. Sassman & Danielle C. Jefferis, *Beyond Emissions: Migration, Prisons, and the Green New Deal*, 52 ENV’T L. 161 (2021); Nathalie Prescott, *Prisoner (In)consideration in Environmental Justice Analysis*, GEO. ENV’T L. REV. ONLINE (2016).

127. See Symposium, *Race, Class, and Environmental Justice*, 97 U. DETROIT MERCY L. REV. 373 (2020); see also Symposium, *Climate Justice Symposium: The Moral & Legal Imperative of the Climate Crisis*, 66 LOY. L. REV. 293 (2020).

128. See DR. ROBERT D. BULLARD, <https://drrobertbullard.com/> [<https://perma.cc/W8TM-FEYK>] (last visited Oct. 23, 2021).

with the times.¹²⁹ But it was also an indication that as a movement, prison abolition's time in the ivory tower had come. The time for connecting the dots on climate change and incarceration was yesterday. The cliodynamics of climate change and mass incarceration now make it impossible to ignore the connections between these issues.

The protests in response to George Floyd's murder have been building up since the brutal shooting of Trayvon Martin in Sanford, Florida in 2012. In response to the 2013 acquittal of Martin's killer, George Zimmerman, three Black female organizers, Alicia Garza, Patrisse Cullors, and Opal Tometi, started the "Black Lives Matter" (BLM) movement.¹³⁰ The next major tremors came in 2014, following the deaths of Michael Brown in Missouri and Eric Garner in New York.¹³¹ This period also coincided with the Flint Water Crisis and protests related to the Keystone XL Pipeline. The two incidents — the Flint Water Crisis and the Keystone XL protests — showed widespread concern for environmental justice issues and demonstrated the agency of frontline communities to respond to environmental issues. In April 2014, the city of Flint switched its water from Lake Huron near Detroit to the Flint River as a cost-saving measure, and residents complained for over a year of rashes, bacterial concerns, and the water quality without any action.¹³² Those who were in the general public had the option to switch to other water sources even if was not practical, but "[i]nmates — including pregnant women — at Flint's County Jail . . . had no option but to drink, shower, and make food with the contaminated city water."¹³³ Law Professor Rebecca Bratspies is concerned that an overwhelming number of incarcerated people come from environmental justice communities. She points out that the closure of Rikers Island can serve as a moment of restorative justice.¹³⁴

By 2020, the Black Lives Matter had spread across the planet, sending shockwaves of protests to every corner of the globe. The momentum of the movement expanded exponentially with mathematical certitude once specific force-based metrics were satisfied in terms of position and force.¹³⁵

129. See Paul Horwitz, *Some Questions About the Harvard Law Review and Its Scholarly Treatment of Prison Issues*, PRAWFSBLAWG (Dec. 21, 2019, 12:16 PM), <https://prawfsblawg.blogs.com/prawfsblawg/2019/12/is-the-harvard-law-review-very-serious-or-kind-of-unserious-about-prison-issues.html> [<https://perma.cc/F3MZ-G3ZC>].

130. *Black Lives Matter Movement*, *supra* note 57.

131. *See id.*

132. *See* Prescott, *supra* note 126.

133. *Id.*

134. *See generally* Rebecca Bratspies, *Renewable Rikers: A Plan for Restorative Environmental Justice*, 66 LOY. L. REV. 371 (2020).

135. *See* Ana Luisa Trejos et al., *Development of Force-Based Metrics for Skills Assessment in Minimally Invasive Surgery*, 28 SURGICAL ENDOSCOPY 2106 (2014). Force-

The momentum also led to the destruction of a police precinct in Minneapolis and sent aftershocks with greater force impacts spiraling. Movement lawyering for social change expanded awareness of social justice and civil rights issues. Lawyers and activists worked together through direct action methods to respond to systems of oppression and improve strategic and tactical decision-making to the frontline communities that were being served.¹³⁶

