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BOTTOMS-UP: CAPABILITIES, COOPERATION, AND CLIMATE CHANGE ADAPTATION

GREGORY S. ALEXANDER

ABSTRACT

This paper discusses climate change and climate change adaptation from the perspectives of human flourishing and capabilities theory. It discusses how the human capacity to cooperate enables successful, albeit small-scale, neighborhood, or bottoms-up, initiatives at climate change adaptation. The paper uses three examples of neighborhood groups that worked together to develop different strategies for responding to the impacts of climate change in their areas. Finally, the paper offers a brief reflection on the basis of human cooperation.

This brief paper attempts to make three points about climate change adaptation. First, it connects the topic of climate change with human flourishing theory and particularly the human flourishing theory of property. Second, drawing on the capabilities theory developed by Amartya Sen and Martha Nussbaum, it discusses how certain human capabilities, notably cooperation, enable a private, or bottoms-up, approach to climate change adaptation that augments public or regulatory efforts to adjust to the effects of climate change. The paper uses three examples of neighborhood groups that worked together to develop different strategies for responding to the impacts of climate change in their areas. Third, and more broadly, the paper argues that humans are social beings who cooperate with each other not simply as a matter or reciprocity but also as a matter of mutual concern, and that this cooperative characteristic of humans is the basis of a bottoms-up approach to climate change adaptation.

By way of background, the paper begins with a brief account of the devastating wildfires that have swept through parts of Northern

California in recent years. It describes how citizen groups in response to these have organized themselves to adjust to these changed conditions that not only threaten their property but potentially their lives as well. In Part II, the paper then moves from description to theory. It provides a short summary of the human flourishing theory of property. Part III then shows how human flourishing depends on capabilities. It further discusses how at least in some circumstances resulting from climate change, capabilities may be the means, rather than the ends, as the capabilities theory usually posits. Part IV provides three examples of neighborhood groups that have developed various strategies aimed at adapting to climate change. These examples illustrate the ability of individuals to cooperate with each other in small-scale efforts, leading to the success of a bottoms-up strategy in climate change adaptation. Part V builds upon Part IV with a brief discussion of the nature of cooperation generally, its foundation, and its limits. Finally, Part VI comes full circle and briefly discusses how human flourishing is possible in a world of climate change.

I. WILDFIRES IN SONOMA COUNTY, CALIFORNIA

I live in the Wine Country of Northern California, Sonoma County. I live in the fire country of Northern California. Since 2017, my wife and I have been evacuated from our home outside of Healdsburg three times because of massive wildfires nearby. Fortunately, on all three occasions our house escaped the fire, but unfortunately, several of our neighbors' homes did not.

Wildfires are a too-familiar part of life in Sonoma County. Just since 2015, Sonoma County has experienced five major fires that have destroyed thousands of acres, taken homes and other structures, and in some cases taken lives. The 2017 Kincade Fire, which torched 77,758 acres and leveled 5,643 structures, is the largest fire in Sonoma County history.[1] Combined with the Tubbs Fire, the Nuns, Atlas, Redwood Valley, Pocket and Sulphur fires destroyed over 195,000 acres.[2] The 2017 Tubbs Fire was at the time the most destructive wildfire in California history.[3] It burned parts of Napa, Sonoma, and Lake counties, inflicting its greatest losses in the city of Santa Rosa.[4] The Tubbs Fire was one of more than a dozen large fires that erupted

1. Janet B. Weber, *A Look Back at Wildfires in Sonoma County and on the North Coast*, THE PRESS DEMOCRAT (Nov. 14, 2019), https://www.pressdemocrat.com/article/news/a-look-back-at-wildfires-in-sonoma-county-and-on-the-north-coast/.

2. *Id.*

3. *See* CAL. DEP'T OF FORESTRY & FIRE PROT., TOP 20 MOST DESTRUCTIVE CALIFORNIA WILDFIRES (2024), https://34c031f8-c9fd-4018-8c5a-4159cdff6b0d-cdn-endpoint.azureedge.net/-/media/calfire-website/our-impact/fire-statistics/ top-20-destructive-ca-wildfires.pdf?rev=9e4974c273274858880c2dd28292a96f&hash=29E21CBFCE8D9885F606246607D21CEB (last visited Nov. 8, 2024).

4. *Tubbs Fire*, WIKIPEDIA, https://en.wikipedia.org/wiki/Tubbs_Fire (last visited Mar. 7, 2024).

in October of that year. These fires burned simultaneously in eight counties in what was called the "Northern California firestorm."[5]

It is hard to describe the devastating effects of these fires on people's lives. The Tubbs Fire provides a particularly powerful example. "It destroyed more than 5,643 structures, half of which were homes in Santa Rosa," and killed twenty-two people.[6] In the city of Santa Rosa, the fire destroyed much of the Coffey Park neighborhood, including about 1,300 structures, mostly detached homes.[7] Five percent of the city's housing stock was destroyed.[8] Of the 2,900 homes destroyed in Santa Rosa, over 200 of them belonged to doctors associated with the area's hospitals.[9] Among the losses was the destruction of the Santa Rosa hillside home of late *Peanuts* creator Charles Schulz.[10] Large sections of the city were evacuated.[11]

Just two years later and only a few miles away, the Kincade Fire struck the communities of Healdsburg, Windsor, and Santa Rosa.[12] The fire destroyed 77,758 acres,[13] damaging or destroying over 120 buildings, including wineries.[14] Virtually all of Sonoma County was under an evacuation order, the largest such evacuation in Sonoma County history.[15]

The Kincade Fire was just the largest one in what was a bad fire season in California. By the end of the year, 7,860 fires were recorded, totaling an estimated 259,823 acres of burned land.[16] Three deaths

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5. *One Death and 1,500 Structures Lost in Northern California Firestorm, Among Worst in State's History*, L.A. TIMES, (Oct. 9, 2017), https://www.latimes.com/local/lanow/la-me-ln-napa-fires-20171009-story.html.

6. *Tubbs Fire*, *supra* note 4.

7. Anjali Singhvi & Derek Watkins, *Satellite Images Show 1,800 Buildings Destroyed by Fire in Santa Rosa*, N.Y. TIMES (Oct. 1, 2017), https://www.nytimes.com/interactive/2017/10/12/us/santa-rosa-california-fires-damage.html.

8. Laura Nelson, *Death Toll from Northern California Fires Jumps to at Least 34; 5,700 Structures Destroyed*, L.A. TIMES (Oct. 1, 2017), https://www.latimes.com/local/lanow/la-me-ln-fires-20171013-story.html.

9. Martin Espinoza, *1 Out of Every 6 Doctors in Santa Rosa Lost Their Home in Fires*, THE PRESS DEMOCRAT (Oct. 2, 2017), http://www.pressdemocrat.com/news/7546178-181/hundreds-of-sonoma-county-doctors.

10. Paul Payne & Randi Rossman, *Fires Grow in Sonoma, Napa and Mendocino Counties as Death Toll Rises*, THE PRESS DEMOCRAT (Oct. 1, 2017), https://www.pressdemocrat.com/article/news/fires-grow-in-sonoma-napa-and-mendocino-counties-as-death-toll-rises/.

11. *Tubbs Fire*, *supra* note 4.

12. *Kincade Fire*, WIKIPEDIA, https://en.wikipedia.org/wiki/Kincade_Fire (last visited Mar. 11, 2024).

13. *Id.*

14. *See* Amy Larson & Erica Pieschke, *Kincade Fire Destroys Wineries in Alexander Valley*, KRON4 (Oct. 29, 2019, 2:42 PM), https://www.kron4.com/news/bay-area/kincade-fire-destroys-wineries-in-alexander-valley/.

15. *Kincade Fire, supra* note 12.

16. *2019 Incident Archive*, CAL. DEP'T OF FORESTRY & FIRE PROT., https://www.fire.ca.gov/incidents/2019/ (last visited Mar. 11, 2024).

resulted from these fires, which also destroyed twenty-two structures.[17]

Powerful, huge wildfires have become part of life in California. Over the past fifty years the total area burned by seasonal wildfires has been increasing.[18] The ten largest California wildfires all happened just in the last twenty years. Of these, five occurred in 2020 and eight after 2017.[19]

Multiple factors have contributed to these fires, but clearly one major factor is climate change. Of the twenty largest fires in California's history, eight have occurred since 2017.[20] There has been a fivefold increase in summer burned area in forests in northern and central California between 1996 and 2021 compared with the period between 1971 and 1995.[21] The results of a recent study published in the journal *Proceedings of the National Academy of Sciences (PNAS)* found that nearly all of the observed increase in burned areas in California over the past half-century is due to human-caused climate change.[22] In fact, taking the West as a whole, anthropogenic climate change accounts for 45% of total forest burned area from 1984 to 2015.[23]

California's wildfires are only one example of how climate change is destroying property, both natural and human-made. Consider hurricanes. Evidence suggests that human-caused pollution has played a substantial role in some of the recent marked increases in hurricane activity in the tropical North Atlantic.[24] Drought is another example. According to the U.S. Drought Monitor, as of February 2024, 21.59% of the contiguous U.S. was classified as experiencing moderate to exceptional drought.[25] Droughts have always occurred, of course, but climate change has altered their pattern, making them more frequent,

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17. *Id.*

18. A.P. Williams et al., *Observed Impacts of Anthropogenic Climate Change on Wildfire in California*, 7 EARTH'S FUTURE 892 (2019).

19. *See* CAL. DEP'T OF FORESTRY & FIRE PROT., *supra* note 3.

20. *Wildfires & Climate Change*, CAL. AIR RES. BD., https://ww2.arb.ca.gov/wildfires-climate-change (last visited Nov. 8, 2024).

21. Marco Turco et al., *Anthropogenic Climate Change Impacts Exacerbate Summer Forest Fires in California*, 120 PROC. NAT'L ACAD. SCIS. no. 25 (2023).

22. *Id.*

23. Philip E. Higuera & John T. Abatzoglou, *Record-Setting Climate Enabled the Extraordinary 2020 Fire Season in the Western United States*, 27 GLOB. CHANGE BIOLOGY 1 (2024).

24. Sandra Banholzer et al., *The Impact of Climate Change on Natural Disasters*, *in* REDUCING DISASTER: EARLY WARNING SYSTEMS FOR CLIMATE CHANGE 21, 34 (A. Singh & Z. Zommers eds. 2014).

25. NAT'L CTRS. FOR ENV'T INFO., NAT'L OCEANIC & ATMOSPHERIC ADMIN., FEBRUARY 2024 DROUGHT REPORT (2024), https://www.ncei.noaa.gov/access/monitoring/monthly-report/drought/202402.

longer, and more severe.[26] According to the United States Geologic Survey, since 2000, the western United States has experienced some of the driest conditions on record.[27]

The financial impact of these disasters is massive. As of early 2025, the U.S. has sustained 403 weather and climate disasters since 1980 where overall damages reached or exceeded $1 billion, including Consumer Price Index adjustment to 2024.[28] The total cost of these events is nearly $3 trillion.[29] In 2022 alone, the cost of climate-related disasters in the United States totaled more than $176 billion—the third costliest year on record.[30] In 2023, there were twenty-eight weather and climate disasters, surpassing the previous record of twenty-two in 2020.[31] The total cost of these was at least $92.9 billion. In California, over the 2017-2021 period, by one estimate average annual losses totaled over $117.4 billion.[32] The rate of these billion-dollar events is accelerating. The 1980-2023 annual average of billion-dollar weather/climate disasters is 8.5 events (CPI-adjusted), compared with the annual average for the most recent five years (2019–2023) of 20.4 events (CPI-adjusted).[33] Between the years of 2017 and 2023, 137 separate billion-dollar disasters have killed at least 5,500 people and cost more than $1 trillion in damage.[34]

We tend to assume that the only effective responses to such disasters are governmental actions by federal, state, and/or local agencies. In this paper, I want to suggest why this assumption is misguided. In addition to public action, private actors can and in some cases have taken the initiative of organizing themselves into neighborhood groups that prepare for the possibility of future climate-change events that would destroy or cause serious damage to their properties. The aim of these groups is to mitigate the likelihood of disaster and, should disasters occur, to protect themselves and their property. My point in discussing these organizations is not to suggest

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26. *Droughts and Climate Change*, U.S. GEOLOGIC SURV., https://www.usgs.gov/science/science-explorer/climate/droughts-and-climate-change (last visited Mar. 17, 2024).

27. *Id.*

28. NAT'L CTRS. FOR ENV'T INFO., NAT'L OCEANIC & ATMOSPHERIC ADMIN., *supra* note 25.

29. *Id.*

30. U.S. DEP'T OF THE TREASURY, THE IMPACT OF CLIMATE CHANGE ON AMERICAN HOUSEHOLD FINANCES 1 (2023), https://home.treasury.gov/system/files/136/Climate_Change_Household_Finances.pdf.

31. *See* Adam B. Smith, *2023: A historic year of U.S. billion-dollar weather and climate disasters*, CLIMATE.GOV (Jan. 8, 2024), available at https://www.climate.gov/news-features/blogs/beyond-data/2023-historic-year-us-billion-dollar-weather-and-climate-disasters(last visited Ma. 17, 2024).

32. *See The economic, fiscal, and environmental costs of wildfires in California*, GORDON AND BETTY MOORE FOUNDATION, available at https://www.moore.org/article-detail?newsUrlName=the-economic-fiscal-and-environmental-costs-of-wildfires-in-california

33. See Smith, *supra* note 31.

34. *See id.*

that private responses to climate change-induced disaster are more efficient or otherwise superior to public responses, but that bottom-up efforts can be an effective approach that complements top-down regulatory actions aimed at moderating the harmful effects of climate change.

This practical point leads to a deeper theoretical point. For bottom-up approaches to succeed, the agents involved must cooperate with each other. Sustaining cooperation in any setting that involves management of common-pool resources represents a challenge because it requires overcoming the temptation to free-ride.[35] Conventional economic theory predicts resistance to cooperation for reasons of rational self-interest. Nevertheless, cooperation does occur, suggesting that actors often calculate what is in their rational self-interest in more sophisticated ways than is often believed.

This paper will use the examples of neighborhood groups in Northern California and elsewhere to discuss a bottom-up approach to climate-change adaptation. These groups illustrate how in some cases, the human capacity of cooperativeness may be a means to the desired end of protecting property, which is necessary for humans to enjoy flourishing lives. This point reverses the means-end relationship that is posited in the human flourishing theory of property. That is, what I wish to discuss here is how climate change creates conditions in which it may be possible, even necessary, to reverse the means-end relationship assumed in the human flourishing theory. The key is whether and how we use certain capabilities that are essential to living a flourishing life. I will begin with a brief account of the human flourishing theory and the key role that capabilities play in it.

II. THE HUMAN FLOURISHING THEORY OF PROPERTY

For some years now, I have been developing a theory that argues that the fundamental purpose of property is to facilitate human flourishing. The theory derives from Aristotle who argued that property's core value is *eudaimonia*, which literally translates into happiness. A better translation is human flourishing, or living a fulfilling life.

There are two important characteristics of my conception of human flourishing. First, it is morally pluralistic; that is, it rejects the notion that there exists a single irreducible fundamental moral value to which all other moral values may be reduced. Rather, it conceives of human flourishing as including (but not limited to) individual autonomy, personal security/privacy, personhood, self-determination, community, and equality. These values cannot be reduced to a single basic value because they are incommensurable; that is, there is no

35. *See* Stefano Carattini, Simon Levin, and Alessandro Tavoni, *Cooperation in the Climate Commons*, 13 REV. OF ENVT'L ECON AND POL'Y 227, 227 (2019).

available metric by which one can commensurate goods such as equality and personhood (it is as if one states that Einstein's genius was "better than" Mother Theresa's compassion—the comparison makes no sense.) They are all aspect of human flourishing, and cannot be balanced one against the other, although rational choices can be made between them in cases where they come into conflict with each other.

The second defining characteristic of flourishing is that it is objective. This is why flourishing is a better translation of *eudaimonia* than happiness is. The problem with "happiness" is that it connotes something which is subjectively determined. It is for me, not for you, to pronounce on whether I am happy, or on whether my life as a whole has been a happy one. Contrast this to my being healthy or flourishing. Here we have no difficulty in recognizing that I might think I was healthy, either physically or psychologically, or think that I was flourishing and just be plain wrong. It is all too easy for me to be mistaken about whether my life is *eudaimon* (the adjective from *eudaimonia*) not simply because it is easy to deceive oneself, but because it is easy to have a mistaken conception of *eudaimonia*, or of what it is to live well as a human being—believing it to consist largely in physical pleasure or luxury, for example.

Now, it is important to emphasize that in characterizing the human flourishing theory as an objective theory, this does not mean that the theory claims that there is one and only one way to live a life that goes maximally well. Far from it. There are many diverse paths to leading a fulfilling life, many ways of flourishing. At the same time, not every way of living that a person may choose to pursue, no matter how excellent an individual may become at his chosen path, is one that maximizes his well-being. A life dedicated to being an honorable soldier may be a flourishing life, but a life dedicated to being an excellent hitman is not.

It is important to understand, especially in the context of property and property theory, how this conception of human flourishing differs from the concept of welfare and how the human flourishing theory differs from those theories that go under the label "welfarist." Modern legal welfarists sometimes suppose that the concepts of welfare and human flourishing are synonymous,[36] but they are not—at least not in the sense in which welfare is used by law-and-economics analysts.[37] Welfare is an imprecise term, and it certainly could be understood to have the same meaning as flourishing. After all, welfare seems to mean "faring well," which is more or less what flourishing is all about. But the question is, faring well in what sense or respect? Law-and-economics analysts define "faring well" in a particular way—whether

36. *See* JOHN O'NEILL, ECOLOGY, POLICY AND POLITICS 71 (1993).

37. *See* LOUIS KAPLOW AND STEVEN SHAVELL, FAIRNESS VERSUS WELFARE (2002).

one's personal preferences, taken as givens, are satisfied. One fares more or less well according to the degree to which one is able to maximize the satisfaction of one's personal preferences. Welfarism, in this sense, supposes that there is one and only one good—maximization of preference satisfaction.[38] All other values can be reduced to that single, irreducible value. In this respect, welfarism, as a moral theory, is a value monist theory, unlike a theory based on human flourishing, which is value pluralist.[39]

Human flourishing, unlike welfarism, is not a desire-fulfillment theory of how a person's life can go maximally well. It is an objective theory. That is, it contends that "certain things are good or bad for us, whether or not we want to have the good things, or to avoid the bad things."[40] Recall that not every way of living that a person may choose to pursue is one that maximizes his well-being. For a Nazi SS officer, a life devoted to murdering Jews, no matter how excellently performed, is not a well-lived life.

III. FLOURISHING AND CAPABILITIES

How can one measure human flourishing? Economists and others committed to welfarist theory measure welfare in terms of resources. For welfarists, human welfare is a matter of satisfying subjective individual preferences, revealed through exchange transactions. Some years ago, the Nobel laureate economist Amartya Sen developed an alternative approach to measuring well-being, one that does not focus on resources or preferences.[41] Sen's insight is that flourishing is a matter of what a person is able to do rather than what he has. That is, the well-lived life should be measured by a person's capabilities rather than by a person's possessions or by the satisfaction of his subjective preferences. The focus is on the tools that people need to lead fulfilling lives. What a person actually does with their capabilities (which Sen called "functionings"[42]) is up to them, but their life simply cannot go well unless they at least possess certain essential capabilities.

The capabilities approach was originally developed by Amartya Sen and Martha Nussbaum. Sen conceives of capabilities as real freedoms people have in order to achieve their potential ways of living. The

38. *See* Daniel M. Hausman & Michael S. McPherson, *Preference Satisfaction and Welfare Economics*, 25

ECONOMICS AND PHILOSOPHY 1 (2009).

39. Gregory S. Alexander, *Pluralism and Property*, 80 FORDHAM L. REV. 1017 (2011); Gregory S. Alexander,

The Social-Obligation Norm in American Property Law, 94 CORNELL L. REV. 745 (2009).

40. DEREK PARFIT, REASONS AND PERSONS 493 (1984).

41. *See* Amartya Sen, *Capability and Well-being*, in MARTHA NUSSBAUM AND SEN eds., THE QUALITY OF LIFE 30 (1993).

42. Amartya Sen, *Rights and Capabilities*, in TED HONDERICH ed., MORALITY AND OBJECTIVITY: A TRIBUTE TO J.L. MACKIE 217 (1985).

freedoms are real in the sense that a person has the means that are necessary to accomplish what that person wishes to do with their life. We might think of these freedoms as "enablements," or even empowerments, because their role is to enable individuals to experience states of physical and mental wellbeing. The theory is freedom-promoting insofar as it allows individuals to choose for themselves whether and how they exercise these capabilities. Put differently, capabilities promote freedom in the sense of having opportunities.

Sen has provided no specific list of necessary capabilities. Rather, he emphasizes practical capabilities such as being free from avoidable diseases, being adequately fed, or participating in community activities.[43] He says that we should understand these in terms of the substantive freedoms people have reason to value rather than in terms of utility or preference-satisfaction. On this view, poverty is understood as capability-deprivation rather than lack of wealth.

Martha Nussbaum has developed a list of ten essential capabilities.[44] These are real opportunities based on personal and social circumstances. These include the following:

1. *Life,* meaning the ability to live to the end of a human life of normal length.
2. *Bodily health,* which includes being adequately nourished and having adequate shelter.
3. *Bodily integrity,* which means being able to move freely from place to place; to be secure against violent assault, including sexual assault and domestic violence.
4. *Senses, imagination, and thought.* To be able to uses the senses; to imagine, to think, to reason—all informed and cultivated by an adequate education. This capability to use one's mind is protected by guarantees of freedom of expression, including both speech and religion.
5. *Emotions.* This means being able to have attachments to other people and things; to be able to love, to grieve, to experience justified anger, etc.
6. *Practical reason,* defined as being able to form a conception of the good and to engage in critical reflection about the planning of one's life.
7. *Sociability*, understood as the ability to live with others, to recognize and show concern for other humans, to engage in various forms of social interaction; to be able to imagine the situation of another.

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43. *See* AMARTYA SEN, DEVELOPMENT AS FREEDOM 75 (1999).

44. *See* MARTHA NUSSBAUM, CREATING CAPABILITIES: THE HUMAN DEVELOPMENT APPROACH 33-34 (2011).

8. *Other species.* This means having the capacity to live with concern for other animals and nature generally.
9. *Play,* meaning the ability to laugh and play.
10. *Control over one's environment.* Nussbaum breaks this capability down into two parts: (a) *political*: this means the ability to participate effectively in political choices that affect one's life; (b) *material*: this means being able to hold property and to have property rights on an equal basis with others. More broadly, it includes the ability to have equal employment rights with others, and within work, to work as a human being, in meaningful relationships with other workers.[45]

Sen has introduced the notion of conversion factors into his discussion of capabilities.[46] Whether a person has the capability to live or act in a certain way depends upon the existence of conversion factors. Sen confines his discussion of conversion factors mainly to marketable resources, like goods and services,[47] but conversion factors need not be so limited. The development of capabilities is not solely a matter of what resources one has available, but also the circumstances in which one lives. They include *internal* factors, such as intelligence, physical skills, physical or mental handicaps, and height; *social* factors, which include gender practices in a society, social norms, social hierarchies, and government policies; and *environmental* factors, including the physical or built environment in which a person lives, and the provision of public goods. So, for example, a person cannot convert adequate supplies of food into nutrition if he suffers from a persistent medical condition that affects his absorptive capacity.[48] Similarly, education for women will not be converted into political power for them in a society that denies women the right to vote or hold political office.[49]

What these conversion factors indicate is that a person's capabilities are not strictly a matter of a person's abilities or innate talents but rather opportunities that are either enabled or constrained by conditions that are internal (personal) or external (social/environmental). In Sen's sense of the term, then, capabilities are opportunities that are either made feasible or constrained by other factors which may be internal or external to the person.