The intersections between environmental justice/climate justice and mass incarceration are not new, but now since white academics and the elites are looking at these connections, the connection starts to matter. Levenson may be among early criminal law scholars to ponder, but she may not have conducted a Google search or Westlaw query of the topic before making the assertion that “less attention is focused on climate change on our criminal justice system.”¹³⁷ In her article, Levenson writes how she anticipates how “climate change will affect and create new challenges for law enforcement, prisons, prosecutorial and defense agencies, government offices, and communities.”¹³⁸ Levenson is a criminal justice and constitutional law scholar, so while in her fields those discussions of criminal justice and climate change have not been happening, that does not mean that the discussions of these intersectional issues are not happening. Although Levenson writes a 49-page law review article with 303 footnotes, she does not mention the phrase “environmental justice” even once. By the complete erasure of the established scholarship in the field of environmental justice and carcerality, Levenson falls into the trap of the white savior academic, failing to acknowledge the work of students and people of color, those at the bottom of the legal academic totem poles.¹³⁹ Just because white academics and elites start to see a problem does not mean that the problem has now suddenly emerged and been given permission to exist. Instead, the critical consciousness of this problem by white scholars means that the existence of the problem is now deeply overdue. Levenson’s articles provide innovative insights on how to handle and respond to criminal law issues, but her assertion of recognizing the connection between criminal justice and climate change is stretched.

based metrics are used in the medical field but can also be useful for understanding atmospheric dynamics, social change, and justice movements.

136. See generally Freeman & Freeman, *supra* note 126.

137. Levenson, *supra* note 114, at 336.

138. *Id.*

139. See, e.g., Jamie Willer, Working Through the Smog: How White Individuals Develop Critical Consciousness of White Saviorism 6–7 (May 2019) (M.A. Thesis, Merrimack College), https://scholarworks.merrimack.edu/cgi/viewcontent.cgi?article=1028&context=soe_student_ce [https://perma.cc/X3JK-TWDB].

C. Global South Variations

The effects of climate change are not born equally by Global North and Global South populations, nor between marginalized Black and Brown communities and the rich and powerful, who contribute most to carbon emissions through their energy consumption patterns. “[I]ncome and resource inequalities highlight how the Third World provide for the living standards of the Global North through its lands, livelihoods, and lives.”¹⁴⁰ Law Professor Carmen Gonzalez argues that historical inequity concerns should be factored into responding to climate displacement, relocation and resettlement.¹⁴¹ Yet the government’s immigration enforcement platform in the United States over the past four decades has instead increased detention through both civil legal authority and criminal legal authority, which invariably created the world’s largest immigration detention center.¹⁴² During the Trump Administration, immigration detentions reached an all-time peak. Yet statistical trends combined with cliodynamics will show that these numbers will creep back up as the COVID-19 pandemic subsides. For reference, in early 2019, ICE confined nearly 50,000 people per day, but by the middle of 2019, that number exceeded 52,000.¹⁴³ The numbers are constantly growing: “‘Annually, the government incarcerates nearly 400,000 people under the same authority’, a figure that has grown substantially over the last few years and one the government was likely to surpass in 2020 until the pandemic caused daily detention numbers to dip.”¹⁴⁴ Law Professors Wyatt Sassman and Danielle Jefferies argue, “[t]here is little reason to suggest the numbers will not climb again as a vaccine for the novel coronavirus becomes available and/or court-ordered monitoring of immigration prisons ends.”¹⁴⁵ Trends indicate that the number of cases of the coronavirus continue to increase.

D. Rule of Law Initiatives as Importation of U.S. Carcerality Overseas

The U.S. logic of the carceral state seems to resemble other countries which have created punitive and lengthy prison sentences, negatively

140. Nadia Ahmad, *Blood Biofuels*, 27 DUKE ENV'T L. & POL'Y F. 265, 283 (2017) (citation omitted).

141. See generally Gonzalez, *supra* note 126; Freiberg, *supra* note 126.

142. See Sassman & Jefferis, *supra* note 126.

143. See *id.*

144. *Id.* at 193 (quoting Danielle C. Jefferis, *Constitutionality Unaccountable: Privatized Immigration Detention*, 95 IND. L.J. 145, 148 (2020)).

145. *Id.*

impacting vulnerable communities.¹⁴⁶ While this process of increased carcerality could be happening on its own, investigative reporting shows the U.S. Department of State has been exporting rule of law initiatives to expand carcerality overseas.¹⁴⁷ Various rule of law programs began in Latin America during the War on Drugs period in the early 2000s, spreading through the Middle East in the wake of the War on Terror and then expanding globally as a part of President Obama's counterterrorism strategy.¹⁴⁸ The Department of State trained approximately 50,000 prison officers across the world over the past decade, who in turn, educated at least another 60,000 prison officers.¹⁴⁹ The United States was involved in the prison systems of 38 countries in 2017, installing more than 100 full-time advisers.¹⁵⁰ Critics at home have extolled the United States for "its overreliance on solitary confinement and its out-of-control prison population — although the US has only 5% of the world's population, it contains 25% of its prisoners, or more than 2.2 million people."¹⁵¹ U.S. military detention centers in Guantanamo Bay and Abu Ghraib have been mired with scandals, and a U.S. detention center in Iraq was where ISIS's leaders first met and began to organize.¹⁵²