This focus on capabilities does not mean that property is irrelevant. To the contrary, property serves as one input in the creation of capabilities. Property itself does not equate to possession of essential

45. *Id.*

46. *See* AMARTYA SEN, INEQUALITY RE-EXAMINED 19-21, 26-30, 37-38 (1992).

47. *See id.*

48. *See* Shankaran Nambiar, *Capabilities, Conversion Factors and Institutions*, 13 PROGRESS IN DEVELOPMENT STUDIES 221 (2013).

49. Id.

capabilities; that depends upon the conversion factors that are present in one's life. Still, property, or rather *having* property, is critical to the development of these capabilities. The converse is also the truth: not having property means that the probability of your developing the necessary capabilities is very low. Having property is obviously necessary for a reasonably long life, for example. The poorer you are, the more likely you are to die prematurely. The same holds true for health. Owning property is no guarantee of good health, but the opposite is certainly true—a life of penury correlates strongly with ill health.

Capability theory ordinarily posits that capabilities and functionings are the ends of well-being. That is, well-being, or flourishing, is understood in terms of people's capabilities to function, or their ability to take advantage of opportunities to act or engage in desired activities. What Sen sees as ultimately important is that people have the capabilities, which he understands in terms of freedoms, to do as they wish and lead the kind of lives they wish to pursue. There may be circumstances, however, under which capabilities serve as means rather than ends, and that what is usually understood as a means becomes an end. A disaster brought about by climate change is one of these circumstances.

No one is immune from the effects of climate change. Whether it is increasing and intensifying heat waves, stronger and more frequent hurricanes, or more intense storms, every part of the continental U.S. has experienced some consequence of the effect of climate change on weather. These effects create health risks by impacting the air we breathe, the water we drink, and even our food. Moreover, these effects pose direct threats to our lives. Climate-change disasters literally kill people. Recall that between 2017 and 2023, 137 separate billion-dollar climate-change disasters have killed at least 5,500 people.[50] Stretching out the time frame, during the period between 1980 and 2023, there were a total of 16,350 deaths associated with billion-dollar climate-change disasters across the United States.[51] Among these events, hurricanes were the most deadly, contributing to nearly 6,900 deaths during that period.[52]

When confronted with such dire conditions, the meaning of flourishing becomes reduced to a simple matter of preserving life and

50. *See* Adam B. Smith, *2023: A historic year of U.S. billion-dollar weather and climate disasters*, Jan. 8, 2024, available at https://www.climate.gov/news-features/blogs/beyond-data/2023-historic-year-us-billion-dollar-weather-and-climate-disasters (last visited March 23, 2024).

51. See Erick Burgueño Salas, *Fatalities due to major climate disasters in the U.S. 1980-2023, by type*, in *Cumulative deaths from billion-dollar natural disaster events in the United States between 1980 and 2023, by disaster type*, STATISTA, Jan 22, 2024, available at https://www.statista.com/statistics/1116981/billion-dollar-climate-disasters-deaths/ (last visited March 23, 2024).

52. *See id.*

home. Life and property are now ends rather than means, and certain capabilities serve as means to those ends. When survival in the face of climate-change disasters is at stake, certain capabilities may become acutely important. What I want to suggest is that among these capabilities is cooperativeness, the ability to work with others to achieve mutually desired goals. Cooperativeness, I will argue, is the essential capability in private, bottoms-up initiatives to respond to the threat of climate-change disasters.

As some economists have noted, cooperation is an anomalous behavior, seen from the perspective of traditional economic theory.[53] As Robyn Dawes and Richard Thaler observe, "Much economic analysis – and virtually all game theory – starts with the assumption that people are both rational and selfish."[54] Rather than cooperate with each other to achieve a common good, conventional economic theory predicts that group members will free ride off others. Yet cooperation does occur, and with greater frequency than economic theory ordinarily predicts. In a paper written by two behavioral economists,[55] the following story illustrates the point.

> In the rural areas around Ithaca [New York] it is common for farmers to put some fresh produce on a table by the road. There is a cash box on the table, and customers are expected to put money in the box in return for the vegetables they take. The box has just a small slit, so money can only be put in, not taken out. Also, the box is attached to the table, so no one can (easily) make off with the money. We think that the farmers who use this system have just about the right model of human nature. They feel that enough people will volunteer to pay for the fresh corn to make it worthwhile to put it out there. The farmers also know that if it were easy enough to take the money, someone would do so.[56]

There is an important and growing behavioral literature on cooperation. Elinor Ostrom famously demonstrated that cooperative behavior could be sustained within small groups over time.[57] Her work established that commons need not turn into tragedies. She found that cooperation existed under certain conditions. The groups she studied operated within geographic areas that were relatively moderate in size. Free-rider problems were relatively small where participants were, in game-theoretic terms, repeat players. They knew each other and regularly interacted with each other. They were largely homogenous socially and had, and knew they had, shared interests, so

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53. *See* Robyn M. Dawes & Richard H. Thaler, *Anomalies: Cooperation*, 2 J. ECON. PERSP. 187, 187 (1988).

54. *Id.*

55. *See id.*

56. *Id.* at 195.

57. *See* Juan-Camilo Cardenas & Elinor Ostrom, *What Do People Bring into the Game? Experiments in the Field About Cooperation in the Commons*, 82 AGRICULTURAL SYS. 307 (2004).

there was a high degree of social capital within the groups.[58] These factors greatly contributed to participants' ability and willingness to organize themselves in ways that overcame free-rider and similar problems that impede cooperative solutions.

Ostrom did not attempt to provide a general theory of cooperative behavior, but others have done so. One popular theory is reciprocal altruism. This account was developed most fully by Robert Axelrod.[59] This theory is based on his observation that people tend to reciprocate behavior with like behavior, such as cooperation with cooperation, defection with defection. The implication is that individuals will not cooperate in situations in which there is no possibility of future interaction with each other, so no possibility of future reciprocity. Their interactions are strictly on a one-shot basis. Evidence from laboratory experiments conducted by economists Robyn Dawes and Richard Thaler (who won the Nobel Prize for Economics in 2017), however, suggests that cooperation is not so limited.[60] Dawes and Thaler observed 50% cooperation rates even in single trial experiments, leading them to conclude that reciprocal altruism cannot directly explain the experimental results they found.[61] From this and similar findings, they suggest that a "norm of cooperation" exists.[62] They conclude that "people have a tendency to cooperate until experience shows that those with whom they are interacting are taking advantage of them."[63] To explain this conclusion, they draw on Robert Frank's work. Frank proposes that people who adopt a norm of cooperation are successful in eliciting cooperation from others and in attracting other cooperators.[64] As Dawes and Thaler explain, "The key to Frank's argument is that one cannot successfully fake being cooperative for an extended period of time-just as one cannot be successful getting people to believe too many lies."[65]

Capabilities require nurturing, and cooperation is no different from any other capability in this respect. Results of empirical work have indicated that one means of nurturing cooperation is by group discussion. In several laboratory experiments involving groups that were allowed to discuss with each other individual contributions to the provision of some public good, contribution rates were high and the

58. *See id.*

59. *See* ROBERT AXELROD, THE EVOLUTION OF COOPERATION (1984).

60. *See* Dawes and Thaler, *supra* note 53.

61. *See id.* at 191.

62. *See id.* at 191-92. *See also* James Andreoni, *Why Free Ride? Strategies and Learning in Public Goods Experiments*, 37 J. OF PUB. ECON. 291 (1987); Andreoni, *Impure Altruism and Donations to Public Goods: A Theory of Warm-Glow Giving*, 100 THE ECON. J. 464 (1990), cited in Dawes & Thaler, *supra* note 53, at 191.

63. *Id.*

64. *See* Robert Frank, *If Homo Economicus Could Choose His Own Utility Function, Would He Want One with a Conscience?*, 77 AM. ECON. REV. 593 (1987).

65. Dawes & Thaler, *supra* note 53, at 192.

public good was provided in all of the cases.[66] Jon Elster offers as one explanation of this finding that group discussions yield arguments for group-regarding behavior and that these arguments affect not only the listener, but the speaker as well.[67] Subsequent laboratory experiments have confirmed this explanation. In groups where discussions were not allowed, only about 30% of the subjects contributed to the provision of the public good, contrasted with 70% contribution rates where discussions were permitted.[68]

There certainly is a free-rider problem, but it is far from universal. Cooperation to achieve mutually advantageous goods does occur and with greater frequency than conventional economic analysis would have us believe. Moreover, cooperation can be nurtured. Several factors contribute to individual participation in efforts to achieve group goods. For one thing, "cooperation is positively related to the investment return on the public good."[69] The more the group has to gain from cooperation, the greater the degree of participation.[70] Moreover, as previously noted,[71] discussion increases the prospects of cooperation. Yet another factor is group identity. Experiments conducted by empirical researchers have shown that cooperation rates can be radically affected by group identity.[72] Even in the absence of any expectation of future reciprocity, group identity enhances cooperative behavior.[73] As a sense of "we-ness" develops and participants begin to identify with the group, cooperation increases.[74] Discussion among participants facilitates the development of group identity. In laboratory experiments, one team of analysts found that discussion among participants in an assurance game[75] significantly contributed to the creation of group identity.[76] As they reported,

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66. *Id.* at 193-194.

67. See *id.* at 194, citing Jon Elster, *The Market and the Forum: Three Varieties of Political Theory*, in JON ELSTER AND AANUND HYLLAND, eds., FOUNDATIONS OF SOCIAL CHOICE THEORY: STUDIES IN RATIONALITY AND SOCIAL CHANGE 103 (1986).

68. *See* Dawes & Thaler, *supra* note 53, at 194-195.

69. *Id.* at 196.

70. *Id.*

71. *See supra* text accompanying note 67.

72. *E.g.,* Robyn M. Dawes et al., *Not Me or Thee but We: The Importance of Group Identity in Eliciting Cooperation in Dilemma Situations: Experimental Manipulations*, 68 ACTA PSYCHOLOGICA 83 (1988).

73. *See id.* at 86.

74. *See id.*

75. Assurance is a "game-theoretic structure also known as the stag hunt." In this game, "it is best for everybody, individually and socially, if all cooperate. But each fears that the others may not play their part and is then motivated to defect. . . . [T]he cooperative solution is a Nash equilibrium," because no one would be better off by defecting from it. Despite that, "with enough suspicion of the others, one may maximize expected utility by defecting." *Assurance Game*, OXFORD REFERENCE, https://www.oxfordreference.com/display/10.1093/oi/authority.20110803095430188 (last visited March 27, 2024).

76. *See* Dawes et al., *supra* note 72.

"Cooperation is a function of group interactions."[77] They further stated, "People immediately start discussing what 'we' should do, and spend a great deal of time and effort to persuade others in their own group to cooperate . . . ."[78] In the illuminating conclusion to their paper, Dawes and his colleagues made the following observations:

> The casual observer of modern economic theory might conclude that the major motivation of us humans is supplied by a short looped tape cycling in our heads continually asking the question 'have you improved your asset position today?'. . .We interpret our experimental results as implying that there are other primary motivations - in particular the parochial one of contributing to one's group of fellow humans. . . .What we question—or rather, what our data question—is whether all, or even a majority, of group regarding behaviors can be 'ultimately' related to such egoistic concerns.[79]

In addition to group identity, other factors have been found to be important in promoting cooperation. Observability is one factor that contributes to cooperation; when participation decisions are observable by others in the group, participation levels increase.[80] Another contributing factor is descriptive norms; information about how others have acted influences decisions whether to participate. When people are told that others have cooperated, they are more apt to cooperate, as this implies that cooperation is the social norm.[81]

IV. CLIMATE CHANGE ADAPTATION AND BOTTOMS-UP INITIATIVES

This Part discusses climate change adaptation. Specifically, it discusses a local, bottoms-up approach to climate change adaptation, illustrated by three initiatives that have successfully created neighborhood programs aimed at coping with the effects of climate change. Before doing so, however, I will begin with a brief explanation of climate change adaptation, what it means, and how it differs from climate change mitigation as a strategy for dealing with the effects of climate change.

A. Climate Change Adaptation

In a nutshell, climate change adaptation is the process of adjusting to the current and future effects of climate change. It differs from climate change mitigation, which is aimed at the causes of climate change. Mitigation means preventing or reducing the emission of

77. *Id.* at 94.

78. *Id.* at 94-95.

79. *Id.* at 96.

80. *See* Gordon Kraft-Todd, Erez Yoeli, Syon Bhanot & David Rand, *Promoting Cooperation in the Field*, CURRENT OP. IN BEHAVIORAL SCIENCES 96 (2015) https://sbhanot1.swarthmore.edu/wp-content/uploads/2015/07/2015-Kraft-Todd-et-al-COBS.pdf.

81. *Id.* at 98.

greenhouse gases into the atmosphere.[82] Adaptation, on the other hand, is a matter of moderating or avoiding harms to people caused by climate change.

Adaptation actions are usually classified into four types: infrastructural, including engineering, built environment, and high-tech solutions; institutional, that is, economic organizations, laws and regulations, and government policies and programs; behavioral, which includes individual and household strategies as well as social and community approaches; and nature-based options, including ecosystem-based adaptation options.[83] Some examples include mangrove planting and habitat conservation, building seawalls to protect against sea level rise, selective breeding for drought-resistant crops, and building green roofs to reduce urban heat island effects.

Adaptation measures may be incremental, or they may be transformative. Incremental measures work within a given system and seek to maintain its integrity. Transformative actions, on the other hand, alter the fundamental characteristics of a system.[84] Both types of measures take a wide variety of forms, depending on the unique context of a community, business, organization, country, or region. People may incrementally adapt to climate change-driven floods, for example, by building higher dams or elevating their houses.[85] Or they may restore previously degraded wetlands upstream.[86] Transformative actions would include, for example, "development of new land-use plans that restricted the use of areas with high risks and mitigation potential."[87] Most adaptation projects are incremental, as there are more barriers for the implementation of transformative adaptation than incremental measures. Transformative adaptation projects require high investments, and the time horizon for their benefits to be realized is longer.

Community disaster preparedness groups are important modes of implementing incremental adaptation measures. Community groups take advantage of local knowledge and utilize local resources, including social capital. They add flexibility to general, more systematized strategies for responding to the risks of climate change

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82. *What is the Difference Between Adaptation and Mitigation?*, EUR. ENV'T AGENCY, https://www.eea.europa.eu/en/about/contact-us/faqs/what-is-the-difference-between-adaptation-and-mitigation (last visited Nov. 11, 2024).

83. *See generally* Brian O'Neill, et al., *Key Risks Across Sectors and Regions*, CLIMATE CHANGE 2022: IMPACTS, ADAPTATION AND VULNERABILITY, IPCC Sixth Assessment Report 2411 (Hans-Otto Pörtner et al., eds., 2022).

84. *See generally* Ian R. Noble et al., *Adaptation Needs and Options*, in CLIMATE CHANGE 2014: IMPACTS, ADAPTATION, AND VULNERABILITY. PART A: GLOBAL AND SECTORAL ASPECTS, IPCC Fifth Assessment Report 833 (2014).

85. *See* Giacomo Fedele et al., *Transformative Adaptation to Climate Change for Sustainable Social-Ecological Systems*, 101 ENV'T SCI. & POL'Y 116 (2019).

86. *See id.*

87. *Id.* at 117.

disasters. Moreover, their relative cost-effectiveness makes them appealing to donors who wish to fund non-governmental climate-change preparedness projects. Although community preparedness organizations are by no means a panacea to the problems of disaster management and climate change, they play an important role as one piece of an overall, more complex strategy for coping with climate change risks.

The primary weakness of local, bottoms-up approaches to climate change adaptation is a relative lack of resources and authority. For that reason, neighborhood initiatives commonly need to work in coordination with local agencies that have greater resources and can exercise greater authority to back up the efforts of neighborhood groups. The examples discussed in the next section illustrate how these public-private partnerships can work to realize the goals of localized climate change adaptation.

B. Bottoms-Up Initiatives at Adaptation

The effects and risks of climate change are location-specific.[88] Because of this, adaptation measures are necessarily local.[89] Moreover, the response to climate change is a shared responsibility that cannot be addressed by local governments alone. Local-level adaptation includes local government efforts, but it also includes private community organizations and local groups. Analysts have argued that third parties, including local and neighborhood groups, are the ones mostly responsible for taking action and best able to do so.[90] An important finding is that taking adaptive action is usually something that private actors initiate.[91] The success of these local organizations and groups at adapting to the risk of climate-change disasters depends in considerable measure on the extent of cooperation among group members in realizing preferred adaptation measures.

To illustrate how members of local groups learn to cooperate with each other to undertake adaptive measures in response to the threat of climate change disasters, I shall discuss three examples of local groups who have acted cooperatively in response to the effects of climate change. These examples are case studies of bottoms-up initiatives at climate change adaptation that demonstrate both the

88. *See* Julie Brugger & Michael Crimmins, *Designing Institutions to Support Local-Level Climate Change Adaptation: Insights from a Case Study of the U.S. Cooperative Extension System*, 7 WEATHER, CLIMATE, & SOC'Y 18 (2014).

89. *See id.*

90. *See* Alex Aylett, *Networked Urban Climate Governance: Neighborhood-Scale Residential Solar Energy Systems and the Example of Solarize Portland*, 31 ENV'T & PLAN. C: POL. & SPACE 858 (2013); Geneviève Cloutier et al., *Do-It-Yourself (DIY) Adaptation: Civic Initiatives as Drivers to Address Climate Change at the Urban Scale*, 74 CITIES: THE INT'L J. OF URB. POL'Y & PLAN. 284 (2018).

91. *See* Cloutier et al., *supra* note 90, at 284.

capability of local groups to work cooperatively and the success of such ventures.

1. COPE

The first case study concerns a local community organization aimed at fire prevention and response in Sonoma County, California. The organization's acronym is COPE – Communities Organized to Prepare for Emergencies. COPE is a self-described "grassroots effort built upon the concept of 'neighbor helping neighbor' engaging communities in emergency preparedness education, advocacy and planning. COPE fosters community preparedness in coordination with public safety agencies, non-profits, and non-governmental agencies."[92]

COPE groups consist of ten to twenty homes located within a neighborhood.[93] Each group chooses one to two members who serve as neighborhood co-chairs.[94] Co-chairs survey their neighbors, soliciting contact information as well as information about the home itself, such as the location of utility shutoffs and fire dangers.[95] Group members identify and share information about escape routes and safe gathering places both within a neighborhood as well as outside of it.[96]

COPE groups work collaboratively with local fire departments and public safety agencies both to receive information about the occurrence, location, and spread of wildfires and to develop plans to prevent or minimize the likelihood of destructive wildfires in their areas.[97]

Technology plays an essential role in COPE's operation. COPE members rely on several mobile applications not only to stay in touch with each other but to stay informed about fire conditions in the area; such apps as Watch Duty have been extraordinarily helpful in tracking fires and determining escape routes.[98]

COPE is not only about escaping fires; it is also about preventing them. The information-sharing and cooperation among COPE members has led to widespread changes in how residents use their land. Combustible trees and vegetation have been either removed entirely or set back away from homes and other structures by safe distances. Because of various cooperative practices by COPE members,

92. *Welcome to C.O.P.E.!*, CITIZENS ORGANIZED TO PREPARE FOR EMERGENCIES, N. SONOMA CNTY., https://copenorthernsonomacounty.com/ [https://perma.cc/5ZZU-D24A] (last visited Dec. 6, 2023).

93. *See Get Started*, CITIZENS ORGANIZED TO PREPARE FOR EMERGENCIES, N. SONOMA CNTY., https://copenorthernsonomacounty.org/getting-started/ (last visited Mar. 16, 2025).

94. *Id.*

95. *Id.*

96. *Id.*.

97. *See Welcome to C.O.P.E.!*, *supra* note 92.

98. *Resources*, CITIZENS ORGANIZED TO PREPARE FOR EMERGENCIES, N. SONOMA CNTY., https://copenorthernsonomacounty.org/links-documents/ (last visited Mar. 16, 2025).

homes and other structures throughout the county are significantly more fire-resistant.

2. Urban Greening Initiatives

The second example looks at civic action in the field of urban greening. Globally, cities account for up to 70% of total manmade greenhouse gas emissions.[99] Hence, cities are key players in efforts both to mitigate and adapt to the effects of climate change. There are multiple aspects of urban strategies aimed at mitigation and adaptation, but one of them is increasing the green spaces within urban areas. Cities are warming at a 29% faster rate than rural areas.[100] Researchers have found that urban greening, including everything from tree-planting to rooftop gardens, assists in cooling cities.[101] Discussions of greening efforts often privilege the role of local municipalities and businesses, but community-based actors have potentially unique roles to play in urban greening projects.[102] The efforts of two local Canadian groups illustrate how citizen-led groups can get ahead of city managers.

The local groups are two citizen groups in Quebec City, Canada: Bien Vivre à Saint-Roch (BVSR) (or "Living Well in St. Roch"), and Verdir et Divertir (VD) (or "Greening and Animating"). The groups' activities address climate change indirectly. Their objectives are enhancing the quality of the environment and the aesthetic value of their areas, rather than directly adapting the neighborhood to climate change.[103]

What triggered the two groups' formation was a notice from the city announcing plans to renovate a street.[104] The city's plan was a standard do-over, a refurbishment that really changed nothing. The neighbors recognized that this was an opportunity to do something different. The two groups came up with "proposals for shared streets, with a number of parking spots."[105] They further proposed to the city that planters should be installed, arranged in such a way as to force cars to slow down.[106] Interviews with the leaders of BVSR and VD

99. Aylett, *supra* note 90.

100. Stefan Ellerbeck, *Cities Are Warming 29% Faster than Rural Areas. Could Urban Greening Fix This?*, WORLD ECON. F. (Oct. 31, 2022), https://www.weforum.org/agenda/2022/10/cities-heat-urban-greening/ (last visited April 2, 2024).

101. Diana E. Bowler et. al., *Urban Greening to Cool Towns and Cities: A Systematic Review of the Evidence*, 97 LANDSCAPE AND URBAN PLANNING 147 (2010).

102. Victoria Campbell-Arvai & Mark Lindquist, *From the Ground Up: Using Structured Community Engagement to Identify Objectives for Urban Green Infrastructure Planning*, 59 URBAN FORESTRY AND URBAN GREENING (2021).

103. Cloutier et al., *supra* note 90, at 286.

104. *Id.*

105. *Id.* at 287.