Not only has the United States grown its own systems of incarceration, the U.S. idea of the carceral state has also developed through rule of law programs for prison systems.¹⁵³ "Changes in the carceral state that may

146. See Ahmad, *supra* note 24, at 306 (citing Vicky Peláez, *The Prison Industry in the United States: Big Business or a New Form of Slavery?*, GLOB. RSCH. (June 14, 2020), <https://www.globalresearch.ca/the-prison-industry-in-the-united-states-big-business-or-a-new-form-of-slavery/8289> [<https://perma.cc/JN69-GP7N>]).

147. See Doug Bock Clark, *The US Wants to Remake the World's Prisons in Its Own Image*, BUZZFEED NEWS (May 28, 2017, 11:00 AM), <https://www.buzzfeednews.com/article/dougbockclark/america-remakes-the-worlds-prisons#.xrk3p4Be> [<https://perma.cc/Q3GQ-5EAV>].

148. *See id.*

149. *See id.*

150. *See id.*

151. *Id.*

152. *See id.*; see also Andrew Keane Woods, *ISIS Was Born in an American Detention Facility (And It Wasn't Gitmo)*, LAWFARE (Feb. 3, 2016, 4:23 PM), <https://www.lawfareblog.com/isis-was-born-american-detention-facility-and-it-wasnt-gitmo> [<https://perma.cc/762H-XYRG>].

153. See *America Is Exporting Its Extreme Prison System Across the Globe*, EQUAL JUST. INITIATIVE (June 2, 2017), <https://eji.org/news/america-exporting-abusive-prison-system-across-globe/> [<https://perma.cc/ZLY4-E4C8>] ("Starting in 2000, the United States spent \$140 million to overhaul Colombia's justice system as part of the 'war on drugs.' Six new prisons were built between 2000 and 2003 based on blueprints from a federal prison in Florida. Sixteen more prisons were built over the next dozen years, increasing capacity by 70 percent, and guards were trained using American instruction manuals translated into Spanish. Colombia hired Rudy Giuliani as a consultant and adopted his 'broken windows' policy, which includes harsh punishment for minor offenses.").

actually reduce crime and carcerality itself tend to be ignored by policymakers and legislators in favor of programs which increase construction of prisons and create jobs for prison workers.”¹⁵⁴ Public attention tends to be diverted away from substantive reforms.¹⁵⁵

Incarcerated folks have been by and large excluded from conversations around bold climate proposals like the Green New Deal, which “neglects to engage with decarceration, prison abolition, or demilitarization.”¹⁵⁶ Initially, lead advocates of the Green New Deal did not say much to specifically address current prisons.¹⁵⁷ The major demand in 2018’s national prison strike was to create “immediate improvements to the conditions of prisons and prison policies that recognize the humanity of imprisoned men and women.”¹⁵⁸ By 2019, those basic demands were left unmet, and the number of incarcerated people who died preventable, climate-related deaths rose.¹⁵⁹ In Southern prisons, the lack of air conditioning has had devastating health and social consequences, especially in the summer months.¹⁶⁰ President Joe Biden’s official withdrawal from Afghanistan in August 2021 triggered a wave of unrest, especially as Afghans who had assisted the U.S. effort sought refuge in the United States.¹⁶¹ The U.S. withdrawal led to displacement internally and

154. Ahmad, *supra* note 24, at 307.

155. See Michael A. Rosengart, Note, *Justice Reinvestment in Alaska: The Past, Present, and Future of SB 91*, 34 ALASKA L. REV. 237, 268–69 (2017).

156. Kim Kelly, *The Climate Disaster Inside America’s Prisons*, NEW REPUBLIC (Sept. 18, 2019), <https://newrepublic.com/article/155092/climate-disaster-inside-americas-prisons> [https://perma.cc/PFX7-KRHG] (quoting the national prison strike’s goals).

157. See *id.*

158. *Id.*

159. See *id.*

160. See Alexi Jones, *Cruel and Unusual Punishment: When States Don’t Provide Air Conditioning in Prison*, PRISON POL’Y INITIATIVE (June 18, 2019), <https://www.prisonpolicy.org/blog/2019/06/18/air-conditioning/> [https://perma.cc/WC5P-Y5G7].