106. *Id.*

indicated that what motivated them was their sense that they could initiate change. One leader stated:

> I think we share a common interest in the quality of the living environment. We do not articulate our thinking and actions exactly the same way, but globally, greening reaches everyone. We all have the feeling that there is a need to adapt the municipal regulation in order to reinforce greening interventions.[107]

The VD group in particular has significant organizational strengths that not all citizen groups possess. For example, it has a Facebook page that lists about 800 members, and that serves as a platform for publicizing information sessions and work bees.[108] The group posts photos and videos online that provide a visual record of its greening work. The steps necessary to carry projects forward are clearly explained to volunteers, and put within a broader, well-justified context. Membership is open to those who live or work in a part of the Saint-Roch neighborhood known as "Tanners" piece of land.[109]

Although VD and BVSR are private citizen groups, they know how to work with and within the public municipal system to their advantage. They also know the right person to contact within the city administration to get information and with whom to speak about alternatives to the city's plans and procedures.[110] One VD leader stated, "If we hear about a street being repaired around here, we send an email about it to the borough director or the urban planning advisor and ask about their way of doing things, something like: 'have you planned on greening the street?'"[111]

The groups have found that an effective way of working with the local city administration is by demonstrating their own efforts. Using a doing-it-ourselves technique, the groups have succeeded both in greening their neighborhoods and showing the local administration that the street landscape can be reshaped.[112] As one observer put it, "I think these initiatives happen without the city administration really realising and this is precisely what is good about them. If they had asked authorization to plant, it would have been complicated and maybe it would not have happened."[113] The success of the technique of demonstrating-first is indicated by the following statement of a city official: "it is through such micro-projects that we will demonstrate our

107. *Id.* (quoting VD leader).
108. *Id.*
109. *Id.*
110. *Id.*
111. *Id.* (quoting VD leader).
112. *Id.*
113. *Id.*

ability to do things, without having to commit to elaborate large plans."[114]

Key to their success is cooperation. BVSR has established collaborative relationships with businesspeople and shopkeepers. The group's leaders present their projects to businesses as opportunities to establish ties with neighborhood residents.[115] They have been able to convince the businesses to support sponsorships to help fund the greening projects.

Admittedly, the impact of the two groups' projects is limited. As the authors of a study of the groups' work stated, "The objective of adapting urban spaces to climate change has not yet been attained."[116] The same authors further state, however, "by their collaborative approach, these greening DIY initiatives can be seen as a first step in transforming the governance of climate change at the local level."[117] They further conclude that "[t]he cases of Bien Vivre à Saint-Roch, and Verdir et Divertir demonstrate how small-scale citizen experiments can bring about climate change adaptation in a concrete way."[118] These citizen experiments succeed because the participants, recognizing their common interests, learn how to cooperate and work together.

3. Solarizing Portland

The public sector of cities has direct control of very little of their emissions—roughly 1%.[119] The remainder is controlled by private sector emitters—business, industrial, and residential. Any effective response to urban greenhouse gas emission, then, must involve these actors. Local community groups can and do participate in urban adoption of green technologies. A community-led program known as Solarize Portland (Solarize), based in Portland, Oregon, illustrates one such contribution.

Solarize was formed in 2009, at a time when solar panels were not nearly as widely used as they are today. At that time, solar power generation in the U.S. was only 1.8% of what it became by 2019.[120] The city of Portland itself is well-known for its climate change response plans, but Solarize, a private grassroots initiative, has transformed the market for solar power for residential use. As a result of this and

114. *Id.*

115. *Id.*

116. *Id.* at 288.

117. *Id.*

118. *Id.* at 289.

119. Aylett, *supra* note 90, at 858.

120. Jerold Brito, *Solarize: The Grassroots Initiative that Cut Solar Costs up to 35%*, ECOBLOCK (Aug. 20, 2021), https://ecoblock.berkeley.edu/blog/solarize-the-grassroots-initiative-that-cut-solar-costs-up-to-35/ (last visited Apr. 3, 2024).

other initiatives, Portland has managed to reduce its emissions to below 1990 levels.[121]

The genesis of Solarize Portland was a collaboration between Stephanie Stewart, a resident of Portland who was active in her neighborhood association (NA) and Tim O'Neill, a sustainability coordinator for SE Uplift, a Neighborhood Coalition facilitating the work of Neighborhood Associations (NAs) in Southeast Portland.[122] Stewart was interested in putting solar energy on her home but was dissuaded by the cost.[123] The sustainability coordinator mentioned to her a San Francisco nonprofit solar contractor that used neighborhood-scale bulk purchasing to reduce the cost of residential solar electricity.[124] That example inspired them to use the NA network the resources provided by the NA system to set up their own program in Portland.[125]

Portland's NA system dates back to the mid-1970s.[126] NAs receive funding from the municipality and are authorized to select and invest in community projects in their areas as they see fit.[127] Although the NAs were essential to Solarize's success, additional support was needed.[128] O'Neill contacted Energy Trust of Oregon (ETO), a state-wide nonprofit established in 2002 to help Oregonians take advantage of energy efficiency and renewable energy options at a household scale.[129] Price and complexity of installation had been the major barriers to commitment to solar energy.[130] Previously, Energy Trust had targeted individual homeowner, but in collaboration with SE Uplift, it developed a program of bulk purchasing discounts. The success of that program depended on adequate demand, and that was the responsibility of SE Uplift.[131] "Volunteers used a mixture of word of mouth, posters put up at local businesses, articles written for community papers and newsletters, announcements at community meetings, the distribution of fliers to homes and events, and a volunteer-maintained website (www.Solarizeportland.org)."[132] SE Uplift solicited participation from the twenty neighborhoods it serves, seeking volunteers to spread the word about the project in their

121. Aylett, *supra* note 90, at 863.
122. *Id.* at 864.
123. *Id.*
124. *Id.*
125. *Id.*
126. *Id.*
127. *Id.*
128. *Id.*
129. *Id.*
130. *Id.* at 865.
131. *Id.*
132. *Id.*

community.[133] Several neighborhoods responded with strong interest and generated a troupe of passionate volunteer representatives.[134] These efforts brought media attention and with it, widespread interest.

Following competitive bidding, a contractor, Imagine Energy, was selected.[135] Imagine's pricing tier was the lowest of those submitting bids, but enrollment in the program was so great that the eventual price was set at the lowest within that tier.[136] A series of introductory workshops was held, where home solar programs as well as the Solarize project were explained.[137] Weekly Q&A sessions followed for people wanting more in-depth information.[138] Participation was higher than expected, with sign-ups tripling the number of residential solar electric systems installed the year before.[139] Beyond the price advantage to individual buyers, there was another benefit to the program: its overall impact on the community. As the sustainability coordinator for SE Uplift reported, "[t]his project has truly brought our community together, all moving toward one goal. From attending workshops to watching as neighbors went solar street by street—it's been great to see what we've been able to accomplish as a group."[140]

Media attention to Solarize's success brought enquiries from households across the city.[141] Neighborhood coalitions from other areas in Portland expressed interest in similar programs of their own.[142] Recognizing that it did not have the capacity to support a citywide initiative, Solarize tried to enlist support from the city's Bureau of Planning and Sustainability (BPS) in helping other neighborhoods start their own programs.[143] BPS had created a program called SolarNow!, which was based on a strategy of spreading information about local solar contracts to the public.[144] That strategy, however, proved to have little effect upon the number of solar installations within the city.[145] The contrast between that approach and that of Solarize was clear. Whereas SolarNow! had followed a program of providing more and better information, Solarize had tapped into

133. Lizzie Rubado, *Solarize Portland: Community Empowerment Through Collective Purchasing*, ENERGYTRUST, https://www.energytrust.org/wp-content/uploads/2016/12/101110_Rubado_SolarizePortland.pdf (last visited April 4, 2024).

134. *Id.*

135. *Id.*

136. *Id.*

137. *Id.*

138. *Id.*

139. *See* Aylett, *supra* note 90, at 865.

140. Rubado, *supra* note 133, at 11.

141. Aylett, *supra* note 90, at 866.

142. *Id.*

143. *Id.*

144. *Id.*

145. *See id* .

broader community bonds of trust, shared enterprise, and neighborhood identity.[146] Still lacking, however, was the institutional support to expand citywide.

Representatives from the city's BPS department stepped up and offered background technical support.[147] Its support allowed Solarize's operation in other parts of the city to handle a much larger volume of community members who were interested in the project.[148] Nevertheless, the project remained mainly the work of the neighborhood associations members and local volunteers.[149]

The case study of Solarize demonstrates how neighborhood groups have the capacity to cooperate with each other to run programs that speed up the adoption of green technologies in urban areas. While other solar energy programs used informational strategies to limited effect, Solarize adopted a grassroots strategy of relying primarily on the work of small neighborhood groups, creating clusters of high-volume, low-margin installations. It changed the scale of action from the individual to the community, using social ties to build demand for technological change. Neighborhood association members had the networks and relationships of trust necessary to find key partners, mobilize volunteers, and initiate programs.[150]

Climate change adaptation in urban areas all too often is equated with public climate policies. The success of programs like Solarize demonstrates the ability of small community-based groups to do what large public agencies are unable to accomplish. They acted quickly, transforming the market for residential solar energy throughout Portland in a manner that was responsive to the community and without bureaucratic red tape. One analyst has identified three characteristics that are the keys to the success of community groups such as Solarize: (1) "their ability to operate at a smaller scale, which enables innovation and experimentation"; (2) "their higher risk tolerance, which lowers the barriers to implementation"; and (3) "their locally embedded understanding of sociotechnical transitions, which allows them to tailor programs to the needs, understandings, and values of their target communities."[151] The limits of this small non-governmental approach to climate change adaptation are revealed by the fact that Solarize's effort to expand its program citywide required the assistance of the municipal Bureau of Planning and Sustainability. Without BPS's technical assistance, Solarize's program would have been confined to just two areas in Portland. Solarize needed the city,

146. *See id.* at 867.

147. *Id.*

148. *Id.*

149. *See id.*

150. *See id.* at 869.

151. *Id.* at 869.

but perhaps more importantly, the city needed Solarize. This was an example of collaboration succeeding at multiple levels: within each neighborhood association group, then among those groups, and finally, between the groups collectively and the municipality. Collaboration was the key to Solarize's success.

V. CAPABILITIES AND COOPERATION

Adaptation to climate change requires social cooperation, and the three above case studies suggest that the capability to cooperate with others to achieve socially desired ends is feasible. The evidence of this capability in the examples leads to a more fundamental question concerning the roots of social cooperation. This is not the occasion for a complete analysis of the foundations of cooperation, but I want to offer some observations that may help explain why and when the capability of cooperation exists—not only under conditions of climate change, but more even broadly.

Behavioralists and others define cooperation as occurring "when an individual incurs a cost in order to provide a benefit for another person or people."[152] The obvious question is, if cooperation is personally costly, why do people do it? As my earlier discussion indicated,[153] most accounts of cooperation analyze it in terms of reciprocity. They suppose that parties are motivated to act cooperatively out of mutual advantage. Martha Nussbaum points out that this mutual advantage account is not based on the belief that humans are selfish but as a matter of parsimony.[154] As Nussbaum puts it,

> [I]f a just society can be generated out of weak assumptions (in other words, not assuming altruism or virtue but much less than that), that is itself interesting, and one should always choose the weakest premises from which one's conclusion follows, rather than saddling the theory with thicker or more controversial premises.[155]

One astringent definition of cooperation provides that it is "costly behaviour performed by one individual that increases the payoff of others."[156] Evolutionary analysts typically explain human cooperation in terms of the so-called "three Rs": reputation, reciprocation and retribution.[157] The problem is, as Boyd and Richerson point out, the three Rs can stabilize any behavior. As Boyd and Richerson state, "[i]f

152. Joseph Henrich & Natalie Henrich, *Culture, Evolution and the Puzzle of Human Cooperation*, 7 COGNITIVE SYS. RSCH 220, 221 (2006).

153. *See supra* text accompanying notes 59-81.

154. *See* Nussbaum, *supra* note 44, at 150.

155. *Id.*

156. Robert Boyd & Peter J. Richerson, *Culture and the Evolution of Human Cooperation*, 364 PHIL. TRANSACTIONS OF THE ROYAL SOC'Y: BIOLOGICAL SCIENCES 3281, 3283 (2009).

157. *See id.*

everybody agrees that individuals must do *X*, and punish those who do not do *X*, then *X* will be evolutionarily stable as long as the costs of being punished exceed the costs of doing *X*. It is irrelevant whether *X* benefits the group or is socially destructive. It will pay to do *X*."[158]

Why, then, is *X* cooperative rather than selfish behavior? How is it that cooperation can appear and exist in a world of self-interest? One explanation is the influential theory of cultural evolution that has been developed in recent years by several different evolutionary theorists.[159] These analysts apply a culture-gene coevolutionary approach to human behavior and psychology, including the evolution of human cooperation. What has emerged from this work is a Dual Inheritance Theory, as Joseph and Natalie Henrich call it.[160] Basically, genes and culture continually interact with each other in a feedback loop. Changes in genes can lead to changes in culture,[161] and those changes may in turn affect genetic selection. The theory argues that humans are heavily reliant on cultural learning and culturally evolved adaptations.[162] These cultural adaptations develop very rapidly, more so than genetic adaptation.

Such adaptations best account for larger scale cooperative behavior, i.e. extending beyond kin groups to large social communities. "Cultural evolution created cooperative groups," Boyd and Nickerson contend.[163] In culturally evolved social environments, the process of natural selection occurring within groups favored new genes that favored more socially agreeable behavior such as cooperation. Individuals and their genes increasingly became members of groups that were governed by social norms that included cooperation.[164] These social norms are maintained by mechanisms such as reputation and signaling.[165] In light of this, as evolutionary analysts Joseph Henrich and Michael Muthukrishna state, "researchers have argued that these cultural products—social norms and institutions—over time have generated

158. *Id.*

159. *See, e.g.*, *id.* at 3181; Joseph Henrich & Michael Muthukrishna, *The Origins and Psychology of Human Cooperation*, 72 ANN. REV. OF PSYCH. 208, 210 (2020). *See generally* ROBERT BOYD & PETER J. RICHERSON, THE ORIGIN AND EVOLUTION OF CULTURES (2005).

160. *See* Henrich & Henrich, *supra* note 152, at 225.

161. "Culture" here is defined as "socially learned behavior," which itself is defined as "copying behaviors observed in others or acquiring behaviors through being taught by others." *Dual Inheritance Theory*, WIKIPEDIA, https://en.wikipedia.org/wiki/Dual_inheritance_theory (last visited on April 18, 2024).

162. *See* Joseph Henrich & Richard McElreath, *Dual-Inheritance Theory: The Evolution of Human Cultural Capacities and Cultural Evolution*, OXFORD HANDBOOK OF EVOLUTIONARY PSYCH. 555, 556 (R. Dunbar & L. Barrett, eds., 2007).

163. Boyd & Richerson, *supra* note 135, at 3286.

164. *See* Henrich & Muthukrishna, *supra* note 159, at 226.

165. *See id.*

powerful social selection on our genes and thereby shaped our evolved psychology."[166]

Arguing from a very different direction, Martha Nussbaum also rejects an account of cooperation that is premised exclusively on reciprocity. She worries that such a contractarian approach to cooperation creates dilemmas concerning the capabilities of certain groups of individuals.[167] If cooperation is strictly a matter of reciprocity, then what are we to do about the capabilities of people with disabilities? The reciprocity approach to cooperation will have difficulty justifying the development of capabilities for those persons. Supporting their capabilities, Nussbaum suggests, requires a new account of social cooperation, one that is focused on benevolence and altruism rather than mutual advantage exclusively.[168] She views humans as "held together by many altruistic ties as well as by ties of mutual advantage," and she invokes Aristotle's conception of the person as a social being for whom "[t]he good of others is not just a constraint on this person's pursuit of her own good; it is part of her good."[169]

People do in fact cooperate with others to empower those differently abled to develop essential capabilities, despite the lack of any personal advantage in doing so. How can we explain this cooperative behavior? To some extent, of course, enablement for persons with disabilities is a matter that is compelled by law. The Americans with Disabilities Act, for example, requires certain groups of individuals to take affirmative steps to facilitate access for disabled persons.[170] In many other circumstances, however, people are more than happy to help differently abled individuals in activities important to the development of capabilities ranging from recreation to education. A parent on a playground may notice a neurodiverse child being ignored by other children in their game and ask their own child to include that child in the game. In some cases, the neurotypical child may invite the neurodiverse child to join the game without any prompting from a parent. This kind of cooperative behavior does not square with the contractarian assumption that people act purely from self-interested motives, nor does reciprocity really explain such cooperative behavior. It is hard to see where the payoff is for such actions. The better explanation lies in Nussbaum's view of humans as "held together by many altruistic ties as well as by ties of mutual advantage." That view squares with the evolutionary account of Boyd and Nickerson, described earlier.

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166. *Id.*

167. *See* Nussbaum, *supra* note 44, at 149-152.

168. *See id*, at 150.

169. MARTHA C. NUSSBAUM, FRONTIERS OF JUSTICE: DISABILITY, NATIONALITY, AND SPECIES MEMBERSHIP 158 (2006).

170. *See* 28 C.F.R. §§ 36.101-36.608 (2024); 42 U.S.C. § 12183.

VI. CLIMATE CHANGE AND HUMAN FLOURISHING

How can we flourish in a world where climate change poses existential threats? Any adequate answer to that question has to begin with the recognition of our inherent sociability and interconnectedness. In coping with climate change, let alone flourishing in the presence of climate change, we cannot act individually or in isolation. The only strategies that will succeed are cooperative ones. Cooperation is possible because we are social creatures who depend upon each other for our survival, let alone our flourishing.

Elsewhere, I have described what I called a "social thesis" that follows from our dependency on others:

> In order for me to be a certain kind of person—a free person with the basic capabilities necessary for human flourishing—I must be in, belong to, and support a certain kind of society—a society that supports a certain kind of political, social, and moral culture and that maintains a decent background material structure.[171]

What I mean to say here is that each of us has an obligation to belong. More concretely, we are obligated to support the institutions, associations, and infrastructures that in turn support the society and culture in which we live. This obligation is really self-regarding. If my society and its values are important to me, then I must maintain the conditions that make their existence possible. It is in my own interest to do what I can to enable these institutions to endure. This is why our obligation to belong is really not a matter of sacrifice at all. It is a matter of self-interest, so that we, each of us, can flourish.

We fulfill the obligation to belong in many ways. We vote; we pay taxes; we join civic groups, churches, synagogues, and mosques; we join unions; and the list continues. In all these activities, we cooperate. As the previous discussion indicated, we are a cooperative species, resulting from a complex process of cultural-genetic inheritance. By joining in various activities and cooperating with each other, we enable the development of the capabilities that are essential to leading flourishing lives. Recall that these include food and shelter, education, good health, having attachments with others, and so on.[172] Each of these capabilities involves cooperation with others in some way. We simply cannot develop these capabilities on our own. Alasdair MacIntyre has described humans as "dependent rational animals."[173] As he states, "we cannot have a practically adequate understanding of our own good, of our own flourishing, apart from and independently of the flourishing of that whole set of social relationships in which we

171. GREGORY S. ALEXANDER, PROPERTY AND HUMAN FLOURISHING 55 (2018).

172. *See* NUSSBAUM, *supra* note 169, at 76.

173. *See* ALASDAIR MACINTYRE, DEPENDENT RATIONAL ANIMALS: WHY HUMAN BEINGS NEED THE VIRTUES 5 (1999).

have found our place."[174] It is only within this set of relationships that we are able to develop the capabilities that enable us to live flourishing lives.

This is the basis of the bottoms-up strategy of climate change adaptation. Adapting to climate change successfully must take into account the social thesis I stated earlier. That is, it requires that each of us actually belong to the communities and the society that enables us to flourish, and that we actually support those communities and that broader society. What constitutes flourishing is an individual matter, but realizing it is not. However each of us defines a well-lived life, we can achieve such a life only in a social context. This is why cooperation is an indispensable capability for surviving, let alone flourishing in the environment of climate change.

Human flourishing may seem like an impossible aspiration under the best of circumstances to those who are under life's thumb. For them, just getting by is quite enough. Add the disastrous conditions wrought by climate change to the mix, and you get a scenario that leaves hardly enough room for survival, let alone flourishing—no matter how one defines that term. In fact, climate change disasters seem to make human flourishing beyond the reach of everyone these days.

And yet this dismal picture is not a foregone conclusion. There exist prospects that may make it possible for all persons to flourish in the future. A wide variety of adaptive measures have been developed to mitigate the effects of climate change. Some of these require government action, but many do not. COPE was just one example of such an initiative that did not need government intervention.

Perhaps the greatest impediment to human flourishing in the presence of climate change is world poverty and inequality of resources devoted to climate change adaptation, especially in Third World countries but also within the U.S.[175] Wealth permits owners to make investments to protect themselves against climate-related risks. In more extreme cases, the investments are not feasible, but wealth enables protection by moving to areas less exposed to the risks associated with climate change disasters.[176]

The problem is especially acute in the Third World. As two authors crisply put it, "[c]limate change will injure vulnerable communities."[177] Frustratingly, those same communities may be at risk of serious injury

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174. *Id.* at 107-08.

175. For an excellent discussion of the topic of climate change adaptation and inequality in the U.S., see David A. Dana, *Climate Change Adaptation as a Problem of Inequality and Possible Legal Reforms*, 117 NW. U. L. REV. 71 (2022).

176. *Id.* at 75.

177. Elizabeth Marino & Jesse Ribot, *Adding Insult to Injury: Climate Change and the Inequities of Climate Intervention*, 22 GLOB. ENV'T CHANGE 323 (2012) (quote is from the article's abstract).

following policies and plans aimed at mitigating or adapting to climate change. Although climate change mitigation and adaptation measures may create opportunities for vulnerable communities to reduce risk, they also have their own stratifying consequences for vulnerable communities.[178] In Shishmaref, Alaska, for example, relocation as an adaptation strategy to changing ecological conditions is the only sustainable option.[179] However, historically constructed vulnerability of the indigenous Iñupiat community together with mis- and under-representation of their voices in adaptation planning exacerbate their susceptibility.[180] Several case studies in other countries reveal that as part of climate change mitigation and adaptation policies, resource control and management tends to be shifting away from participatory programs to those that rely on technical expertise or state and global actors.[181] Technical expertise is needed, of course, but unless local voices are heard, already existing social stratification will be intensified.

CONCLUSION

In a very real and concrete way, human flourishing is dependent upon the natural world that we inhabit. As flourishing lives require certain capabilities, environmental conditions may affect development of those capabilities. Climate change threatens those conditions, and in doing so creates increasingly greater difficulties for meeting our capability needs, ranging from first-order capabilities such as food and shelter, to second-order ones like play and social affiliations or relationships. "Climate change will also affect the ability of many to move freely,"[182] while for others the effect of rapid climate change is to force them to relocate, disrupting stable relationships with their families and other communities.

Breena Holland has argued that a sustainable environment is what she calls a "meta-capability."[183] She reasons that "certain environmental conditions [are] instrumental to human capabilities in the same way that Nussbaum treats material things such as shelter, nourishment, and property as instrumental to human capabilities."[184]

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178. *Id.*

179. *See* Elizabeth Marino, *The Long History of Environmental Migration: Assessing Vulnerability Construction and Obstacles to Successful Relocation in Shishmaref, Alaska*, 22 GLOB. ENV'T CHANGE 374, 374 (2012).

180. *See id.*

181. *See, e.g.*, Betsy A. Beymer-Farris & Thomas J. Bassett, *The REDD Menace: Resurgent Protectionism in Tanzania's Mangrove Forests*, 22 GLOB. ENV'T CHANGE 332, 332 (2012).

182. *See* David Schlosberg, *Climate Justice and Capabilities: A Framework for Adaptation Policy*, 26 ETHICS & INT'L AFF. 445, 454 (2012).

183. *See* Breena Holland, *Justice and the Environment in Nussbaum's "Capabilities Approach": Why Sustainable Capacity is a Meta-Capability*, 61 POL. RSCH. Q. 319 (2008).

184. *Id.* at 320.

She further concludes: "[B]ecause certain environmental conditions are necessary for producing and sustaining these material things, and indeed for making all human capabilities possible, I seek to establish these environmental conditions as an independent 'meta-capability.'"[185] For example, she points to the effect of storm surges and tidal flooding forcing people, especially poor people, to move away from the coast. Such disruption of one's homes involves more than just direct relocation costs. It means severing attachments to one's friends and the community that makes a place a home; it may even involve detaching from parts of one's family. Such relocation can be a traumatic event, as suggested by the experiences of the low-income families in New Orleans who were forced to move out of the Lower Ninth Ward during Hurricane Katrina.[186] The same is true for the victims who survived the Camp Fire of 2018, in Paradise, California.[187]

Various methods of adapting to climate change must be pursued if the capabilities that are essential to flourishing lives are sustained. At the center of these methods are local groups. Particularly within cities, neighborhoods are increasingly taking the initiative in addressing local effects of climate change through adaptation efforts.

Local groups such as the ones mentioned above illustrate that at the core of these initiatives is cooperation. The capability to cooperate with others is indispensable to the success of adaptation programs. Development of the capacity to cooperate with others does not depend on owning property, but our ability to protect property may depend on cooperativeness. Humans have a capacity to cooperate, especially under conditions of shared existential threat.[188] Under such circumstances they share information, strategize together, and may even put themselves in harm's way to help others avoid imminent dangers to themselves or their property. Capability theorists have argued that the state must provide or at least enable individuals with the necessary capabilities, but while this is the case with respect to

185. *Id.*

186. *See* Breena Holland, *Environment as Meta-Capability: Why a Dignified Human Life Requires a Stable Climate System*, in ETHICAL ADAPTATIONS TO CLIMATE CHANGE: HUMAN VIRTUES OF THE FUTURE 145, 153-55 (Allen Thompson & Jeremy Bendik-Keymer eds., 2012).

187. Dani Anguiano, *Trauma, Fear, Homelessness: Life After California's Deadliest Fire Shows the Future of Climate Crisis*, THE GUARDIAN (Sept. 9, 2020), https://www.theguardian.com/us-news/2020/sep/09/trauma-fear-homelessness-paradise-camp-fire-migrants-climate-change. ("The Camp Fire started on Thursday, November 8, 2018, in Northern California's Butte County. The fire caused at least 85 civilian fatalities, and injured 12 civilians and five firefighters. . . . It . . . destroyed more than 18,000 structures" and "almost completely destroyed" the town of Paradise. *Remembering the Camp Fire*, CALFIRE, https://www.fire.ca.gov/our-impact/remembering-the-camp-fire (last visited Mar. 16, 2025).)

188. *See, e.g.*, Henrike Moll & Michael Tomasello, *Cooperation and Human Cognition: The Vygotskian Intelligence Hypothesis*, 362 PHIL. TRANSACTIONS OF THE ROYAL SOC'Y: BIOLOGICAL SCIENCES (2007); MICHAEL TOMASELLO, THE CULTURAL ORIGINS OF HUMAN COGNITION (1999); Harvey Whitehouse et al., *The Evolution of Extreme Cooperation via Shared Dysphoric Experiences*, 7 SCI. REPORTS 6-7 (2017).

certain capabilities like health, it is not true of cooperativeness. Aristotle was right when he famously characterized humans as social animals. Humans learn how to cooperate without any help from the state.

The voluminous literature on capabilities makes clear that capabilities are ends, and that it is the ends rather than the means on which our attention should be focused. Although it is certainly the case that ends are what ultimately matter when thinking about well-being, it hardly follows that means are thus irrelevant. When we examine actual social practices that promote well-being, we may find that what we had assumed were ends, valued for themselves, were in some cases actually means. This appears to be the case in my example with COPE, where the capabilities of cooperativeness and practical reasoning have functioned as indispensable means to the desired end of human flourishing or, more specifically, protecting life and property. Nevertheless, the general point of capabilities theory still holds true—capabilities, rather than resources, are the key to living a fulfilling and free life.

WHY WE SHOULD LOOK UP FOR ANSWERS TO OUR ENERGY QUESTIONS: A PROPOSAL TO SLOW IRREVERSIBLE CLIMATE DAMAGE AND REMEDY ENVIRONMENTAL JUSTICE INEQUITIES BY DECOUPLING OUR ECONOMY FROM OUR EMISSIONS THROUGH SOLAR ENERGY

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INTRODUCTION

Carbon emissions contributing to rapid climate change cause a host of problems globally and domestically,[1] and as long as humans have employed the use of fossil fuels, our economies and emissions have been intertwined.[2] Today, the majority of economic activities, such as manufacturing, transportation, and energy production, generate greenhouse gas emissions that contribute to climate change.[3] Our historical and present-day carbon reliance has led to sea-level rise, destruction of biodiversity, and deadly global temperature increase.[4] We have seen and measured these effects, yet conferences, treaties, and overwhelming amounts of visual and published evidence of the dangers of climate change have scant effects on how we consume fossil fuels.[5] But why? Many believe it is not their problem or that it is a

1. *See generally* Justin A. Johnson et al., *The Economic Case for Nature*, WORLD BANK GRP. (2021), https://openknowledge.worldbank.org/server/api/core/bitstreams/9f0d9a3a-83ca-5c96-bd59-9b16f4e936d8/content.

2. *Sources of Greenhouse Gas Emissions*, U.S. ENV'T PROT. AGENCY, https://www.epa.gov/ghgemissions/sources-greenhouse-gas-emissions (last visited May 4, 2023).

3. *Id.*

4. Johnson et al., *supra* note 1.

5. *See generally* Eur. Broad. Union, *Climate Journalism That Works*, EUROVISION NEWS (2023), https://www.ebu.ch/files/live/sites/ebu/files/Publications/strategic/open/News_report_2023_Climate_Journalism.pdf.

problem for the world's future generations to solve.[6] Many discount the costs that will burden our society if we continue the status quo, both literally and mathematically.[7] Many believe it is unfixable.[8] Given this, it seems that presenting the dangers and causes of climate change in a relatable light may be the best solution to bringing about change. Perhaps the most pressing current issue humans face from our carbon-emitting practices is one that is far less widely discussed: poor air quality. Air quality problems set off by the burning of fossil fuels lead to extremely detrimental health effects that cost humans trillions annually.[9] However, universally, those that contribute the least to our carbon emissions experience the worst of their externalities.[10] Carbon emissions create poor air quality that disproportionately affects low-income communities of color, often called environmental justice (EJ) communities,[11] aptly leading to the plight of these communities being labeled as environmental injustices.[12] Humans emit carbon dioxide and other greenhouse gases because we consume energy, so in order to safeguard public health and relieve EJ communities' plight, it is imperative that we address the source of our emissions—or better yet, our electricity.[13] Already, albeit slowly, the future is moving towards renewable energy sources, and so is our economy.[14] We are in the most capable position we have ever been to undo our wrongs and prevent future injustices in our energy consumption practices, so it only makes sense that we move towards this future justly and efficiently by dislodging the status quo of energy consumption and bringing those who have suffered vastly disproportionate burdens[15] of our carbon

6. *Id.*

7. *Id.*

8. *Id.*

9. *What You Need to Know About Climate Change and Air Pollution,* WORLD BANK GRP. (Sept. 1, 2022), https://www.worldbank.org/en/news/feature/2022/09/01/what-you-need-to-know-about-climate-change-and-air-pollution#:~:text=A%20World%20Bank%20report%20estimated,to%206.1%25%20of%20global%20GDP (last visited May 4, 2023).

10. Laura Cozzi et al., *The World's Top 1% of Emitters Produce Over 1000 Times More CO2 Than the Bottom 1%*, INT'L ENERGY AGENCY (Feb. 22, 2023), https://www.iea.org/commentaries/the-world-s-top-1-of-emitters-produce-over-1000-times-more-co2-than-the-bottom-1; *see generally Environmental Justice Screening Report for the Clean Power Plan*, U.S. ENV'T PROT. AGENCY (2015), https://19january2017snapshot.epa.gov/sites/production/files/2016-04/documents/ejscreencpp.pdf.

11. *Environmental Justice Screening Report for the Clean Power Plan*, *supra* note 10.

12. *Environmental Justice*, THE WHITE HOUSE, https://www.whitehouse.gov/environmentaljustice/ (last visited May 4, 2023); *What Causes Environmental Injustice?*, BEN CRUMP L., https://bencrump.com/environmental-justice-lawyer/what-causes-environmental-injustice/ (last visited May 4, 2023).

13. *See generally* Shelley Welton, *Clean Electrification*, 88 U. COLO. L. REV. 571 (2017).

14. *U.S. Renewable Energy Consumption Surpasses Coal for the First Time in Over 130 Years*, U.S. ENERGY INFO. ADMIN. (May 28, 2020), https://www.eia.gov/todayinenergy/detail.php?id=43895.

15. *See generally* CLIFFORD VILLA ET AL., ENVIRONMENTAL JUSTICE: LAW, POLICY & REGULATION (Carolina Acad. Press 3d ed. 2020).

consumption to the forefront of our divorce from the fossil fuel era. Addressing the health threats that carbon emissions present us means we must reconsider our energy portfolio.[16] As already demonstrated in some communities domestically, among the best and most practical ways to veer ourselves away from the status quo is by implementing widespread solar-distributed energy resources.[17] This Note proposes that we should decouple our economy from our emissions by transitioning from fossil fuels to renewable energy sources and that the implementation of distributed solar energy in EJ communities best initiates that process.

Part I of this Note addresses our emissions, their sources, and the threats they create, especially for EJ communities. Part II addresses solar energy as the most feasible and appropriate option for our transition to clean energy, as well as the existing legal framework that would play a key role in our solar-powered clean energy revolution. Finally, Part III addresses which solar options are best, the programs we should strive to emulate, and other vital considerations of a *just* transition to solar energy.

I. AN OVERVIEW OF OUR EMISSIONS AND ENVIRONMENTAL JUSTICE

The decade from 2011 to 2020 was the warmest on record, as global average temperatures reached nearly 1.1°C above pre-industrial levels in 2019 and research now suggesting that we will see a 0.2°C-per-decade increase in temperatures going forward.[18] Spiking temperatures create a host of problems in themselves,[19] such as harsher weather patterns causing both floods and droughts, wildfires, decreases in agricultural yields, and mass extinctions of species.[20] Earth goes through natural cycles causing temperatures to rise and fall, a planetary process known as natural variability,[21] but never has

16. *See* Shalanda H. Baker, *Anti-Resilience: A Roadmap for Transformational Justice Within the Energy System*, 54 HARV. C.R.-C.L. L. REV. 1, 15-19 (2019).

17. Welton, *supra* note 13, at 645.

18. *Causes of Climate Change*, EUR. COMM'N, https://climate.ec.europa.eu/climate-change/causes-climate-change_en (last visited May 4, 2023).

19. *The Effects of Climate Change*, NAT'L AERONAUTICS & SPACE AGENCY, https://climate.nasa.gov/effects/#:~:text=Climate%20change%20has%20caused%20increased,related%20health%20impacts%20in%20cities (last visited May 4, 2023).

20. *Billion-Dollar Disasters: Calculating the Costs*, NAT'L OCEANIC & ATMOSPHERIC ADMIN., https://www.ncei.noaa.gov/access/monitoring/dyk/billions-calculations; *see generally* Shi-Ling Hsu, *Climate Insecurity*, 23 UTAH L. REV. 129, 141 (2023).

21. *World of Change: Global Temperature*, NAT'L AERONAUTICS & SPACE AGENCY EARTH OBSERVATORY, https://earthobservatory.nasa.gov/world-of-change/global-temperatures (last visited May 4, 2023).

our planet heated so rapidly.[22] It is because of this that we can almost solely blame these above-mentioned events, or at the very least their frequency and severity, on anthropogenic emissions.[23] Ironically, the temperature increases we have inflicted upon ourselves also indirectly increase emissions as we consume more and more energy to cool ourselves, and thus the cycle continues and worsens.[24] Temperature increases and global greenhouse gas emissions have increased proportionally, both having yet to peak.[25] Since 1970, carbon dioxide (CO2) emissions have increased by about 90%, with emissions from fossil fuel combustion and industrial processes contributing to roughly 78% of that increase.[26] Electricity generation alone accounted for 34% of all greenhouse gas emissions in 2019,[27] and the industry supplies 7.8 million jobs,[28] just under 5% of all U.S. jobs.[29] It is no wonder why we are drawn to fossil fuel consumption, as the technological advancements induced by such consumption afford us widespread luxuries of efficiency and employment. But in recent years, a significant shift in the sources of our electricity generation has originated from further technological advancements, namely in the realm of renewable energy.[30] In 2019, for the first time ever, the United States' manmade renewable energy sources produced more energy than coal, thanks in large part to the proliferation of solar and wind renewables.[31] This shift away from our traditional energy consumption

22. Jason Vermes, *Earth Hasn't Been This Hot in 125,000 Years, but Scientists Say Temps Are Rising Much Faster Now*, CAN. BROAD. CORP. NEWS (Aug. 14, 2021), https://www.cbc.ca/radio/day6/earth-as-hot-as-125-000-years-ago-election-countdown-reservation-dogs-afghanistan-under-siege-more-1.6139545/earth-hasn-t-been-this-hot-in-125-000-years-but-scientists-say-temps-are-rising-much-faster-now-1.6139550.

23. Michael Burger et al., *The Law and Science of Climate Change Attribution*, 45 COLUM. J. ENVTL. L. 57, 61 (2020).

24. Lucas W. Davis & Paul J. Gertler, *Contribution of Air Conditioning Adoption to Future Energy Use Under Global Warming*, 112 PROC. OF THE NAT'L ACAD. OF SCIENCES 5962 (Apr. 27, 2015), https://www.pnas.org/doi/10.1073/pnas.1423558112.

25. *Global Greenhouse Gas Emissions Data*, U.S. ENV'T PROT. AGENCY, https://19january2017snapshot.epa.gov/ghgemissions/global-greenhouse-gas-emissions-data_.html (last visited Mar. 13, 2025).

26. *Id.*

27. *Global Greenhouse Gas Overview,* U.S. ENV'T PROT. AGENCY, https://www.epa.gov/ghgemissions/global-greenhouse-gas-overview (last visited Mar. 13, 2025).

28. *2022 U.S. Energy and Employment Report Fact Sheet*, U.S. DEP'T OF ENERGY (2022), https://www.energy.gov/sites/default/files/2022-06/USEER%202022%20Fact%20Sheet_0.pdf.

29. Statista Rsch. Dep't, *Seasonally Adjusted Monthly Civilian Labor Force in the US*, STATISTA (Oct. 8, 2024) https://www.statista.com/statistics/193953/seasonally-adjusted-monthly-civilian-labor-force-in-the-us/#:~:text=U.S.%20civilian%20labor%20force%20seasonally%20adjusted%202021%2D2023&text=In%20February%202023%2C%20the%20civilian,people%20in%20the%20United%20States.

30. *U.S. Renewable Energy Consumption Surpasses Coal for the First Time in Over 130 Years*, *supra* note 14.

31. *Id.*

practices and towards renewables signals the ushering in of a new era of energy production and, thus, a chance to adapt to it *correctly*.

A. Air Pollution As The Primary Threat

Environmentalists have tried every method to move people to be concerned with and fight against climate change. We see images of polar bears starving,[32] San Francisco skies that resemble the atmosphere of Mars,[33] and everything in between. However, framing climate change and the critical importance of halting our activities that contribute to it in such a manner has been largely ineffective.[34] Addressing our collective apathy on the subject more compellingly may have yet to be achieved, which is why framing the urgency for action in a new light is necessary. Even with climate change being the "threat multiplier"[35] that it is, imperiling us and future generations more than any threat we have ever faced,[36] we need a new villain for the fight against climate change to gain traction—and no threat better suits the role than air pollution. The largest contributor to climate change, anthropogenic emissions, is also the most lethal to humans worldwide.[37] Specifically, the air pollution our energy consumption creates kills more humans and shortens more lifespans than any other affliction we *currently* face.[38] Globally, an estimated one in five deaths (roughly 18 to 21.5%) every year can be attributed to fossil fuel pollution,[39] meaning nearly nine million people around the globe die each year as a result of breathing in air containing particles from

32. Stephen Leahy, *Polar Bears Really Are Starving Because of Global Warming, Study Shows*, NAT'L GEOGRAPHIC (Feb. 1, 2018), https://www.nationalgeographic.com/science/article/polar-bears-starve-melting-sea-ice-global-warming-study-beaufort-sea-environment.

33. *See* J.D. Morris, *California's New Largest-Ever Wildfire: North Coast's August Complex Shatters Record Set Two Years Ago*, SAN FRANCISCO CHRON. (Sept. 10, 2020, 2:00 PM), https://www.sfchronicle.com/california-wildfires/article/North-Coast-complex-is-now-California-s-second-15554767.php.

34. Seth Borenstein, *No Obituary for Earth: Scientists Fight Climate Doom Talk*, ASSOCIATED PRESS NEWS (Apr. 4, 2022, 12:57 PM), https://apnews.com/article/fighting-climate-doom-d47f2ea47bc428656b7be1f48771b75d.

35. Hsu, *supra* note 20, at 132 (citing *Climate Change Recognized as 'Threat Multiplier,' UN Security Council Debates Its Impact on Peace*, U.N. NEWS (Jan. 25, 2019), https://news.un.org/en/story/2019/ 01/1031322.)

36. *See* Melody Schreiber, *Addressing Climate Change Concerns in Practice*, MONITOR ON PSYCH., Mar. 1, 2021, at 31, 33.

37. Sebastian Malo, *Air Pollution is the World's Top Killer, According to New Research*, WORLD ECON. F. (Nov. 21, 2018), https://www.weforum.org/agenda/2018/11/deadly-air-pollution-shortens-lives-by-nearly-2-years-researchers.

38. *Id.*

39. *Fossil Fuel Air Pollution Responsible for 1 in 5 Deaths Worldwide*, UNIV. COLL. LONDON NEWS (Feb. 9, 2021), https://www.ucl.ac.uk/news/2021/feb/fossil-fuel-air-pollution-responsible-1-5-deaths-worldwide#:~:text=Co%2Dauthor%20and%20UCL%20Associate, PM2.5%2C%20are%20well%20documented.

burning fuels like coal, petrol, and diesel.[40] Three hundred and fifty thousand of those deaths occur in the United States, earning fossil fuel burning the title of the third leading cause of death in the country, behind heart disease and cancer.[41] This number is even more shocking considering that the respiratory diseases brought on by breathing in fossil fuel emissions both cause and exacerbate the risks of diseases like heart disease, cancer, stroke, chronic lower respiratory illnesses, liver disease, and kidney disease.[42] The above diseases make up six of the nine leading causes of death in the United States and altogether cause nearly two million deaths in the country annually.[43] Air quality problems are incessant and affect everyone, although some populations are affected more so than others regardless of their existing health.[44] And again, unfortunately, the ones contributing to climate change the least are the ones experiencing the worst air quality issues.[45]

B. Environmental (In)Justice

In the United States, the roots of the term "environmental justice" (EJ) can be traced back to the civil rights movement and the environmental movement of the 1960s and 1970s.[46] EJ is a concept that acknowledges the intersectionality of race, class, and environmental issues and recognizes that the negative effects of environmental pollution are not evenly distributed.[47] The term EJ went on to become associated with communities of color and low-income communities that faced disproportionately higher environmental burdens than communities that represented persons

40. *Id.*; *see also* Christopher D. Ahlers, *Wood Burning, Biomass, Air Pollution, and Climate Change*, 46 ENVTL. L. 49, 51 (2016).

41. David Abel, *Burning Fossil Fuels Kills an Estimated 350,000 Americans a Year, Including 7,600 in Massachusetts, Study Finds*, BOS. GLOBE (Feb. 9, 2021), https://www.bostonglobe.com/2021/02/09/metro/burning-fossil-fuels-kills-an-estimated-350000-people-year-study-finds/; *see also Leading Causes of Death*, U.S. CENTERS FOR DISEASE CONTROL AND PREVENTION: NAT'L CTR. FOR HEALTH STAT. (2023), https://www.cdc.gov/nchs/fastats/leading-causes-of-death.htm.

42. *Leading Causes of Death*, *supra* note 41; *see also Air Pollution Linked to Fatty Liver Disease*, GENETIC ENG'G & BIOTECHNOLOGY NEWS (Dec. 7, 2021), https://www.genengnews.com/news/air-pollution-linked-to-fatty-liver-disease/#:~:text=Formerly%20known%20as%20nonalcoholic%20fatty,increase%20the%20risk%20of%20MAFLD; Baris Asfar et al., *Air Pollution and Kidney Disease: Review of Current Evidence*, 12 CLINICAL KIDNEY J. 19, 19 (2019).

43. *Leading Causes of Death*, *supra* note 41.

44. Frederica P. Perera, *Multiple Threats to Child Health from Fossil Fuel Combustion: Impacts of Air Pollution and Climate Change*, 125 ENV'T HEALTH PERSP. 141, 142 (2016).

45. Cozzi et al., *supra* note 10; *see also Environmental Justice Screening Report for the Clean Power Plan*, *supra* note 10.

46. Eddy F. Carter, *The American Environmental Justice Movement*, UNIV. OF TENN. AT MARTIN: INTERNET ENCYCLOPEDIA OF PHIL., https://iep.utm.edu/enviro-j/#H1 (last visited May 4, 2023).

47. *See generally* Villa et al., *supra* note 15.

from a higher socioeconomic class, with areas such as Afton, North Carolina, and Northwood Manor, Texas as the faces of the EJ movement.[48] These communities garnered national attention for their shockingly close proximity to waste facilities that poisoned them with air pollution.[49] As recognition of their situations grew, so did awareness of how pervasively chronic their affliction was in countless communities throughout the country.[50] Sadly, but perhaps unsurprisingly, waste facilities are just *one* type of mega-polluter that plagues EJ communities. In addition to waste facilities,[51] power plants,[52] petrochemical plants,[53] refineries,[54] and manufacturing plants[55] have been the most significant contributors to poor air quality in EJ communities for generations.[56]

In the United States, African Americans are 20% more likely than the average person to die from emissions-based air pollutants.[57] Specifically, African Americans are roughly 9% more likely than white non-Latinos and twice as likely as all other Americans to die from these pollutants.[58] When considering that children below the age of twelve take two to three times as many breaths as adults,[59] it is easy to see how the children in EJ communities experience significantly higher risks from exposure to emissions-related air pollution than the

48. *Id.* at 3-13; *see What is Environmental Justice?*, U.S. COMM'N ON CIVIL RIGHTS, https://www.usccr.gov/files/pubs/envjust/ch2.htm#_ftnref2 (last visited May 4, 2023).

49. *What is Environmental Justice?*, *supra* note 48.

50. *See generally* Villa et al., *supra* note 15, at 3-38.

51. Robert D. Bullard, *Environmental Justice: It's More Than Waste Facility Siting*, 77 SOC. SCI. Q. 493 (1996).

52. Kathiann M. Kowalski, *Study: Black, Low-Income Americans Face Highest Risk from Power Plant Pollution*, ENERGY NEWS NETWORK (Dec. 11, 2019), https://energynews.us/2019/12/11/study-black-low-income-americans-face-highest-risk-from-power-plant-pollution/.

53. Sheri Walsh, *Louisiana Residents in 'Cancer Alley' File Lawsuit to Ban New Petrochemical Plants*, UNITED PRESS INT'L (Mar. 21, 2023), https://www.upi.com/Top_News/US/2023/03/21/louisiana-lawsuit-st-james-parish-chemical-plants-black-neighborhoods/2771679438794/.

54. *Fighting for Environmental Justice in Richmond, CA*, EARTHJUSTICE, https://earthjustice.org/case/protecting-global-climate-and-community-health-from-oil-refinery-impacts (last visited May 4, 2023).

55. Gabrielle Coppola, *How a New Jeep Factory In Detroit Turned Into a Civil Rights Fight*, BLOOMBERG NEWS (Mar. 21, 2022), https://www.bloomberg.com/news/features/2022-03-21/stellantis-nv-s-detroit-jeep-plant-draws-ire-of-environmental-justice-activists#xj4y7vzkg.