Prolonged exposure to extreme heat can cause dehydration and heat stroke, both of which can be fatal. It can also affect people’s kidneys, liver, heart, brain, and lungs, which can lead to renal failure, heart attack, and stroke. Many people in prison are especially susceptible to heat-related illness, as they have certain health conditions or medications that make them especially vulnerable to the heat. Conditions such as diabetes and obesity can limit people’s ability to regulate their body heat, as can high blood pressure medications and most psychotropic medications (including Zoloft, Lexapro, Prozac, Cymbalta, and more but excluding the benzodiazepines). Old age also increases risk of heat-related illness, and respiratory and cardiovascular illnesses, such as asthma, are exacerbated by heat.

Id.

161. See Nadia Ahmad, *The US Endgame in Afghanistan Was Mineral Extraction, Not Democracy*, COMMON DREAMS (Aug. 25, 2021), <https://www.commondreams.org/views/2021/08/25/us-endgame-afghanistan-was-mineral-extraction-not-democracy> [https://perma.cc/8R67-Q9UG].

motivated Afghans to flee the country due to the uncertainty of Taliban rule in the region.¹⁶² The Taliban's confinement of women in the home and exclusion of them in the public sphere from government to education follows the U.S. carceral model of criminalizing dissent and protest.

III. CLIMATE CHANGE RESISTANCE MOVEMENTS

The drive for prison abolition resembles and is deeply connected to struggles for climate justice. While these struggles may be distinct, the systems at play still operate in hegemonic unison.¹⁶³ Blackouts, overheating in warm climates, low temperatures in freezing conditions, and water quality issues are increasing in the prisons due to climate change. Climate change will worsen extreme weather conditions, growing vulnerabilities for prison populations.¹⁶⁴ Prison overcrowding preserves corporatism and is manifested by disparate responses to environmental pollution concerns from the Flint water crisis to pipeline protests at Line 3 in Minnesota.¹⁶⁵

A. Momentum of Environmental Defenders

Since September 2021, over 700 water protectors and indigenous leaders have been arrested while protesting Line 3 in Minnesota.¹⁶⁶ Environmentalists and Indigenous groups have been protesting the pipeline on the ground and in the courtroom.¹⁶⁷ A number of the protests have been imprisoned and fined for their protests. Enbridge is a Canadian company, which is approaching completion of its Line 3 pipeline project in Minnesota, to replace an older pipeline with a lower carrying capacity that would “cross wetlands and over 200 water bodies, endangering the health of her constituents and treaty lands of Indigenous peoples.”¹⁶⁸ While legal options in court are dwindling, pipeline opponents are pressuring the White House to cancel the U.S. Army Corps of Engineers' federal water

162. See *What's Next for Afghans Fleeing the Taliban?*, HUM. RTS. WATCH (Sept. 9, 2021, 12:00 AM), <https://www.hrw.org/news/2021/09/09/whats-next-afghans-fleeing-taliban#> [<https://perma.cc/MV42-3CNJ>].

163. See Ahmad, *supra* note 24, at 300.

164. See *id.* at 301.

165. See *id.* at 301–02.

166. See Jessica Corbett, *The Squad Protests Line 3 in Minnesota: 'We Are Here Because the Climate Crisis Is Here,'* COMMON DREAMS (Sept. 3, 2021), <https://www.commondreams.org/news/2021/09/03/squad-protests-line-3-minnesota-we-are-here-because-climate-crisis-here> [<https://perma.cc/4AW3-D6S7>].

167. See *id.*

168. See *id.*

permit.¹⁶⁹ The frequency and intensity of pipeline protests will continue to increase. These social justice movements also offer a means to reexamine environmental justice in the academic context.

B. Intersectional Environmental Injustice

Environmental sociologists Stephanie Malin and Stacia Ryder have observed that the field of environmental justice “has yet to capitalize on this momentum by bringing these analyses into intersectional theoretical space.”¹⁷⁰ Prominent environmental justice scholars have observed “that scholarship lacks meaningful engagement with the complexities of intersecting environmental injustices,” citing the work of Amartya Sen and Martha Nussbaum to suggest a capabilities approach because of the broad range of issues addressed, including social and political rights.¹⁷¹ The intersectional forms of structural environmental injustice “operate as classist, racist, sexist, nativist, ableist, homophobic, and anthropocentric matrices of domination.”¹⁷² The pipeline protests over Indigenous lands evidence the intersectionality of the environmental justice movement. The same and similar coalition building in prison abolition, siting of industrial prisons, incarceration rates, and other environmental justice concerns, like water quality and clean energy access, have connected issues of poisoned water, poverty, racial/ethnic marginalization, and deindustrialization.¹⁷³

When the Sunrise Movement organized a sit-in at Nancy Pelosi’s office in January 2019, veteran environmental activists realized they were doing everything all wrong.¹⁷⁴ The Sunrise Movement is a multifaceted and intersectional campaign for environmental protection and climate justice.¹⁷⁵

169. See Kirsti Marohn, *As Line 3 Nears Completion, Pipeline Battles Are Far from Over*, MPR NEWS (Aug. 31, 2021, 7:16 PM), <https://www.mprnews.org/story/2021/08/31/as-line-3-nears-completion-pipeline-battles-are-far-from-over> [https://perma.cc/Z849-Y59E].

170. Stephanie A. Malin & Stacia S. Ryder, *Developing Deeply Intersectional Environmental Justice Scholarship*, 4 ENV’T. SOCIO. 1, 2 (2018).

171. *Id.* at 2. “David Pellow (2016) notes these expansion efforts as part of a ‘second generation’ of EJ scholarship, focused on developing a critical environmental justice field that questions long-standing assumptions in environmental justice research as they relate to social categories, scale, state-sanctioned violence, and ecological justice.” *Id.* at 3.

172. *Id.* at 1.

173. *See id.*

174. See Miranda Green, *Ocasio-Cortez Joins Climate Change Sit-in at Pelosi’s Office*, HILL (Nov. 13, 2018, 11:31 AM), <https://thehill.com/policy/energy-environment/416411-youth-protestors-fill-nancy-pelosis-office-demanding-climate-change> [https://perma.cc/Y5U7-QDBV].

175. See Cat Kutz, *This Texas Teen Is Changing the Climate Change Community*, SMITHSONIAN VOICES (Oct. 1, 2021), <https://www.smithsonianmag.com/blogs/conservation-commons/2021/10/01/meet-chante-davis/> [https://perma.cc/77F7-UY5S].

By ambushing the lion's den of the most powerful woman in D.C., youth climate activists pushed leading environmental activists and leading Democrats to adopt a shift as the youth vote would be essential in 2020. Everyone in D.C. took notice, especially the veteran environmentalists. The renewed momentum for climate activism was part of a coordinated organizing strategy known as Momentum, which encourages activists to keep the movement constantly growing instead of fading away after a few flashy protests.¹⁷⁶ This Momentum approach has been used by Black Lives Matter, immigrant rights groups, Indigenous organizers, Extinction Rebellion, Sierra Club, and 350.org.¹⁷⁷ This Momentum strategy was on a full display when tensions grew high in Minneapolis last summer. Activists around the world deployed, awakening a sleeping dragon of protest in the midst of the COVID-19 pandemic. While these movements have been occurring somewhat independently, the thread of environmental justice runs between the two movements of racial justice and climate change activism.

CONCLUSION

Leading up to the November 2020 elections, President Biden's campaign sought to expand the electorate and turned to the youth vote to do so. More so, global warming continues to be an existential threat multiplier for security. Democratic campaign officials realized the climate plan was central to harnessing the youth vote. A youth-driven climate and environmental justice movement went from doing teach-ins and sit-ins to drafting policy.¹⁷⁸ While some say the plan falls short as only a better-than-before policy, climate activists have moved on the major policy points.

Sunrise Movement's Co-Founder and Executive Director Varshini Prakash, who served on the Unity Task Force on Climate and Environmental Justice, tweeted: "All in all, I feel genuinely hopeful. Not because of a task force, or because of what I expect Biden to do or not do,

176. See Climate Advoc. Lab, *The Keys to the Sunrise Movement's Momentum? A Bold Idea, A Visionary Narrative, and Organising Best Practices*, MOBILISATION LAB (Feb. 13, 2019), <https://mobilisationlab.org/sunrise-movement-bold-idea-visionary-narrative-organising-best-practices/> [<https://perma.cc/4CG8-X2JF>].

177. See, e.g., Lewis Page, *Climate Activists Are Rebellious. Are Politicians Finally Listening?*, SIERRA (May 8, 2019), <https://www.sierraclub.org/sierra/climate-activists-are-rebellious-are-politicians-finally-listening-extinction-rebellion> [<https://perma.cc/RZ9R-E3HY>] (explaining how this movement is used by other climate change groups).