56. *Air Enforcement*, U.S. ENV'T PROT. AGENCY, https://www.epa.gov/enforcement/air-enforcement (last visited May 4, 2023).

57. Maninder P. S. Thind et al.,

Fine Particulate Air Pollution from Electricity Generation in the US: Health Impacts by Race, Income, and Geography, ENV'T. SCI. & TECH. 14010, 14013 (2019).

58. *Id.*

59. Adam Rowden, *What is a Normal Respiratory Rate Based on Your Age?*, MED. NEWS TODAY, (Jan. 4, 2023), https://www.medicalnewstoday.com/articles/324409#how-to-measure.

general population as well.[60] "[C]hildren spend more time outside, where the concentrations of pollution from traffic, powerplants, and other combustion sources are generally higher," and before human immune systems and lungs are fully developed, exposure to these pollutants from a young age raises the possibility of much worse responses than those seen in adults from similar exposures.[61] Research shows a positive correlation between the likelihood of moving away from your hometown and the amount you earn,[62] which spells a huge problem for those from EJ communities. Exposure to air pollutants begins for these children shortly after birth and can continue well into adulthood or beyond,[63] as many of them never leave these communities so ravaged by air pollutants.[64] Just one of the respiratory risks EJ communities' children face at alarmingly higher-than-average rates is asthma, a disease that is often caused, and always exacerbated by, exposure to emissions[65] and which causes repeated episodes of wheezing, breathlessness, and chest tightness.[66] For example, African American children visit the emergency room four times more often and die seven times more often from asthma than white children.[67] It is true that climate change affects all of us, but no communities suffer worse than environmental justice communities, especially so from what is causing it.[68] That is precisely why, as the United States moves towards renewable energy sources, the country possesses a unique opportunity to achieve co-benefits by transitioning in a way that both remedies the adverse health effects these communities face and empowers them in the future of clean energy.

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60. *See generally* Joel Schwartz, *Air Pollution and Children's Health*, 113 PEDIATRICS 1037, 1037 (2004) https://www.teamsofangels.org/publication/medical_journal_articles/air_pollution_and_children.pdf.

61. *Id.*

62. Alvin Chang, *Those Who Leave Home, and Those Who Stay,* VOX (Jul. 25, 2018, 8:17 AM), https://www.vox.com/policy-and-politics/2017/6/15/15757708/hometown-stay-leave.

63. *See* Schwartz, *supra* note 60.

64. *What Percentage of Americans Currently Live in the Town or City Where They Grew Up?*, N. AM. MOVING SERVICES, https://www.northamerican.com/infographics/where-they-grew-up (last visited May 4, 2023).

65. Angelica I. Tiotiu et al., *Impact of Air Pollution on Asthma Outcomes*, 17 INT'L. J. OF ENV'T. RSCH. & PUB. HEALTH 1 (2020).

66. *About Asthma*, U.S. CENTERS FOR DISEASE CONTROL AND PREVENTION, https://www.cdc.gov/asthma/about/index.html (last visited Nov. 5, 2024).

67. Emily A. Benfer, *Health Justice: A Framework (And Call to Action) for the Elimination of Health Inequity and Social Injustice*, 65 AM. U. L. REV. 275, 298 (2015).

68. Douglas Fischer, *Climate Change Hits Poor Hardest in U.S.*, SCI. AM. (May 29, 2009), https://www.scientificamerican.com/article/climate-change-hits-poor-hardest/; *see generally* Rachel Morello-Frosch et al., *The Climate Gap: Inequalities in How Climate Change Hurts Americans & How to Close the Gap*, UNIV. OF S. CAL. DORNSIFE: EQUITY RSCH. INST. (May 2009), https://dornsife.usc.edu/eri/publications/the-climate-gap-inequalities-in-how-climate-change-hurts-americans-how-to-close-the-gap/.

II. MAKING THE SOLAR MOVEMENT HAPPEN

To re-envision our relationship with energy, we will likely need to re-envision our relationship with the planet. Living creatures require a "continuous flow of degradable energy to maintain" their functions, and almost all of that energy flows from the sun.[69] As far as humans are concerned, at the beginning of this energy flow that sustains all life are plants, which sustain themselves by drawing in infinitesimally small portions of the 173,000 terawatts of solar energy the Earth is bathed in annually.[70] Globally, humans consume roughly twenty terawatts of energy per year, which means that the sun, in an hour, provides "enough energy to supply the world for a year."[71] So why is it, in this modern era where we possess the technology to harness this energy completely, of which minuscule fractions of the available supply could effectively power our entire species' needs, that when we look for the source of our energy, we look down? For the sake of turning to renewables, particularly solar renewables, one study projects that solar energy systems could cover the electricity portion of the United States' energy needs using only about 0.6% of the total land area of the country.[72] Investors in the energy industry seem to have noticed this potential as well: between 2009 and 2019, the price of solar electricity dropped by over 90%; solar now represents the best return on investment of all energy sources for new power plant developers.[73] As we move into the clean energy era, instead of looking down as we always have, we should instead look *up*: solar energy is the key to decoupling our economy from our emissions, as well as ending the cycle of environmental and societal wrongs for EJ communities.

Thankfully, the United States is moving at invigorating speeds toward implementing renewable energy sources as replacements for fossil fuels.[74] The Biden administration set a goal of achieving a 100% "carbon pollution-free power sector by 2035," a goal that, if achieved, would see us entirely replace our fossil fuel industry in the next twelve

69. ULRICH STEGER ET AL., SUSTAINABLE DEVELOPMENT & INNOVATION IN THE ENERGY SECTOR 32-33 (Springer 1st ed. 2005).

70. Peter Forbes, *Sunshine in a Bottle*, AEON MEDIA GRP. (May 5, 2016), https://aeon.co/essays/could-we-mimic-photosynthesis-to-tap-into-the-sun-s-energy.

71. *Id.*

72. Paul Denholm & Robert M. Margolis, *Land-Use Requirements and the Per-Capita Solar Footprint for Photovoltaic Generation in the United States*, 36 ENERGY POL'Y 3531, 3539 (2008).

73. Max Roser, *Why Did Renewables Become so Cheap so Fast?*, OUR WORLD IN DATA (Dec. 1, 2020), https://ourworldindata.org/cheap-renewables-growth/.

74. *Renewable Electricity Growth is Accelerating Faster than Ever Worldwide, Supporting the Emergence of the New Global Energy Economy*, INT'L ENERGY AGENCY (Dec. 1, 2021), https://www.iea.org/news/renewable-electricity-growth-is-accelerating-faster-than-ever-worldwide-supporting-the-emergence-of-the-new-global-energy-economy.

years.[75] As exciting and overdue a prospect as this is, the haste with which we make this transition creates a ticking time bomb for EJ communities.[76] Obviously, the faster we transition to renewable energy sources, the better—however, doing so without the proper deployment strategy risks us leaving these communities we have historically ravaged by our energy consumption practices in the dust, dooming them to the continuous cycle of energy poverty, adverse health effects, and lost opportunities.[77] Put simply, if average-earning and high-earning households adopt renewable energy sources at a large scale before low-income communities can, the energy burdens EJ communities face will likely rise, perhaps dramatically.[78] This is because when homeowners install solar panels and make their homes more energy-efficient, renters and lower-income households will have to bear more of the brunt of paying to maintain the grid—which means as solar homeowners' bills get lower, everyone else's could get higher.[79] If done correctly, or better put, justly, implementing widespread solar energy in the United States would start with elevating those worst equipped to adapt to the already-in-motion transition to renewables. And to do so, they will need a lot of help.

Bootstrapping a clean energy movement through environmental-justice-achieving measures is beginning to seem like a real possibility.[80] One of the pillars of environmental justice is the concept of distributive justice, which is premised on the idea that the benefits and burdens of governmentally- or privately-undertaken environmentally threatening activities are best distributed in an equitable manner.[81] More realistically, from where we stand today, distributive justice for EJ communities can really only be brought about through a sort of corrective justice, another foundational aspect of environmental justice, that addresses the disproportionate public

75. *FACT SHEET: President Biden Sets 2030 Greenhouse Gas Pollution Reduction Target Aimed at Creating Good-Paying Union Jobs and Securing U.S. Leadership on Clean Energy Technologies*, THE WHITE HOUSE ARCHIVES (Apr. 22, 2021), https://bidenwhitehouse.archives.gov/briefing-room/statements-releases/2021/04/22/fact-sheet-president-biden-sets-2030-greenhouse-gas-pollution-reduction-target-aimed-at-creating-good-paying-union-jobs-and-securing-u-s-leadership-on-clean-energy-technologies/

76. Welton, *supra* note 13, at 649-52.

77. *See* Baker, *supra* note 16.

78. Eric D. Fournier et al., *On Energy Sufficiency and the Need for New Policies to Combat Growing Inequities in the Residential Energy Sector*, ELEMENTA: SCI. OF THE ANTHROPOCENE 1-13 (2020).

79. *How Biden's Climate Tax Breaks Keep Some Americans Paying More Than Their Fair Share*, TIME (Apr. 13, 2023, 8:00 AM), https://time.com/6270883/biden-climate-legislation-taxes-ira/

80. *See EPA Releases Framework for the Implementation of the Greenhouse Gas Reduction Fund as Part of President Biden's Investing in America Agenda,* U.S. ENV'T PROT. AGENCY (April 19, 2023), https://www.epa.gov/newsreleases/epa-releases-framework-implementation-greenhouse-gas-reduction-fund-part-president.

81. *See* Villa et al., *supra* note 15, at 12.

health and environmental risks they face.[82] Putting this idea into practice would require decisionmakers to acknowledge our nation's history and shortcomings with respect to EJ communities, and for them to apply morality when distributing public resources.[83] After all, *Massachusetts v. EPA* was premised on *parens patriae*, the idea that the State of Massachusetts had a duty to protect its citizens from injuries (such as those brought on by climate change) that they could not protect themselves from, which gave Massachusetts' citizens the "special solicitude" they needed to have standing and bring suit.[84] Similarly, American codes of criminal and tort law are riddled with concepts rejecting the notion that one should not be subjected to physical, emotional, or fiscal harm for the sake of another's economic gains.[85] In the same vein, decisionmakers should, with their morals, decide to distribute funds to the communities most burdened by our energy production industry and, by doing so, give them a chance at breaking the cycle.[86] Thankfully, despite the enormity of the hurdles we have climbed and have still yet to climb in our environmental-justice-seeking clean energy transition, we are closer than we have ever been to setting EJ communities free from energy-borne afflictions.[87]

For the purposes of reducing emissions generated from stationary sources such as power plants, the key piece of legislation is the Clean Air Act (CAA).[88] Title I of the CAA authorizes the Environmental Protection Agency (EPA) to regulate and control air pollution in the United States,[89] and its principal line of attack against air pollution comes from the National Ambient Air Quality Standards (NAAQS) program it established.[90] NAAQS is a framework that allows the EPA to set and enforce air pollution controls by specifying maximum pollutant concentrations deemed to be safe for exposure over various periods of time.[91] Still, because they do not specify limitations that must be placed on actual sources, the standards themselves cannot

82. *See id.* at 15-16.

83. *See id.* at 16-18.

84. Massachusetts v. Env't Prot. Agency, 549 U.S. 497, 539 (2007) (Roberts, C. J., dissenting).

85. *See generally* RESTATEMENT (THIRD) OF TORTS (AM. L. INST. 2010); RESTATEMENT (SECOND) OF THE LAW OF CRIMINAL LAW (AM. L. INST. 1985).

86. *See generally* Morello-Frosch et al., *supra* note 68.

87. *EPA Releases Framework for the Implementation of the Greenhouse Gas Reduction Fund as Part of President Biden's Investing in America Agenda*, supra note 80; *see* West Virginia v. Env't Prot. Agency, 597 U.S. 697 (2022); *Massachusetts*, 549 U.S. 497.

88. *Summary of Clean Air Act*, U.S. ENV'T PROT. AGENCY, https://www.epa.gov/laws-regulations/summary-clean-air-act (last visited May 4, 2023); 42 U.S.C. §§ 7401-7671(q) (2023).

89. 42 U.S.C. §§ 7401-7671(q) (2023).

90. ROBERT L. GLICKSMAN ET AL., ENVIRONMENTAL PROTECTION: LAW AND POLICY 396-403 (Aspen 8th ed. 2019).

91. *Id.*

constitute a complete basis for air pollution control.[92] Perhaps the ideal way to jumpstart the clean energy revolution would be through the EPA promulgating rules to which existing major emitters would have to adhere. These EPA regulations would make it more cost-effective for energy producers to produce renewable energy rather than nonrenewable (due to potential fines for nonadherence to stricter standards becoming too costly) or maybe push emitters to get ahead of the curve in preparation for such a costly future. Eventually, this top-down approach would make the dominos fall such that renewable energy would *have* to become the status quo for energy production. Were this process possible, *this* transition, through executive branch regulations, to renewable energy would remediate major air pollution problems throughout the country by removing millions of tons of emissions from American air every year.[93] But even a solution like this would risk leaving EJ communities in the wake of an expensive national transition to clean energy.[94]

Regardless, *Massachusetts* made the above-mentioned notion seem like a real possibility.[95] The Supreme Court found that the EPA had the authority to regulate emissions from motor vehicles and a duty to regulate emissions that contributed to climate change and endangered public health or welfare.[96] Environmentalists rejoiced over this decision, as the Court's holding could be interpreted as one requiring the EPA to regulate emissions from stationary sources like power plants;[97] later, the EPA attempted to do just that.[98] Unfortunately, the administrative and environmental law landmark decision of *West Virginia v. EPA* seemingly quelled the possibility of agency regulation being a catalytic solution for bringing about a clean energy revolution.[99] In a six to three decision, the Supreme Court found that the EPA's regulation of existing power plants fell under the "major questions doctrine" and that Congress did not grant the EPA authority to regulate emissions from existing plants based on "generation shifting" mechanisms through the CAA.[100] This extraordinary act of judicial review undermining the EPA's authority to regulate harmful air pollutants brought with it a huge setback for all agency rule-makers as well as for hopes of a more forward-thinking judicial

92. *Id.*

93. *Inventory of U.S. Greenhouse Gas Emissions and Sinks*, U.S. ENV'T PROT. AGENCY, https://www.epa.gov/ghgemissions/inventory-us-greenhouse-gas-emissions-and-sinks#:~:text=Trends,sequestration%20from%20the%20land%20sector (last visited May 4, 2023).

94. *See generally* Welton, *supra* note 13.

95. *See generally Massachusetts*, 549 U.S. 497.

96. *Id.*

97. *Id.*

98. *See generally West Virginia*, 597 U.S. 697.

99. *Id.*

100. *Id.* at 697.

"agenda."[101] The Inflation Reduction Act, which essentially codified *Massachusetts* and gave the EPA direct statutory authority to regulate greenhouse gas emissions,[102] has enabled the EPA to attempt to hurdle the Court's *West Virginia* blocking "generation shifting" regulations in new ways, and, as of when this Note was written, the EPA has proposed *another* major effort to curb emissions from stationary sources.

Since and because of *West Virginia*, environmental and EJ advocates have recently thought that a complete overhaul of the United States' power generation industry would effectively be left in the hands of legislators[103] and that a dissolution of our nation's air pollution crisis from the federal level would require congressional action, likely via an amendment to the CAA.[104] However, on April 27, 2023, the EPA announced it would be proposing a new regulation to put the first federal controls on greenhouse gases from power plants, potentially compelling emitters to capture their air pollution.[105] The proposed rule does not mandate emitters use carbon capture equipment, but it would set caps on pollution rates that plant operators could only meet by using different technologies or significantly reducing their electric output.[106] Although this is progress and a step in the right direction for EJ communities' health and wellness, even without paying mind to the inevitable forthcoming legal battles over its promulgation, this proposed rule still leaves us right where we started with respect to the energy burden and generational wealth issues the current energy regime imposes upon EJ communities.[107] However, political hurdles have not stopped the Biden administration from trudging forward in its fight for environmental

101. Alice C. Hill, What Does the Supreme Court's Decision in West Virginia v. EPA Mean for U.S. Action on Climate?, COUNCIL ON FOREIGN RELATIONS (Jul. 19, 2022), https://www.cfr.org/blog/what-does-supreme-courts-decision-west-virginia-v-epa-mean-us-action-climate.

102. Lisa Friedman, Democrats Designed the Climate Law to Be a Game Changer. Here's How., N.Y. TIMES (Aug. 22, 2022), https://www.nytimes.com/2022/08/22/climate/epa-supreme-court-pollution.html; Patrick Parenteau, *The Inflation Reduction Act Doesn't Get Around the Supreme Court's Climate Ruling in* West Virginia v. EPA*, But it Does Strengthen EPA's Future Abilities*, THE CONVERSATION (Aug. 24, 2022), https://theconversation.com/the-inflation-reduction-act-doesnt-get-around-the-supreme-courts-climate-ruling-in-west-virginia-v-epa-but-it-does-strengthen-epas-future-abilities-189279.

103. Friedman, *supra* note 102; Parenteau, *supra* note 102.

104. Coral Davenport & Lisa Friedman*, E.P.A. to Propose First Controls on Greenhouse Gases From Power Plants*, N.Y. TIMES (Apr. 22, 2023), https://www.nytimes.com/2023/04/22/climate/epa-power-plants-pollution.html?smid=nytcore-ios-share&referringSource=articleShare; Parenteau, *supra* note 102.

105. Davenport & Friedman, *supra* note 104; Parenteau, *supra* note 102.

106. Davenport & Friedman, *supra* note 104.

107. *Id.*

justices.[108] For example, the Biden administration in early 2023 published an executive order requiring every federal agency to address the disproportionate impact of pollution and climate change on minority and EJ communities.[109] This notion, on top of the already significant number of programs[110] the Biden administration promoted for EJ purposes, is unprecedented recognition at the federal level of the EJ crisis our nation is facing.[111] Of these, one particularly prominent program is Justice40, designed to transform hundreds of federal programs such that 40% of their overall benefits can be distributed within EJ communities,[112] and among the seven areas of Justice40's focus is investments in clean energy and energy efficiency for EJ communities.[113] Programs like these are exactly the sort of corrective and distributive justices required to address and rectify harms in the United States' EJ communities, and we cannot stop here.

Likely stemming from both a sense of urgency to fix the problem and a recognition of good marketing opportunities by the Biden administration, Earth Month (April) 2023 has been huge for EJ initiatives.[114] A massive development came on April 19, 2023, when the EPA released its framework for the implementation of the Greenhouse Gas Reduction Fund (GGRF), part of President Biden's Investing in America Agenda and plausible through funding from the Inflation Reduction Act.[115] Unlike the EPA's newly proposed power plant emission rule, which will be subject to legal battles,[116] the GGRF is a program that the Inflation Reduction Act created, meaning it can take effect without judicial intervention.[117] The EPA will implement GGRF

108. *FACT SHEET: President Biden Signs Executive Order to Revitalize Our Nation's Commitment to Environmental Justice for All*, THE WHITE HOUSE ARCHIVES (Apr. 21, 2023), https://bidenwhitehouse.archives.gov/briefing-room/statements-releases/2023/04/21/fact-sheet-president-biden-signs-executive-order-to-revitalize-our-nations-commitment-to-environmental-justice-for-all/.

109. Lisa Friedman, *Biden to Create White House Office of Environmental Justice*, N.Y. TIMES (Apr. 21, 2023), https://www.nytimes.com/2023/04/21/climate/biden-environmental-justice.html?searchResultPosition=1.

110. *Environmental Justice*, *supra* note 12.

111. Friedman, *supra* note 110; *Environmental Justice*, *supra* note 12.

112. *FACT SHEET: President Biden Signs Executive Order to Revitalize Our Nation's Commitment to Environmental Justice for All*, *supra* note 109.

113. *Justice40*, THE WHITE HOUSE ARCHIVES, https://bidenwhitehouse.archives.gov/environmentaljustice/justice40/ (last visited Jun. 5, 2025).

114. Jean Chemnick, *Biden Marks Earth Day with New EJ Orders*, POLITICOPRO (Apr. 21, 2023, 6:53 AM), https://subscriber.politicopro.com/article/eenews/2023/04/21/biden-marks-earth-day-with-new-ej-orders-00093220.

115. *EPA Releases Framework for the Implementation of the Greenhouse Gas Reduction Fund as Part of President Biden's Investing in America Agenda*, U.S. ENV'T PROT. AGENCY (Apr. 19, 2023), https://www.epa.gov/newsreleases/epa-releases-framework-implementation-greenhouse-gas-reduction-fund-part-president.

116. Davenport & Friedman, *supra* note 104.

117. *EPA Releases Framework for the Implementation of the Greenhouse Gas Reduction Fund as Part of President Biden's Investing in America Agenda*, *supra* note 116.

and distribute the $27 billion allocated for it through three complementary grant competitions.[118] Specifically, the program aims to combine government investment with private capital in financing clean energy projects that reduce pollution and energy costs, increase energy security, and create good-paying jobs in EJ communities.[119] GGRF is the embodiment of the most significant and meaningful federal effort ever undertaken to promote EJ communities, and has already rightfully garnered praise as "the single largest investment in clean energy and environmental justice in American history."[120]

Notably, the most revolutionary aspect of GGRF is its $7 billion "Solar for All" competition, which will provide up to sixty grants to states, tribal governments, municipalities, and nonprofits to enable them to provide millions of families in EJ communities access to residential and community solar.[121] With projects like GGRF and Justice40 leading the monumental and pioneering efforts the Biden administration has taken to empower EJ communities and begin our nationwide transition to clean energy in the right places, where we now stand represents the closest we have ever been to closing the climate gap and successfully balancing our society's overall needs while elevating those we have historically left behind.[122] Measures like these are leveling the playing field by beginning to make a dent in our nation's ever-resilient energy grid[123] and by buying EJ communities desperately needed time in their races to adapt with the rest of the nation to clean energy; with any luck, state and local governments will continue to provide initiatives for their citizens to acquire solar distributed renewables.[124]

III. CHOOSING JUST SOLAR INITIATIVES

Solar energy exists at two scales. There are farms, which are large, concentrated groups of generation units that produce mass quantities of power, and there are smaller, distributed systems.[125] Implementing both varieties will be critical for the United States' energy transition, but the opportunities that distributed solar energy systems present for EJ communities to be elevated from energy poverty and relieved of

118. *Id.*

119. *Id.*

120. *Id.*

121. *Id.*

122. *Id.*; *see generally* Morello-Frosch et al., *supra* note 68; *Justice40*, *supra* note 114.

123. *See generally* Baker, *supra* note 16.

124. Alexandra E. Dolezal, *Power to the People: Distributing the Benefits of a Clean Energy Transition Through Equitable Policy, Legislation, and Energy Justice Initiatives*, 106 MINN. L. REV. 2441, 2465 (2022).

125. Garrick B. Pursley & Hannah J. Wiseman, *Local Energy*, 60 EMORY L.J. 877, 897 (2011).

much of their air pollution afflictions are too beneficial for the country to ignore.[126]

Both large- and small-scale solar implementation face similar challenges with respect to regulatory, financial, and land use issues, but only large-scale projects threaten to extend the power of wealthy interests over those of EJ communities.[127] For the same reasons power facilities have historically been located near EJ communities, new solar farms are likely to be sited near EJ communities, as developers would likely find their projects to be most economically viable if sited on the cheapest land possible.[128] Although these host communities will likely benefit from decreased air pollution, an increased tax base or payments in lieu of taxes, and some job creation (assuming the developers hire locally), environmental justice concerns arise when developers site these projects in EJ communities where residents lack the money, time, and other resources needed to meaningfully lobby for land uses that better suit their community's needs.[129] Simply put: there exists a lack of safeguards to prevent procedural injustices in these projects' development, making large-scale renewables an unattractive option for many EJ communities.

Places such as New York and New Mexico have acknowledged these risks, and have created policies that address both environmental impacts and EJ concerns.[130] New York's Office of Renewable Energy Siting has initiated a siting process that designates existing or abandoned commercial use locations, such as brownfields, landfills, and abandoned properties, as those that will be considered for new renewable energy projects.[131] Similarly, New Mexico enacted its Energy Transition Act, which seeks to issue permits for new renewable energy projects on a grading scale that accounts for those with the lowest environmental impact.[132] This metric is determined by a potential site's ability to repurpose defunct coal power plant sites in coal power communities and provide jobs with comparable pay and benefits to those lost due to the abandonment of those defunct

126. *Id.*

127. Hannah J. Wiseman, *Localizing the Green Energy Revolution*, 70 EMORY L.J. ONLINE 59, 80 (2021).

128. *Id.* at 81; Aman Azhar, *An African American Community in Florida Blocked Two Proposed Solar Farms. Then the Florida Legislature Stepped In.*, INSIDE CLIMATE NEWS (Jan. 2, 2022), https://insideclimatenews.org/news/02012022/environmental-justice-florida-solar-preemption-legislature-desantis/; Camille Squires, *Houston's Huge New Urban Solar Farm is a Win for Environmental Justice*, QUARTZ (Apr. 26, 2022), https://qz.com/2158647/houston-is-building-the-larges-urban-solar-farm-in-us.

129. Wiseman, *supra* note 128, at 95.

130. *Id.* at 90-91.

131. Michael B. Gerrard & Edward McTiernan, *New York's New Statute on Siting Renewable Energy Facilities*, 263 N.Y. L.J., 1, 2 (2020), https://www.arnoldporter.com/-/media/files/perspectives/publications/2020/05/newyorksenvironmentallaw.pdf.

132. H.R. 489, 54th Leg., 1st Sess. (N.M. 2019).

facilities.[133] Policies such as these should be a model for federal and state green energy policies, as they take into account the importance of the location of the sites as well as the negative externalities the surrounding communities face from their presence. Furthermore, as we transition to renewable energy sources, solar projects that could displace traditional fossil fuel facilities may be better served by *replacing* them on their existing sites, such that existing transmission lines can be used.[134] Therefore, when solar farms *are* to be implemented, federal and state green energy policies should expand mandates for the use of marginal lands, such as low-productivity farmlands or abandoned resource extraction sites. However useful and clean large solar farms are, they will almost certainly promote the same sort of energy production hierarchy ripe for exploitation that we are used to and thus should not be the standard we seek to instill for our clean energy transition.[135]

Conversely, distributed solar can provide more meaningful and lasting benefits to both rural and urban areas alike.[136] Distributed solar can be built and deployed quickly, face less consumer and political opposition than large solar farms, and have the potential to turn homes and businesses into energy and income generators that help build and sustain local economic empowerment.[137] In order to address past and current wrongs and provide benefits to EJ communities, government-mandated or subsidized small-scale energy projects, such as those the GGRF will help provide,[138] can and should be implemented *first* in low-income homes and apartments.[139] A homeowner,multifamily housing unit, or business in an area enabled by local regulations to implement distributed solar can have a system up and running in just a few months.[140] In addition to the savings distributed solar can bring to EJ communities, distributed solar reduces the burden on the grid, which reduces air pollution in these communities.[141] This is because many power plants exist solely to meet peak electricity demand, and with fewer consumers hooked up to the grid, these plants will sit idle, halting their emissions.[142] Some states are already well underway with implementing distributed solar in EJ

133. *Id.*

134. Wiseman, *supra* note 128, at 91.

135. Michael Maruca, *From Exploitation to Equity: Building Native-Owned Renewable Energy Generation in Indian Country*, 43 WM. & MARY ENVTL. L. & POL'Y REV. 391, 418 (2019).

136. Pursley & Wiseman, *supra* note 126, at 900.

137. *Id.* at 899.

138. *EPA Releases Framework for the Implementation of the Greenhouse Gas Reduction Fund as Part of President Biden's Investing in America Agenda*, *supra* note 116.

139. Wiseman, *supra* note 128, at 92.

140. Pursley & Wiseman, *supra* note 126, at 899.

141. *Id.* at 899-900.

142. *Id.* at 900.

communities within their borders, and seeking to follow and build off their models is our best course of action.[143]

A. Modeling Our Solar Future

Many states and communities have begun to lead the way in destabilizing our emissions-heavy energy industry and empowering communities it has ravaged by developing EJ-focused solar initiatives that aim to provide health benefits through cleaner air, as well as economic benefits through lower energy costs and payments to consumers for the excess energy they have produced.[144]

Ahead of the curve of progressive trends, as usual, stands California.[145] In 2006, California enacted Senate Bill 1 which established the California Solar Initiative (CSI), a program that aimed to put solar panels on the roofs of one million buildings across the state.[146] That goal was achieved in 2019, and CSI's rebate-laden incentive structure allowed California to set aside $3 billion for small-scale solar projects.[147] On top of this initiative's stimulation of $63 billion in private investments in California-solar and its creation of over 77,000 jobs in the state's energy sector, meaning solar jobs provide employment to more Californians than the state's five largest utilities *combined*,[148] the additional funds from the program helped create the Solar on Multifamily Affordable Housing (SOMAH) Program.[149] SOMAH, at its core, is an environmental justice-oriented program, as it provides $100 million of annual funding for solar projects on existing multifamily affordable housing units.[150] SOMAH functions by providing multifamily housing solar system purchasers incentives *on top of* the already-existing federal investment tax credit, which currently covers 22% of costs, and provides those same incentives to solar system lessees whose system has third-party ownership.[151] Furthermore, programs like these in California are particularly widespread in EJ communities because California law requires 35% of its emissions cap-and-trade auction proceeds to be spent on clean energy projects in disadvantaged communities and low-

143. Dolezal, *supra* note 125, at 2465.

144. *Id.*

145. *Id.*

146. *Id.*

147. *Id.* at 2466.

148. *California Celebrates Reaching One Million Solar Roofs Milestone; New Focus on "One Million Solar Batteries"*, CAL. SOLAR STORAGE ASSOC. (Dec. 12, 2019), https://calssa.org/press-releases/2019/12/12/california-celebrates-reaching-one-million-solar-roofs-milestone-new-focus-on-one-million-solar-batteries-goal.

149. Dolezal, *supra* note 125, at 2468.

150. *Id.*

151. *Incentives & Finance*, CALSOMAH.ORG, https://calsomah.org/incentives-finance (last visited May 4, 2023).

income neighborhoods, reducing monthly utility bills for some of its beneficiaries by as much as 75%.[152]

Across the country, nonprofits and government entities alike are also beginning to choose to promote solar as a means to solve EJ energy burden issues.[153] In Washington, D.C., the city's government-driven "Solar for All" program provides access to free solar panels for low-income and EJ community households.[154] Frank Cole, a D.C. resident who received his home's solar panels at no cost, saw his energy bill decrease from upwards of $400 a month prior to their installation to $1.52 in August 2022 after their installation.[155] Although most "Solar for All" enrollees will not be single-family homeowners like Mr. Cole, as the program mostly gives renters access to community solar subscriptions such that they receive cheaper energy from shared solar facilities located throughout D.C., this is a fantastic model for states and local governments to emulate.[156] Also in D.C., a nonprofit organization named New Partners Community Solar Corporation implements large solar arrays on various commercial rooftops throughout the city, providing free electricity to many of the city's low-income households.[157] The proliferation of projects like these led D.C. to produce a shocking 46% of all its energy in 2021 through solar power.[158] Across the country, to aptly empower EJ communities financially and curb the air pollution they are disproportionately exposed to, implementing initiatives like these is essential.[159] Through initiatives such as these cutting into fossil-fueled energy providers' market share of electricity generation, those providers' eventual adoption of solar or other renewable technologies will become increasingly inevitable; upon the eventual widespread adoption of

152. Patricia Leigh Brown, *Green Upgrade: How California Is Pioneering 'Energy Justice'*, YALE ENV'T 360 (Jul. 30, 2018), https://e360.yale.edu/features/green-upgrade-how-california-is-pioneering-renewable-energy-justice-cap-and-trade.

153. *EOC Receives Environmental Justice Solar Outreach Award*, ENERGY OUTREACH COLO. (Sept. 21, 2022), https://www.energyoutreach.org/solar-outreach-award-presented-to-eoc/; Kayla Benjamin, *Solar Energy – More Affordable Than Some May Believe*, THE WASH. INFORMER (Aug. 31, 2022), https://www.washingtoninformer.com/solar-energy-more-affordable-than-some-may-believe/.

154. Benjamin, *supra* note 154.

155. *Id.*

156. *Id.*

157. Mark O'Meara, *ITCs Help Low-Income Washington, D.C., Residents Receive Free Electricity*, 10 NOVOGRADAC J. OF TAX CREDITS 1 (Nov. 7, 2019), https://www.novoco.com/periodicals/articles/itcs-help-low-income-washington-dc-residents-receive-free-electricity.

158. *District of Columbia State Profile and Energy Estimates*, U.S. ENERGY INFO. ADMIN. (Dec. 15, 2022), https://www.eia.gov/state/?sid=DC#:~:text=In%202021%2C%20solar%20energy%20generated,16%25%20of%20the%20city's%20generation.

159. *See generally Environmental Justice Screening Report for the Clean Power Plan*, *supra* note 10.

those technologies will come an end to electricity-based emissions and a massive reduction in nationwide air pollution.[160]

B. Opportunities And Potential Pitfalls For Widespread Solar Implementation

Some distributed solar generation systems are isolated and not connected to a local utility power grid, but most are connected to a larger power grid.[161] Therefore, an extremely important aspect of a righteous transition away from energy emissions pollutants to clean energy for EJ communities is allowing these communities to get "behind" the meter.[162] That is, for our nation's air pollution crisis to be curbed whilst also giving EJ communities an opportunity to build generational wealth and break their cycles of energy poverty, those installing solar-distributed renewables on their residences need to be able to reap their full benefits by not having to pay a utility provider for its usage.[163] The best chance at doing this is by the implementation of consumer-friendly net-metering policies.[164] Customers with connected distributed generation systems can buy power from their electric utility when they are not producing enough electricity to meet their needs, but when their systems are producing more electricity than they are using, they can sell power back to utility companies through a process known as "net metering."[165] Some experts are concerned that some net metering structures allow rooftop solar users to avoid paying their fair share of the costs of energy generation, which threatens to widen the energy gap.[166] However, if done correctly, a solid nationwide net metering policy would create an overall positive effect for consumers, especially those in EJ communities (assuming they continue to be given more accessible solar options),[167] as well as incentivize further development in the solar sector and therefore vastly decrease our nation's fossil fuel emissions.[168] Thus, creating a model net metering standard for states that would help standardize

160. *See* Frank Klose et al., *Toward a Distributed-Power World*, THE BOS. CONSULTING GRP. (June 2010), http://www.newworldcapital.net/wp-content/uploads/2014/03/BCG-Toward-Distributed-Power-World.pdf; *see supra* Part I.

161. Richard L. Revesz & Burcin Unel, *Managing the Future of the Electricity Grid: Distributed Generation and Net Metering*, 41 HARV. ENVTL. L. REV. 43, 45 (2017).

162. Solar Energy Technologies Off., *Solar Integration: Distributed Energy Resources and Microgrids*, U.S. DEP'T OF ENERGY, https://www.energy.gov/eere/solar/solar-integration-distributed-energy-resources-and-microgrids (last visited May 4, 2023).

163. *See* Pursley & Wiseman, *supra* note 126, at 897; Solar Energy Technologies Off., *supra* note 163.

164. Pursley & Wiseman, *supra* note 126, at 897.

165. Revesz & Unel, *supra* note 162.

166. Dolezal, *supra* note 125, at 2467; *see generally* Morello-Frosch et al., *supra* note 68.

167. Wiseman, *supra* note 128, at 92.

168. Mark Muro & Devashree Saha, *Rooftop Solar: Net Metering is a Net Benefit*, BROOKINGS INST. (May 23, 2016), https://www.brookings.edu/research/rooftop-solar-net-metering-is-a-net-benefit/.

how they treat distributed generation and maximize its deployment is of vital importance to stifling our air pollution crisis.[169]

Another vital piece of the widespread solar implementation puzzle is societal awareness of existing solar implementation policies and programs that serve to enable U.S. residents to become carbon-free energy consumers.[170] Better said, a *lack* of awareness of these policies and programs presents an enormous missed opportunity for EJ purposes.[171] One such policy that could drastically change our domestic emissions landscape is the "direct pay" option for federal tax credits.[172] Direct pay was created by the Inflation Reduction Act, and allows tax-exempt entities to receive a solar investment tax credit as a direct payment.[173] Before the Inflation Reduction Act, to make most nonprofit solar projects financially viable, tax-exempt organizations would partner with banks or developers that could take advantage of the tax benefits of implementing solar and sign power purchase agreements (PPAs) with them, which eventually allowed these organizations to pay off the solar equipment they installed on their facility.[174] Now, tax-exempt organizations like religious facilities, public schools, cities, and nonprofits can get those credits by direct pay, and receive a check for 30% of their solar project's costs, just like how a tax-paying entity (such as a bank or developer) would receive the credit when filing taxes had they installed a solar energy system.[175] Essentially, the direct pay option paves the way for the economic viability of solar in many communities, as it provides tax-exempt organizations the opportunity to own solar projects at a massively reduced price instead of the larger, interest-accruing costs over extended periods of time they previously faced when buying solar equipment through PPAs.[176] For example, one large church in Arizona, by its implementation of solar energy for its facilities, will now keep *two million* pounds of carbon dioxide out of the atmosphere while saving approximately $350,000 on electricity over

169. *See* STAFF OF H. SELECT COMM. ON THE CLIMATE CRISIS, 116TH CONG., SOLVING THE CLIMATE CRISIS: THE CONGRESSIONAL ACTION PLAN FOR A CLEAN ENERGY ECONOMY AND A HEALTHY, RESILIENT, AND JUST AMERICA (Comm. Print 2020).

170. *Environmental Justice in Your Community*, U.S. ENV'T PROT. AGENCY (Apr. 19, 2023), https://www.epa.gov/environmentaljustice/environmental-justice-your-community.

171. *Id.*

172. *Federal Solar Tax Credits for Businesses*, U.S. DEP'T OF ENERGY (Apr. 2023), https://www.energy.gov/eere/solar/federal-solar-tax-credits-businesses.

173. Grace Coates et al., *How Your House of Worship Can Go Solar*, ENV'T TEX. (Jan. 17, 2023), https://environmentamerica.org/texas/articles/how-your-house-of-worship-can-go-solar/.

174. Kelsey Misbrener, *Who Qualifies for Direct Pay for the Solar ITC?*, SOLAR POWER WORLD (Sept. 12, 2022), https://www.solarpowerworldonline.com/2022/09/who-qualifies-for-direct-pay-for-the-solar-itc/.

175. *Id.*

176. *Id.*

the lifespan of its solar equipment, which is roughly forty years.[177] Fostering a healthier atmosphere in the most economically and socially efficient manner will depend on the general public's awareness of programs such as these.

Of course, with developments like widespread solar proliferation will come *societal* transitions. While a transition to renewable energy production is estimated to result in our society losing at least six million fossil fuel jobs, economists predict that between twenty-four and thirty-seven million clean energy jobs will be created.[178] This means that the *just* approach to a solar energy transition should focus on providing those workers displaced by the phasing out of fossil fuel jobs opportunities to train for and be employed by "green jobs."[179] This is especially important in an EJ context, as these communities are burdened by emissions from the very same power plants that provide them their incomes.[180] The Virginia Clean Economy Act, passed in 2020, considers this very issue, as it requires utilities that are building renewable resources to submit plans detailing their plans for prioritizing the apprenticeship and eventual hiring of local workers, veterans, and residents of historically economically disadvantaged communities.[181] Keeping this notion close as we move forward with our clean energy transition will be critical to ensuring environmental justice is truly served through this movement.

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177. Coates et al., *supra* note 174.

178. Elizabeth J. Kennedy, *Equitable, Sustainable, and Just: A Transition Framework*, 64 ARIZ. L. REV. 1045, 1049-1050 (2022).

179. *Id.* at 1081.

180. Diane Toomey, *Coal Pollution and the Fight For Environmental Justice*, YALE ENV'T 360 (Jun. 19, 2013), https://e360.yale.edu/features/naacp_jacqueline_patterson_coal_pollution_and_fight_for_environmental_justice.

181. *See* Rita Cliffton et al., *The Clean Economy Revolution Will Be Unionized: A Road Map from States on Creating Good, Union Jobs To Build the Clean Energy Economy*, CTR. FOR AM. PROGRESS (July 7, 2021), https://www.americanprogress.org/wp-content/uploads/2021/06/Clean-Economy-Revolution.pdf.

CONCLUSION

The future of our energy landscape is green, and the writing is on the wall.[182] Before long, renewable energy sources will become the primary forces in our electricity generation industry, and the fossil fuel emissions that have plagued our nation's most vulnerable citizens will be slashed significantly. This transition is inevitable. But justice for these communities is not, if we do not transition properly.[183] We must take tangible steps even further than those this Note discusses to ensure that we do not miss out on the best opportunity our nation has ever had to amend some of our most profound domestic inequalities. Through *just* policies and programs that prioritize low-income and EJ communities' adoption of solar energy, we can break the cycle of energy poverty and, for most EJ communities, end the health crisis they face from air pollution.

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182. *U.S. Renewable Energy Consumption Surpasses Coal for the First Time in Over 130 Years*, *supra* note 14.

183. Kennedy, *supra* note 179.

DEATH IS NOT THE END: WHAT FLORIDA'S CONSTITUTIONAL PROHIBITION ON AGENCY DEFERENCE CAN PREDICT ABOUT THE FEDERAL ADMINISTRATIVE STATE POST-*CHEVRON*, WITH A FOCUS ON ENVIRONMENTAL POLICY

HANNAH L. ROBINSON

ABSTRACT

The 2024 case Loper Bright Enterprises v. Raimondo presented the U.S. Supreme Court with an opportunity to overturn its decision in Chevron v. Natural Resources Defense Council, which established the current standard of agency deference. Many believe that Chevron's demise will severely negatively impact the environment because they presume environmental agencies' statutory interpretations will lose in court without deference, and that agencies will thus be unable to regulate in the Earth's interest. At the state level, Florida is the sole jurisdiction to have already prohibited agency deference via a voter-approved constitutional amendment.

This Note uses Florida caselaw featuring judicial discussions of agency statutory interpretations to assert that the federal administrative state and particularly environmental protections may not be so gravely impacted, and that agencies' interpretations can still be upheld even without a deferential standard of review. Specifically, Part I explores public and professional opinion regarding overturning Chevron. Part II explains federal agency deference doctrines and the Loper Bright litigation, focusing on Chevron's relation to the environment. Part III presents relevant Florida jurisprudence pre- and especially post-amendment and relates it to the federal level, including a brief statistical analysis. Part IV examines three environmental post-amendment cases and the federally applicable lessons that can be gleaned from them. Part V considers and demystifies the federal "zombie Chevron" concept through breaking down the related notion within Florida using a recent state case.

INTRODUCTION

Federal agency deference has had its moments at the forefront of academic and mainstream debate, but 2024 finds that debate livelier than ever. Seemingly imminent was the U.S. Supreme Court's long-expected overturning of its seminal 1984 decision in *Chevron v. Natural Resources Defense Council*,[1] which established arguably the most well-known and significant (and controversial) administrative law doctrine in this country's history; the case that allowed the Court to strike down *Chevron* was *Loper Bright Enterprises v. Raimondo*.[2] The primary doctrinal consideration in *Loper Bright* was whether *Chevron* deference should be discarded,[3] a question the Court answered in the affirmative.[4]

Many agency interpretations have been deferred to and upheld under *Chevron* since 1984, at both the Supreme Court and lower appellate courts. This has resulted in a wide array of strong support for, or deep detestation of, *Chevron* agency deference, both leading up to and in the months after the *Loper Bright* decision. Before *Chevron*'s reversal, many proponents believed the Court's ultimate rejection of *Chevron* deference would be a drastically negative development in the realm of administrative law, and several specifically focused on what

1. 467 U.S. 837 (1984).

2. *Docket No. 22-451*, U.S. SUPREME COURT, https://www.supremecourt.gov/docket/docketfiles/html/public/22-451.html (last visited Apr. 18, 2024).

3. *Docket No. 22-451: Questions Presented*, U.S. SUPREME COURT, https://www.supremecourt.gov/docket/docketfiles/html/qp/22-00451qp.pdf (last visited Apr. 18, 2024) (the second part of this inquiry involved potentially considering whether *Chevron* should instead only be clarified).

4. Loper Bright Enters. v. Raimondo, 603 U.S. 369, 412 (2024).

they anticipate will be severely harmful implications to environmental regulations.[5] Opponents of *Chevron*, though, looked forward to its being overturned and celebrate the same expected impacts in the workings of federal agencies that proponents fear.[6] There are yet other neutral theorists who opined that *Chevron*'s being struck down will not so deeply affect the federal administrative state, especially in regards to environmental policy.[7] This paper argues that this more muted outcome is likely the most correct perspective following the Court's reversal of *Chevron* based on an observation of trends in Florida in the years following the state's rejection of agency deference in its own intrastate affairs.

In late 2018, voters in Florida approved a proposed amendment to the state constitution to prohibit agency deference in the courts.[8] Effective two months later, Florida judges have since been required to review agency interpretations de novo.[9] Several such interpretations have been challenged in the last few years, allowing Florida courts to demonstrate what de novo review looks like in practice.[10] Notably, Florida's administrative state is still alive and indeed robust, active, and capable—and courts still affirm agency interpretations when warranted.

The potential consequences of the federal *Chevron* doctrine's death have been written on in great detail and in different ways the last few years as *Loper Bright* has progressed through the courts. At the state level, law students, academics, and practicing attorneys have opined on Florida's constitutional amendment and its implications since its passage in 2018.[11] However, seemingly no one has yet specifically used Florida post-amendment jurisprudence as a predictive case study for what the federal administrative state could look like post-*Chevron*. This paper seeks to fill that gap in the discussion, asserting that Florida's post-amendment jurisprudence demonstrates that federal

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5. *See, e.g.*, CleanLaw Podcast, *The* Loper Bright *Case and Fate of the* Chevron *Doctrine with Jody Freeman and Andy Mergen*, HARV. L. SCH. ENV'T & ENERGY L. PROGRAM (Aug. 23, 2023), https://eelp.law.harvard.edu/cleanlaw-the-loper-bright-case-and-fate-of-the-chevron-doctrine-with-jody-freeman-and-andy-mergen/.

6. *See, e.g.*, *Pacific Legal Foundation calls for an end to* Chevron *judicial deference*, PAC.LEGAL FOUND. (July 17, 2023), https://pacificlegal.org/press-release/pacific-legal-foundation-calls-for-an-end-to-chevron-judicial-deference/.

7. *See, e.g.*, Berit DeGrandpre, *What Overruling* Chevron *Could Mean for Environmental Law*, GEO. ENV'T. L. REV. ONLINE (Nov. 6, 2023), https://www.law.georgetown.edu/environmental-law-review/blog/what-overruling-chevron-could-mean-for-environmental-law/.

8. *Proposed Constitutional Amendments and Revisions for the 2018 General Election*, FLA. DIV. OF ELECTIONS 1, 19 (2018), https://files.floridados.gov/media/699824/constitutional-amendments-2018-general-election-english.pdf.