178. See Gregory Krieg, *The Sunrise Movement Is an Early Winner in The Biden Transition. Now Comes the Hard Part.*, CNN (Jan. 2, 2021, 8:28 PM), <https://www.cnn.com/2021/01/02/politics/biden-administration-sunrise-movement-climate/index.html> [<https://perma.cc/B9WC-R5X8>].

but because of what our movement has already shifted and made possible.”¹⁷⁹ The tremors from the BLM and youth climate protests are reverberated in the 2020 DNC Platform and in Biden’s policy proposals.¹⁸⁰ President Biden has been slow to respond to calls for criminal justice reform while also increasing funding for policing and military coffers.¹⁸¹ President Biden has also resisted more aggressive climate change adaptation efforts, including the Green New Deal.

The thinking of law as centered around nature is crucial for seeing the connections for resiliency in dynamic systems.¹⁸² The land title and legal systems are designed for wealth maximization and fall to the principal idea of shareholder primacy to effectuate capital accumulation. Resiliency, focused on environmental justice, clashes with the goals of wealth maximization and capital accumulation. Resilience thinking developed from physics, psychology, ecology, and urban planning.

While some may criticize the numbers-based approach to history as a failure to understand the complexities of the field. I agree with Turchin that the numbers can provide data points and ways to access and predict the future. Turchin describes how the state, population factors, instability dynamics, and the issues of the elite are interconnected issues or variables. Instability in one or more systems can have cascading effects on the entire system.¹⁸³ The numbers are the bold response to the urgency of the matter. The time to act on climate was yesterday. We have approached the point the no return, and there is no turning back.

179. Varshini Prakash (@VarshPrakash), TWTEXT.COM, <https://twtext.com/article/1280963350437015554> [<https://perma.cc/N46R-PWYR>].

180. The Author served as a 2020 Delegate to the DNC National Convention and is an elected member of the Democratic National Committee.

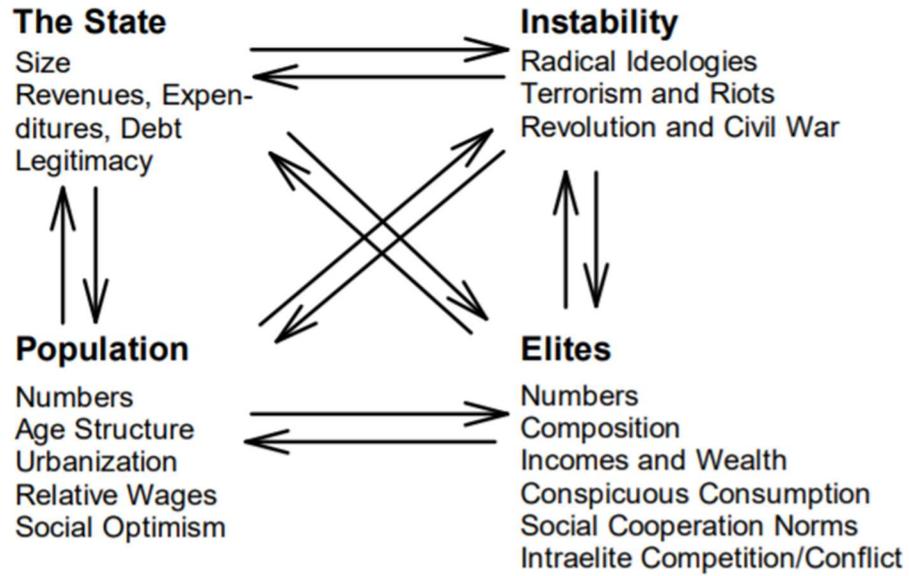
181. See Aaron Mehta & Joe Gould, *Biden Requests \$715B for Pentagon, Hinting at Administration’s Future Priorities*, DEFENSE NEWS (Apr. 9, 2021), <https://www.defensenews.com/breaking-news/2021/04/09/biden-requests-715b-for-pentagon-hinting-at-administrations-future-priorities/> [<https://perma.cc/6FYF-985Y>].

182. See Ahmad, *supra* note 24.

183. See app. A.

APPENDIX A

Figure 1: The main logical components of the structural-demographic theory¹⁸⁴



184. See Turchin & Korotayev, *supra* note 112.