9. FLA. CONST. art. V, § 21.

10. *See, e.g.*, Citizens v. Brown, 269 So. 3d 498 (Fla. 2019).

11. *See, e.g.*, Frank Shepherd et al., *The Demise of Agency Deference: Florida Takes the Lead*, 94 FLA. B.J. 18, 18 (2020).

agencies' statutory interpretations can still be upheld in the absence of a highly deferential standard, that *Chevron* being overturned will not inherently result in the loss of environmental protections, and that the overall impact of *Chevron*'s demise may not result in a sea change within the federal administrative state.

This paper is presented in five major parts. Part I introduces mainstream sentiments regarding the then-expected death of *Chevron*, especially regarding views on *Chevron*'s connection to environmental policy and regulations. Part II, as background, discusses federal agency deference generally, the Court's opinions in *Skidmore* and *Chevron*, the *Chevron* doctrine's relation to environmental law, and the *Loper Bright* case. Part III explores Florida's standards of agency deference and judicial review of agency interpretations before and after its 2018 amendment, analyzes statistics from caselaw post-amendment, explains what de novo review means for agencies and what these statistics might reveal at the national level, and discusses why Florida is likely a good federal comparison on this topic. Part IV presents three major environmental law cases decided in Florida post-amendment and argues why these cases represent that a prohibition on agency deference does not inherently mean the inability of agencies to regulate and, more importantly, the loss of environmental protections. Finally, Part V briefly considers the "zombie *Chevron*" concern within Florida and at the federal level, using a recent Florida opinion in an attempt to demystify this concept.

It should be noted that agency deference, at both the federal and state levels, is multi-faceted and complex. This paper does not seek to address every aspect of overturning the *Chevron* doctrine nor all the jurisprudential implications of Florida's 2018 amendment. For example, *Chevron* deference hinged upon the existence of ambiguity in a statute, raising essential questions (indeed raised during the *Loper Bright* arguments[12] and by Justice Kavanaugh years prior[13]) about what constitutes ambiguity and whether that distinction is itself ambiguous. Additionally, the major questions doctrine is an oft debated (and oft controversial) feature of *Chevron* agency deference and legislative delegation discussions.[14] Both of these are outside the specific scope of this paper. There are several cases[15] establishing judicial agency deference standards for agency interpretations of

12. *E.g.*, Transcript of Oral Argument at 50, Loper Bright Enters. v. Raimondo, 603 U.S. 369 (2024) (No. 22-451).

13. *See* Brett M. Kavanaugh, *Fixing Statutory Interpretation*, 129 HARV. L. REV. 2118, 2136 (2016) (book review).

14. *See, e.g.*, Daniel T. Deacon & Leah M. Litman, *The New Major Questions Doctrine,* 109 VA. L. REV. 1009 (2023); KATE R. BOWERS, CONG. RSCH. SERV., IF12077, THE MAJOR QUESTIONS DOCTRINE 1 (2022).

15. *See* Bowles v. Seminole Rock, 325 U.S. 410 (1945); Auer v. Robbins, 519 U.S. 452 (1997); Kisor v. Wilkie, 139 S. Ct. 2400 (2019).

regulations, which will not be discussed herein as this paper is concerned only with statutory interpretation.

Finally, perhaps the most frequent argument for overturning *Chevron*, and prohibiting deference generally, was a concern for separation of powers and of an overpowerful executive branch resulting from judicial and legislative abdication, which is often considered together alongside the nondelegation doctrine.[16] Considerable research, thought, and literature has been devoted to this notion; it is unnecessary to reinvent the wheel by discussing it herein, and it is also outside the needs and purpose of this paper's environmental focus.

I. PROLIFERATION OF PUBLIC AND PROFESSIONAL OPINION

Since the dawn of federal agency deference, and certainly since *Chevron* was decided, the field of academic literature and public opinion has been saturated with varying views as to its constitutionality and legality.[17] And if that saturation existed before, then early 2024 found that field flooded as *Chevron* stood poised to be overturned by *Loper Bright*. Perhaps a promising sign of a healthy democracy is indeed that so many citizens, public policy and legal theorists, news outlets, and practitioners have found themselves discussing federal agency deference and its implications. But perhaps concerning is the alarmist language regarding deference used by some of those participating in the discussion.

Depending on where someone looks for answers regarding the consequences of overturning *Chevron*, one might very likely come away with the impression that it will prove "utterly disastrous for [the] administrative state,"[18] and that it will "create an upheaval—a large shock to the legal system."[19] Specifically, many proponents of keeping *Chevron* alive focused on the potential environmental impacts of killing it: "Everything from the climate to consumer safety could be worse off";[20] citizens would "face more polluted air and water, … and

16. *See, e.g.*, LINDA TSANG & KATE R. BOWERS, CONG. RSCH. SERV., LSB10666, CONGRESS'S DELEGATION OF "MAJOR QUESTIONS": THE SUPREME COURT'S REVIEW OF EPA'S AUTHORITY TO REGULATE GREENHOUSE GAS EMISSIONS MAY HAVE BROAD IMPACTS 4 (2021); Rachel Scholz-Bright, *Walking the Tightrope: Finding Balance Between Strict Nondelegation and the Administrative State through an Examination of State Experiences*, 20 GEO.J.L.& PUB. POL'Y 427, 428 (2022).

17. As rough quantitative support for this assertion, entering "chevron AND agency" in Westlaw's search bar results in over 10,000 secondary sources; an equivalent Google search brings about 48,500,000 sources.

18. Randvek, Comment to *What Happens if the* Chevron *Deference is Overturned?*, REDDIT (Jan. 2024), https://www.reddit.com/r/AskALiberal/comments/19asofy/what_happens_if_the_chevron_deference_is/.

19. Cass R. Sunstein, *Zombie* Chevron*: A Celebration*, 82 OHIO ST. L. J. 565, 572 (2021).

20. Chevron *Case Imperils Environmental Protections To Benefit Big Oil*, ACCOUNTABLE.US (Jan. 17, 2024), https://accountable.us/chevron-case-imperils-environmental-protections-to-benefit-big-oil/.

more inaction on the climate crisis";[21] and the Court would be "gut[ting] environmental protections."[22] Some well-educated and experienced legal professionals and environmental advocates took the stance that overturning *Chevron* would limit the ability of federal agencies like the Environmental Protection Agency (EPA) to effectively regulate corporations' actions, which has helped prevent environmental damage from big businesses.[23]

Many citizens and experts alike shared concerns that sounding the death knell to *Chevron* agency deference would simultaneously put a nail in the coffin of environmental regulations. But what if overturning *Chevron* is no occasion for grieving? What if the fear that environmental progress dies alongside *Chevron* never comes to fruition? Strong evidence pointing to that very outcome comes from the state of Florida—where it has already been demonstrated that the death of agency deference is, in fact, not the end.

II. FEDERAL AGENCY DEFERENCE

Before exploring and comparing Florida's situation, it is imperative to understand the situation at the federal level. First, what exactly is agency deference? Regardless of the specific standard employed, agency deference is the notion that a court should or will defer to an agency's interpretation of a statute.[24] That statute is often the agency's organic act, wherein the agency was created and typically also granted the power to promulgate rules and otherwise act according to its legislatively defined duties.[25]

A. Then and Now: Skidmore And Chevron

Skidmore v. Swift[26] was decided forty years before *Chevron*, and first officially established a standard for judges to follow when

21. *Overturning* Chevron *Deference Would Harm the Public*, PUBLIC CITIZEN (Jan. 17, 2024), https://www.citizen.org/news/overturning-chevron-deference-would-harm-the-public/.

22. Justine Calma, *How the Supreme Court could gut environmental protections in 2024*, THE VERGE (June 28, 2024, 10:33 AM), https://www.theverge.com/24080192/supreme-court-pollution-environment-cases-2024-epa.

23. *See, e.g.*, Justine Calma, *Why a Supreme Court decision on fishing boats could change everything*, THE VERGE (Jan. 20, 2024, 8:00 AM), https://www.theverge.com/2024/1/20/24044179/supreme-court-chevron-doctrine-deference (Harvard Environmental and Energy Law Program director Jody Freeman's opinion quoted and discussed therein).

24. *See* GARY LAWSON, FEDERAL ADMINISTRATIVE LAW 570-71 (8th ed. 2019).

25. *Organic Statute*, BALLOTPEDIA, https://ballotpedia.org/Organic_statute (last visited Sept. 21, 2024).

26. 323 U.S. 134 (1944).

considering agency interpretations.[27] That standard could be grossly simplified in two words: how persuasive?[28] The Court noted that agency interpretations were "not controlling upon the courts" but "do constitute a body of experience and informed judgment" which could prove helpful to courts in these considerations.[29] Under *Skidmore*, whether a judge upheld an agency's interpretation depended on different factors "which give it power to persuade, if lacking power to control"; these factors included (among others) whether the interpretation at hand was consistent with the agency's interpretations previously and subsequently, and what proof existed that the interpretation was a quality decision based upon careful deliberation.[30] Finally, the *Skidmore* doctrine required that the persuasiveness of each interpretation be considered in isolation under all of the factors laid out by the Court.[31]

Given that applications of *Skidmore* depended on various factors and were conducted individually, *Skidmore* is very similar to de novo (meaning "anew"[32]) review. De novo review is the antithesis to complete deference, and *Skidmore*'s standard is far closer to that end of the agency deference spectrum than *Chevron*'s. There is a strong argument that *Skidmore* is not actually deferential at all; supportive of this assertion is Justice Kavanaugh's statement during the *Loper Bright* arguments that he considered *Skidmore* to be "respect" rather than "deference," and the petitioner's calling it "a doctrine of weight or persuasiveness."[33] The very essence of *Skidmore* is that agency interpretations are given weight, not that they are deferred to by way of permissibility or not being clearly erroneous.

The *Skidmore* doctrine, which rendered agency interpretations persuasive but not controlling, remained the standard for cases of agency statutory interpretations until *Chevron* was decided.[34] *Chevron* deference is in part so well-known and frequently debated because of how much more deferential courts inherently were required to be to

27. *See* Nicholas Mosvick, *How the Supreme Court created agency deference*, NAT'L CONST. CTR.: CONST. DAILY BLOG (June 25, 2021), https://constitutioncenter.org/blog/how-the-supreme-court-created-agency-deference#:~:text=On%20this%20day%20in%201984,a%20law's%20language%20is%20ambiguous.

28. *Id.*

29. *Skidmore*, 323 U.S. at 140.

30. *Id.* (There are a handful of other factors involved in a *Skidmore* deference analysis).

31. *Id.* ("Each case must stand on its own facts.").

32. *De Novo*, BLACK'S LAW DICTIONARY (12th ed. 2024).

33. Transcript of Oral Argument at 30, 39, Loper Bright Enters. v. Raimondo (2024) (No. 22-451).

34. *See Deference: When the Court Must Yield to the Government's Interpretation*, CIRC. 230 DESKBOOK 1-1, 1-4 (2006), https://www.thecre.com/oira/wp-content/uploads/2015/03/ABA-Deference.pdf.

agencies under this standard.[35] Ironically, the Supreme Court seemingly did not think this 1984 opinion was significant precedent or a major change to agency deference, which it quickly proved to be.[36]

Since 1984, *Chevron* has been cited in over 18,700 cases; 22,000 secondary sources such as law journals; and 40,000 appellate documents—Westlaw reports more than 101,000 total citations to *Chevron*.[37] However, this number does not include state cases whose individual jurisdictions' deference standards are synonymous with or equivalent to *Chevron* but have a different (or no) name. For example, Florida's standard prior to the 2018 constitutional amendment "was known simply" as agency deference,[38] though many cases indeed employed a deference doctrine that had a distinct *Chevron* flavor.[39]

But, back to *Chevron* itself: this 1984 opinion established what has been coined the "*Chevron* two-step"[40] for courts considering agency interpretations. Step One was originally "whether Congress ha[d] directly spoken to the precise question at issue"[41] but over time evolved into whether the statute was ambiguous.[42] If Congress had directly answered the immediate question—or rather, if the statute was clear—then the court was to stop and follow that "unambiguously expressed intent of Congress."[43] If not, the court moved to Step Two and considered whether the agency's interpretation was "based on a permissible construction of the statute."[44] The *Chevron* Court explained that agency deference was not novel, as interpretations—since at least the *Skidmore* decision in 1944—have been granted "considerable weight" in the course of agencies fulfilling their statutory duties.[45]

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35. *See, e.g.,* James P. Mcloughlin Jr. et al., *In* Loper Bright *and* Relentless*, Supreme Court returns to high-stakes question of viability of the* Chevron *doctrine*, REUTERS (Nov. 7, 2023, 11:15 AM), https://www.reuters.com/legal/legalindustry/loper-bright-relentless-supreme-court-returns-high-stakes-question-viability-2023-11-07/.

36. LAWSON, *supra* note 24, at 594-95.

37. Citing References to *Chevron, U.S.A., Inc. v. Nat. Res. Def. Council, Inc.*, 467 U.S. 837 (1984), WESTLAW (enter "467 U.S. 837 (1984)" in Westlaw's main search bar and click "Citing References" under the case name; the following page displays the number of total citations and the number of citations according to each content type on the left-hand side). Last updated Sept. 22, 2024.

38. Shepherd et al., *supra* note 11, at 18.

39. *See, e.g.,* State Dep't of Health & Rehab. Serv. v. Framat Realty, Inc., 407 So.2d 238, 241 (Fla. 1st DCA 1981); Doyle v. Dep't of Bus. Regul., 794 So.2d 686, 690 (Fla. 1st DCA 2001).

40. *See, e.g.,* Catherine M. Sharkey, *Cutting in on the* Chevron *Two-Step*, 86 FORDHAM L. REV. 2359, 2360 (2018).

41. *Chevron*, 467 U.S. at 842.

42. *See* Daniel J. Hemel & Aaron L. Nielson, Chevron *Step One-and-a-Half*, 84 U. CHI. L. REV. 757, 760 (2017).

43. *Chevron*, 467 U.S. at 843.

44. *Id.* at 843.

45. *Id.* at 844.

In 2001, the Court added to the equation what has been called *Chevron*'s "Step Zero" in *U.S. v. Mead*,[46] holding that *Chevron* deference should only apply to interpretations wherein a court first determines that the agency was acting properly under a legislatively delegated authority to make legally binding rules.[47] Though *Mead*'s ruling is not insignificant, for the sake of this paper's scope, reference to and consideration of the *Chevron* doctrine will implicitly focus only on the core two-step analysis.

Skidmore required courts to conduct individualized assessments of how persuasive each agency's statutory interpretation was, according to a handful of listed factors, before deciding whether to accept that interpretation. *Chevron* required courts to first consider whether a statute was clear and then whether an agency's interpretation was reasonable under the statute before deferring to that interpretation. Comparing the two doctrines in that way—persuasive versus permissible—makes it easy to label *Chevron* as the far more deferential standard. One would then expect agencies and their interpretations to have been more successful in practice under the more agency-friendly *Chevron* than under *Skidmore*, and indeed they were according to a major study of federal circuit courts spanning from 2003 to 2013.[48]

When *Chevron* deference was applied (which was 74.8% of the time), agencies had a win rate of 77.4%; when courts used *Skidmore* (10.8%), that success rate dropped to 56.0%.[49] Further, when these courts employed a de novo standard—like Florida after the 2018 amendment—agencies were successful 38.5% of the time.[50] Of those cases involving *Chevron* deference, 70.0% got to Step Two; of those Step Two instances, agencies were successful at an impressive rate of 93.8%.[51] According to a smaller study conducted more recently, these numbers had changed some and agencies were not so highly successful at Step Two, but *Chevron* was still applied far more than *Skidmore* and the general trends remained.[52]

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46. 533 U.S. 218 (2001).

47. *Id.* at 226-27.

48. *See* Kent Barnett & Christopher J. Walker, Chevron *in the Circuit Courts*, 116 MICH. L. REV. 1 (2017).

49. *Id.* at 6, 29.

50. *Id.* at 6, 30 (In the other 6.9% of cases, "courts declined to choose a deference standard, usually holding that the answer would been the same under any standard.").

51. *Id.* at 6.

52. *See* Isaiah McKinney, *The* Chevron *Ball Ended at Midnight, but the Circuits are Still Two-Stepping by Themselves*, YALE J. ON REG.: NOTICE & COMMENT BLOG (Dec. 18, 2022), https://www.yalejreg.com/nc/chevron-ended/.

B. Agency Deference and the Environment

Throughout legal practice, academic literature, and public opinion, *Chevron* is often associated with environmental regulations, protection, and progress.[53] The *Chevron* case itself was about environmental law, with the Court ruling in favor of the EPA's statutory interpretation of the Clean Air Act as a "*permissible construction* of the statute which seeks to accommodate progress in reducing air pollution with economic growth."[54] Similarly, *Loper Bright* involved federal fishery management legislation and the National Marine Fisheries Service's (NMFS) observation aboard fishing vessels.[55] NMFS, alternatively called NOAA Fisheries, is the federal agency "responsible for the stewardship of the nation's ocean resources and their habitat."[56]

Specific case facts aside, *Chevron* deference and the administrative state generally are frequently associated with environmental law and policy because "it is a virtual certainty" that agency promulgations regarding the environment will result in some form of litigation.[57] This is because some parties (namely, businesses whose activities impact the environment in some way) will typically want to contest rules that limit their conduct; others (including activist groups) will often challenge promulgations they feel should do more to regulate commercial activity and protect the environment.[58] Further, the environmental context is usually highly technical and specific, so Congress tends to delegate rulemaking authority to the EPA (and some other related agencies like NMFS, depending on the legislation) to promulgate appropriate regulations through proper procedures,

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53. *See, e.g.,* Jason J. Czarnezki, *An Empirical Investigation of Judicial Decisionmaking, Statutory Interpretation, and the* Chevron *Doctrine in Environmental Law*, 79 U. COLO. L. REV. 767 (2008); Pamela King, *How a diminished* Chevron *doctrine could weaken Biden's climate law*, E&E NEWS (Jan. 25, 2024, 1:25 PM), https://www.eenews.net/articles/how-a-diminished-chevron-doctrine-could-weaken-bidens-climate-law/; *How will the changes from the USA Supreme Court on the* Chevron *Deference case alleviate and protect the oil industry? Will we lose the clean water protections?* QUORA, https://www.quora.com/How-will-the-changes-from-the-USA-Supreme-Court-on-the-Chevron-Deference-case-alleviate-and-protect-the-oil-industry-Will-we-lose-the-clean-water-protections.

54. *Chevron*, 467 U.S. at 866 (emphasis added).

55. *Docket No. 22-451: Questions Presented*, *supra* note 3.

56. *About Us: Our Mission*, NOAA FISHERIES, https://www.fisheries.noaa.gov/about-us (last visited Apr. 23, 2024).

57. Thomas J. Grever, *The Demise of* Chevron*, or Another Red Herring?*, A.B.A. SECTION OF ENV'T, ENERGY, & RES. (Feb. 22, 2024), https://www.americanbar.org/groups/environment_energy_resources/resources/natural-resources-environment/2024-winter/the-demise-chevron-or-another-red-herring/.

58. *Id.*

based on a presumed high level of relevant expertise and capability of handling such scientific matters.[59]

That same expertise and technical nature (pun intended) of environmental regulation is largely why *Chevron* was decided as it was,[60] and a significant part of the reason why agency deference exists at all.[61] One practitioner observes that "[c]ourts reviewing the regulation are generally reluctant to question or overrule an agency's evaluations and conclusions, especially when rooted in technical or scientific analysis within the agency's statutory charge."[62]

All of the above, in addition to the increase in opinionated online explanations of agency deference by prominent environmental organizations,[63] is very likely why so many associate the *Chevron* doctrine with environmental law. This is a valid connection to make, and it is indeed backed by academic studies and jurisprudential observations. Part I of this paper explored more in depth some of the strong thoughts and opinions expressed by those regarding *Chevron* and the environment. However, *Chevron* is likely not the make-or-break for environmental regulations that many may assume it is; one law professor's empirical study from 2008 suggests instead that courts have demonstrated "a strong willingness to defer, *under any doctrine or framework*, to agency action when environmental scientific expertise is required."[64] This quote, and other evidence, point to the potential for *Chevron*'s death to not be so significantly impactful.[65]

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59. *See generally Our Mission and What We Do*, U.S. ENV'T PROT. AGENCY, https://www.epa.gov/aboutepa/our-mission-and-what-we-do (last visited Apr. 23, 2024) ("EPA works to ensure that . . . federal laws protecting . . . the environment are administered and enforced fairly, effectively, and as Congress intended . . . . When Congress writes an environmental law, we implement it by writing regulations."); *see also* Michael B. Rappaport, *Using Delegation to Promote Deregulation*, CATO INST. (Winter 2015-2016), https://www.cato.org/regulation/winter-2015-2016/using-delegation-promote-deregulation ("[A]gencies have significant policy and political expertise . . . . Such expertise is one of the most common justifications offered for delegation.")

60. *Chevron*, 467 U.S. at 865 (discussing the EPA's ability and duty to politically balance interests in a way such that the judicial branch could not. "[T]he [EPA] Administrator's interpretation represents a reasonable accommodation of manifestly competing interests and is entitled to deference: the regulatory scheme is technical and complex, the agency considered the matter in a detailed and reasoned fashion, and the decision involves reconciling conflicting policies.").

61. *See, e.g.,* Grever, *supra* note 57.

62. *Id.*

63. *See, e.g., A Pair of Supreme Court Cases About Fisheries Management Could Put Important Protections at Risk*, EARTHJUSTICE (Jan. 16, 2024), https://earthjustice.org/article/loper-bright-chevron-doctrine-relentless.

64. Czarnezki, *supra* note 53, at 771 (emphasis added).

65. *See generally* DeGrandpre, *supra* note 7 (arguing that overturning Chevron may not have the expected "watershed impact on environmental law" and regulations).

C. Loper Bright and the Digging of Chevron's Grave

For the purposes of this paper, an analysis of the particular facts, prior history, and outcome of the *Loper Bright* case is unnecessary, but the broader doctrinal concept itself is crucial. *Loper Bright Enterprises v. Raimondo* was a consolidated case with *Relentless, Inc. v. Department of Commerce*,[66] wherein the Court certified two questions, one specifically (and here, unrelatedly) analyzing the NMFS regulation at hand and the other addressing whether *Chevron* should officially be overturned.[67]

Chevron has been debated and disliked by many jurists since 1984, and arguments had been made several times for its rejection. Multiple former and current Supreme Court Justices had indeed expressed a strong disdain for deferring to agency interpretations, especially under the *Chevron* two-step, for various reasons. As two prevalent examples, Justice Thomas wrote in his concurrence in the Court's 2015 *Michigan v. Environmental Protection Agency* decision that "*Chevron* deference raises serious separation-of-powers questions."[68] In criticizing the Step One ambiguity inquiry, Justice Kavanaugh wrote in a 2016 book review: "No wonder people suspect that judges' personal views are infecting [agency interpretation] cases. We have set up a system where that suspicion is almost inevitable because the reality is almost inevitable."[69] Additionally, he opined that "*Chevron* encourages the Executive Branch (whichever party controls it) to be extremely aggressive in seeking to squeeze its policy goals into ill-fitting statutory authorizations and restraints."[70]

Regarding the *Loper Bright* litigation itself, certain questions and answers from oral arguments demonstrate the strong likelihood that *Chevron*'s head was already poised on the Court's chopping block before the death warrant was signed. For example, during the petitioner's argument, Justice Kavanaugh said something that echoed his distaste for *Chevron* as discussed in his above cited work, *Fixing Statutory Interpretation*:

> Then Justice Kagan raises an important point about judicial restraint or humility in terms of *Chevron*, and that—that's an important concern for any judge. I think the flip side, why this is hard, the other concern for any judge is abdication to the executive branch running roughshod over limits established in the Constitution or, in this case, by Congress.

66. *See* Mcloughlin Jr. et al., *supra* note 35.

67. *Docket No. 22-451: Questions Presented*, *supra* note 3 (as part of the second question regarding overruling *Chevron*, the Court adds that it will consider whether it should "at least clarify that statutory silence concerning controversial powers expressly but narrowly granted elsewhere in the statute does not constitute an ambiguity requiring deference to the agency.").

68. Michigan v. EPA, 576 U.S. 743, 761 (2015).

69. Kavanaugh, *supra* note 13, at 2142.

70. *Id.* at 2150.

> So I think we've got to find the—that's—that's why it's hard, find the right balance between restraint and letting the executive get away with too much.[71]

Further, Justice Gorsuch asked the respondent's counsel a series of questions that revealed his (and other judges and justices') difficulty with the Step One question of ambiguity:

> JUSTICE GORSUCH: The fact that you think [the statute is] clear and [petitioner's counsel] thinks it's clear but a court below thought it was ambiguous should tell us something, shouldn't it? . . . [Y]ou think you win under Step One, and so does [petitioner's counsel]. And yet here we are.
>
> RESPONDENT'S COUNSEL: I don't think it's at all unusual to find a case where the government thinks it has both the—the—the clear interpretation of the statute on its side and that the agency has acted unreasonably.
>
> JUSTICE GORSUCH: Yeah, because – because we have this ambiguous ambiguity trigger that nobody knows what it means.[72]

These and other quotes from the arguments ominously foreshadowed the impending demise of *Chevron*. Indeed, decided in late June of 2024, the Supreme Court officially sounded the funeral toll for the *Chevron* doctrine: "*Chevron* is overruled."[73] Though a great number of articles, blogs, and discussions have been and will be devoted to *Loper Bright* that more deeply analyze the decision itself and the resulting judicial review standard (or intended lack thereof), for the purposes of this paper, the following quote from the majority is helpful:

> Courts must exercise their *independent judgment* in deciding whether an agency has acted within its statutory authority . . . . And when a particular statute delegates authority to an agency consistent with constitutional limits, *courts must respect the delegation*, while ensuring that the agency acts within it. But courts need not and under the APA *may not defer to an agency interpretation . . . simply because a statute is ambiguous.*[74]

Given the expansive judicial discourse surrounding the implications of *Chevron*'s highly deferential standard to executive agencies, not to mention the opinions of other professionals and many members of the public, the Court's decision to hear *Loper Bright* was not the groundbreaking of *Chevron*'s grave. That had been slowly underway for years—indeed since the late 1980s—as more facets of

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71. Transcript of Oral Argument at 40-41, Loper Bright Enters. v. Raimondo (2024) (No. 22-451).

72. Transcript of Oral Argument at 52-53, Loper Bright Enters. v. Raimondo (2024) (No. 22-451).

73. *Loper Bright*, 603 U.S. at 412.

74. *Id.* (emphasis added).

the debate had surfaced over time. Rather, *Loper Bright* can more accurately be analogized to be the final nail in *Chevron*'s coffin, and the subsequent dumping of the 1984 doctrine into that long-expanding hole in the ground.

III. FLORIDA AGENCY DEFERENCE BEFORE AND AFTER THE 2018 AMENDMENT

The state of Florida prides itself on being a preeminent example in government administration, especially with its Sunshine Law—an expansive open public records requirement.[75] Florida is furthermore considered nationally to be a leader in many ways.[76] It comes as no surprise, then, that Florida would similarly pave the way in an area of government law as widely controversial as agency deference.

A. Then and Now: Judicial Review of Agency Interpretations

Before 2018, Florida courts employed a particularly high deferential standard. Two early Florida Supreme Court cases called agencies' interpretations "persuasive but … not controlling"[77] and held that they should be granted "great weight" by courts.[78] The Court held in a third case that the "*contemporaneous* administrative construction of [a statute] by those *charged with its enforcement* and interpretation is entitled to great weight, and courts generally will not depart from such construction unless it is clearly erroneous or unauthorized."[79] If all this mention of an agency interpretation's ability to persuade a court and the subsequent weight that comes with it sounds familiar, it should—it seems similar to the federal *Skidmore* doctrine.

The latter two of the above cited quotations came from cases decided right after *Skidmore*, in 1949 and 1952 respectively; the italicized portions of the final quote are indeed two of the several factors that the *Skidmore* opinion required courts to consider. Interestingly, the first of the above quotes comes from a pre-*Skidmore* 1941 case, further demonstrating Florida's uniquely longstanding history of judicial deference to agency interpretations. However, the Florida standard, especially following the state supreme court's 1952 decision, was much more deferential than *Skidmore*; at its core, *Skidmore* is closer to de novo review because it requires an

75. See*, e.g., Open Government*, OFF. OF THE ATT'Y GEN., https://www.myfloridalegal.com/open-government/open-government (last visited Sept. 21, 2024).

76. *See, e.g., Best States Rankings: Education*, U.S. NEWS & WORLD REP., https://www.usnews.com/news/best-states/rankings/education (last visited Apr. 19, 2024).

77. Lee v. Gulf Oil Corp., 4 So. 2d 868, 870 (Fla. 1941).

78. City of St. Petersburg v. Carter, 39 So. 2d 804, 806 (Fla. 1949) (en banc).

79. Gay v. Canada Dry Bottling Co. of Fla., 59 So. 2d 788, 790 (Fla. 1952) (emphasis added).

individualized, factor-based approach to each interpretation. Florida instead held that interpretations should be given weight according to *Skidmore*-like factors, but that they should ultimately be deferred to unless clearly incorrect. This is therefore a more agency-friendly standard than *Skidmore*.

In 1985, a year after *Chevron* was decided, the Florida Supreme Court held that judges were required to defer to agency interpretations if they were "consistent with legislative intent" and the agency provided "substantial, competent evidence."[80] Several other Florida cases provided or expanded upon qualifications to this standard, namely, that interpretations do not warrant judicial deference if they are "clearly erroneous,"[81] if the situation is not one that invokes agency expertise,[82] or if the statute itself is unambiguous.[83] Exceptions aside, courts often upheld agency interpretations, especially as the highly deferential *Chevron* took hold at the federal level.[84] In Florida, there was seemingly no formula equivalent to *Chevron*'s two steps, though perhaps it could be argued that Florida's "clearly erroneous" standard constituted a Step One-esque threshold, wherein courts would not defer to obviously incorrect interpretations but generally defer to interpretations that passed that qualification.

Though a formal two-step was never implemented, many of Florida's judicial opinions during this time demonstrated that the state was very much aligned with the federal *Chevron*-era jurisprudence—even before *Chevron* itself was decided by the Supreme Court. For example, in 1981, Florida's First District Court of Appeals (DCA) opined that "[w]hether the Department's interpretation of section 381.272(7) is the only possible interpretation of the statute, or the most desirable one, we need not say. It is within the range of permissible interpretations of the statute . . . ."[85] This court's holding based on a "permissible interpretation" all but matches the *Chevron* Court's emphasis on a "permissible construction." A month after *Chevron* was decided, the same Florida court upheld another agency interpretation and said that "[a]gencies are afforded wide discretion . . . and will not be overturned on appeal unless clearly erroneous. . . . The reviewing court will defer to any interpretation

80. Pub. Emps. Rel. Comm'n v. Dade Cnty. Police Benevolent Ass'n, 467 So. 2d 987, 989 (Fla. 1985).

81. Doyle v. Dep't of Bus. Regul., 794 So. 2d 686, 690 (Fla. 2001).

82. *See, e.g.,* Schoettle v. State, Dep't of Admin., Div. of Ret., 513 So. 2d 1299, 1301 (Fla. 1st DCA 1987); Bd. of Tr. of Northwest Fla. Cmty. Hosp. v. Dep't of Mgmt. Serv., 651 So. 2d 170, 173 (Fla. 1st DCA 1995).

83. *See, e.g.,* City of Safety Harbor v. Commc'n Workers of America, 715 So. 2d 265, 267 (Fla. 1st DCA 1998); Conservation All. of St. Lucie Cnty. Inc. v. Fla. Dep't of Env't Prot., 144 So. 3d 622, 624 (Fla. 4th DCA 2014).

84. *See* Shepherd et al., *supra* note 11, at 20.

85. State Dep't of Health & Rehab. Servs. v. Framat Realty, Inc., 407 So. 2d 238, 241 (Fla. 1st DCA 1981).

within the range of *possible* interpretation."[86] The Florida Supreme Court in 2006 even made mention of the fact that federal and other states' courts "share [Florida's] principles" of agency deference, specifically citing *Chevron*.[87]

As demonstrated, Florida's strong history of agency deference, with some narrow exceptions, mirrored *Chevron* deference in terms of weight given to agency interpretations. Given this similarity, the jump from this almost reflexive deference to the current de novo review seems jarring, but it followed a statewide and national trend of more conservative jurisprudence regarding separation of powers and, more generally, regarding administrative law as a whole.[88]

The constitutional amendment, approved by Florida voters during the 2018 election, added Section 21 to the end of Article V (Judiciary), which now reads:

> Judicial interpretation of statutes and rules—In interpreting a state statute or rule, a state court or an officer hearing an administrative action pursuant to general law may not defer to an administrative agency's interpretation of such statute or rule, and must instead interpret such statute or rule de novo.[89]

As of the amendment's effective date, then, there is no agency deference in Florida, and all challenged agency interpretations of statutes must be independently evaluated by each court.

Several Florida court opinions published soon after the amendment took effect specifically discuss this change in the standard of judicial review.[90] The Florida Supreme Court even analyzed the new de novo standard in the context of an environmental protection case (wherein the Court upheld the agency's interpretation), described below. After the amendment, agency statutory interpretations are still regularly upheld in Florida, even with de novo review—meaning that the fear of agencies predominantly losing post-*Chevron* may not hold much weight.

In the area of public utilities, Florida courts post-amendment (including the state's supreme court) have particularly cited the Florida Public Service Commission's (PSC) understanding and expertise in its consideration of regulations, rate setting, or other

86. Natelson v. Dep't of Ins., 454 So. 2d 31, 32 (Fla. 1st DCA 1984) (emphasis in original).

87. McKenzie Check Advance of Fla., LLC v. Betts, 928 So. 2d 1204, 1218 n.9 (Fla. 2006).

88. *See, e.g.,* Shepherd et al., *supra* note 11, at 20-21.

89. FLA. CONST. art. V, § 21.

90. *E.g.,* Kanter Real Est., LLC v. Dep't of Env't Prot., 267 So. 3d 483, 487-88 (Fla. 1st DCA 2019); Lee Mem'l Health Sys. Gulf Coast Med. Ctr. v. Agency for Health Care Admin., 272 So. 3d 431, 436-37 (Fla. 1st DCA 2019).

agency activities.[91] The supreme court in 2023 even recognized that agencies "lost any deference" with the amendment, but discussed the specific legislative delegation and past caselaw that acknowledged the PSC's "specialized knowledge and expertise in this area" in its opinion.[92] Ultimately, the court in that case remanded to the PSC because it had likely acted outside of the bounds of its legislative authority,[93] but the mention of an agency's expertise (which is, as aforementioned, a primary reason that agencies exist in the first place) is telling.

Further, Florida's First DCA in a separate case affirmed another of the PSC's interpretations in part and reversed in part, stating that the PSC "has much discretion . . . under the statutory framework" and (citing another case) that the PSC's "determinations of the applicable . . . considerations should be given greater weight since [they] areinfused with policy considerations for which the [PSC] has special responsibility and expertise."[94] A review of reported post-amendment Florida cases shows that public utilities challenges stand out as an area where the courts will consider the particular expertise of the agency; time will tell if that respect will be bestowed upon other agencies or within other areas.

B. Statistical Analysis of Agency Success in Florida and What This Can Reveal About the Federal Level

Before analyzing three key environmental state cases decided after the amendment's passage, it will be helpful to delve into some statistics of what Florida's judicial review has looked like in practice. First, the author of this paper does not claim to be a statistical research expert, and these numbers are not meant to represent an empirical study. They are, however, intended to shed light on how often courts have affirmed and currently do affirm agency interpretations, and what that can possibly predict about federal agency deference.[95]

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91. *See* Floridians Against Increased Rates, Inc. *v.* Clark, 371 So. 3d 905, 910 (Fla. 2023); Citizens of State through Fla. Off. of Pub. Couns. *v.* Fla. Pub. Serv. Comm'n, 294 So. 3d 961, 965 (Fla. 1st DCA 2019).

92. *Floridians Against Increased Rates*, 371 So. 3d at 922 n.23, 910.

93. *Id.* at 914.

94. *Citizens of State through Fla. Off. of Pub. Couns.*, 294 So. 3d at 965 (citing *Palm Coast Util. Corp. v. State*, 742 So. 2d 482, 484 (Fla. 1st DCA 2019)).

95. The statistics in this section were gathered by entering the following in Westlaw's search bar: *"de novo" AND agency AND interpretation AND statute*, narrowed to show Florida courts only. From there, results were narrowed by Date for each selected time period: since the amendment's effective date ("all dates after" 01/08/2019 [as of mid-April in 2024, when this paper was written]); that same span of time before the amendment's effective date ("date range" 09/26/2013 to 01/07/2019); and the same span of time before 09/26/2013 ("date range" 06/14/2008 to 09/25/2013). From there, each result in each time period was read

Three different time periods were collected: all cases addressing challenges to agency interpretations since the amendment's effective date (seventy-eight opinions), all such cases decided roughly five years right before the amendment (sixty-one), and all such cases from approximately five years before that (fifty-one). Notably, several more cases were heard each five-year period, which some may see as analogous support for the concern of a larger docket load for federal circuit courts following *Chevron*'s reversal.[96] However, this author believes it is likely instead a result of expanding executive action as Florida's agencies are legislatively tasked with handling more specialized matters to accommodate a rapidly growing population with increasingly complex issues (like environmental preservation, insurance, and health care). An average of only two or three additional cases per year does not seem particularly significant considering this growth of the administrative state via corresponding legislation, coupled with Florida's population increase of over four million between 2008 and 2023.[97] Whether that legislative delegation is desirable is outside the scope of this paper.

Since the amendment's effective date, 20.7% of the case outcomes upheld agency interpretations, 28.0% reversed them, and 51.2% of the decisions fell outside of that binary. Excluding that third category, agency interpretations were upheld 42.5% and reversed 57.5% of the time.

In the five years right before the amendment's effective date, 31.3% of the outcomes were affirmations and 20.3% were reversals; 48.4% of the outcomes fell into the third "other" category. Removing the "other" outcomes, courts affirmed agency interpretations 60.6% of the time and struck them down 39.4% of the time.

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through for the holding and reasoning; tallies were made and categorized by Affirm/Agency Win, Reverse/Agency Loss, and Other Holding/Catch-all. That "Other" category includes non-state agencies (i.e., cities or other localities, citizen/private parties), cases considering an Administrative Law Judge's interpretation, cases regarding regulations rather than statutes, criminal cases, and other matters unrelated to state agency interpretations of statutes. Where a case was decided with more than one outcome, for example—an agency interpretation was affirmed in part and reversed in part, that was recorded as "0.5" Affirm and "0.5" Reverse; each "0.5" became essentially its own case, because each interpretation outcome was collected independently, even if two came from the same opinion.

Finally, these statistics include "bad law" because many deference cases, following the amendment, no longer comply with the current de novo standard but are inherently necessary for the analysis purpose here; therefore, if an opinion was marked as "treated negatively" or overturned on Westlaw, it was still included so long as the discussion was related to an agency's statutory interpretation.

96. *See, e.g.,* Philip Hamburger, *Professor Thomas W. Merrill on the Future of the* Chevron *Doctrine*, COLUM. LAW SCHOOL STORY ARCHIVE (Jan. 11, 2024), https://www.law.columbia.edu/news/archive/professor-thomas-w-merrill-future-chevron-doctrine.

97. *See Florida Population 1900-2023*, MACROTRENDS, https://www.macrotrends.net/global-metrics/states/florida/population (last visited Apr. 28, 2024).

Finally, in the five years preceding that, an immense 72.7% of the outcomes were outside the binary assessment; agencies were successful 12.7% of the time and unsuccessful 14.5% of the time. Disregarding those irrelevant cases, agency interpretations were upheld 46.7% of the time during this period and struck down 53.3% of the time. All of these numbers are, for the sake of clarity, represented below in a simple table.

	AFFIRM (Agency Win)	REVERSE (Agency Loss)
After amendment's effective date (since 01/08/2019 [as of mid-April, 2024])	42.5%	57.5%
Right before the amendment (09/26/2013 – 01/07/2019)	60.6%	39.4%
Leading up to the amendment (06/14/2008 – 09/25/2013)	46.7%	53.3%

Percentages disregard the outcomes outside of the Affirm / Reverse binary.

These are the statistics, but what do they mean? For one, they reveal that, despite how deferential the judicial review standard of interpretations was on paper long before the amendment, agency wins and losses were comparable. Further, over half of the agency interpretations during that period were actually reversed rather than upheld. The expected trend of high deference to agencies is more clearly observed in the years immediately before the amendment's effective date, where interpretations were affirmed almost twice as frequently as reversed. That ratio supports many of the concerns about judicial deference to agencies in Florida previously, and indeed observation of this trend is likely why the amendment was brought to voters in the first place.

Perhaps most telling is the agency win ratio post-amendment, where interpretations are still upheld nearly half of the time. This is important because it helps alleviate the concern that agencies will never win following *Chevron*'s being overturned. Not only are Florida agencies still successful after the prohibition on deference, but it is almost an even split, which proves a crucial point. There is likely an assumption that de novo review results in more losses for agencies and far fewer (maybe even zero) wins, because a court starting anew when considering interpretations instead of looking at prior precedent or deferring based on permissibility certainly sounds less promising for those agencies. Indeed, this might be driving some of the fear that the loss of *Chevron* will hinder the ability of agencies to regulate because they will not be upheld in court. But a de novo standard of review *should* be expected to produce an even division over time; at its core, an application of de novo is a simple "yes" or "no" answer removed from

the factors that weigh in support or opposition of agencies. Therefore, an agency's interpretation (a bit simplistically) has a fifty-fifty chance of being upheld in court under a de novo standard.

Further, as these statistics demonstrate, most of the cases were decided on other grounds or were otherwise unrelated to the focused question of an agency's statutory interpretation. This might suggest, then, that the number of cases decided specifically on that issue of interpretation and regarding specifically an executive agency are smaller than is presumed, and that the fear of a post-*Chevron* tidal wave of agency reversals is not supported.

Thus, if Florida judges uphold interpretations almost half of the time even under a de novo review standard, then it seems a strong argument that federal agencies will also continue to see success in court if *Loper Bright* is ultimately understood to require de novo review (and more so if it is instead a stunted return to *Skidmore* deference[98]). Based on this evidence from Florida and the cases discussed below, it appears that the future of administrative law is *bright* indeed.

C. Why Florida Can be a Good Federal Indicator

Why should Florida post-amendment be analyzed as a predictive comparison to the federal level post-*Chevron*? Florida is colloquially regarded as a leader in governmental operations, including, for example, the responsiveness of its Division of Emergency Management and the sometimes-groundbreaking enactments of its legislature. Florida is also demographically comparable to the country at large in terms of race and sex (among other attributes),[99] as well as party affiliation. Currently, Republican support stands at roughly 38% in Florida and 30% within the U.S. generally, and Democratic support is about 32% in Florida and 28% in the country.[100] As the third largest state in the U.S. by population, one attorney has commented that Florida's size might likely be a large factor in other states observing

98. *See, e.g.,* Christopher J. Walker, *What* Loper Bright Enterprises v. Raimondo *Means for the Future of* Chevron *Deference*, YALE J. ON REG.: NOTICE & COMMENT BLOG (June 28, 2024), https://www.yalejreg.com/nc/what-loper-bright-enterprises-v-raimondo-means-for-the-future-of-chevron-deference/ (explaining that there remains some disagreement over whether *Loper Bright* officially demands de novo review or allows some lesser form of deference).

99. *See QuickFacts: United States*, U.S. CENSUS BUREAU (July 1, 2023), https://www.census.gov/quickfacts/fact/table/US/PST045221; *QuickFacts: Florida*, U.S. CENSUS BUREAU (July 1, 2023), https://www.census.gov/quickfacts/fact/table/FL/PST045223.

100. *See Party Affiliation*, GALLUP, https://news.gallup.com/poll/15370/party-affiliation.aspx (last visited Apr. 9, 2025); *Voter Registration – By Party Affiliation*, FL. DIV. OF ELECTIONS (Apr. 9, 2024), https://dos.fl.gov/elections/data-statistics/voter-registration-statistics/voter-registration-reports/voter-registration-by-party-affiliation/.

Florida to see how a prohibition on agency deference looks in practice.[101]

Further, Florida is presently the only state in the country to prohibit judicial deference to agencies via constitutional amendment.[102] As one study explained, this fact likely makes Florida "the most significant" of all the jurisdictions to have put a statewide stop to agency deference.[103] This is so because in using a constitutional amendment, Florida is the sole state to have rejected deference through the approval of citizen voters—under a requirement of 60% voter approval, no less[104]—as opposed to a majority of legislators through lawmaking or judges via an opinion.[105] Florida's size and demographics, the state's known history of being particularly deferential to agency interpretations (including in *Chevron*-like opinions published right before the amendment's passage),[106] and this precedential constitutional change through a unique method likely make Florida a good indicator for how the federal level could operate post-*Chevron*.

IV. FEDERAL LESSONS FROM FLORIDA CASES REGARDING ENVIRONMENTAL PROTECTIONS POST-AMENDMENT

One of the biggest concerns regarding *Chevron* being overturned, as previously discussed, is the detrimental impact to the environment which many believe will be caused by the death of such an agency-friendly deferential standard. At first glance, this fear is not baseless: environmental agencies like the EPA interpret their enacting statutes (like the Clean Air Act) to make rules which constrain businesses' activities and therefore protect the environment. Under *Chevron*, so long as those statutes were ambiguous (which was not a high threshold) and the EPA's interpretation was permissible, then that interpretation was upheld, and the EPA could enforce its

101. Daniel M. Ortner, *The End of Deference: The States That Have Rejected Deference*, YALE J. ON REG.: NOTICE & COMMENT BLOG (Mar. 24, 2020), https://www.yalejreg.com/nc/the-end-of-deference-the-states-that-have-rejected-deference-by-daniel-m-ortner/.

102. Martha Kinsella & Benjamin Lerude, *Judicial Deference to Agency Expertise in the States*, STATE COURT REP. (Oct. 26, 2023), https://statecourtreport.org/our-work/analysis-opinion/judicial-deference-agency-expertise-states.

103. Ortner, *supra* note 101.

104. *See* FLA. CONST. art. XI, § 5(e) (proposed amendments must be approved of by at least 60% of voters in that election to pass); *Florida Amendment 6, Marsy's Law Crime Victims Rights, Judicial Retirement Age, and Judicial Interpretation of Laws and Rules Amendment (2018)*, BALLOTPEDIA, https://ballotpedia.org/Florida_Amendment_6,_Marsy%27s_Law_Crime_Victims_Rights,_Judicial_Retirement_Age,_and_Judicial_Interpretation_of_Laws_and_Rules_Amendment_(2018) (last visited Apr. 28, 2024) (this particular amendment passed with 61.61% of citizens' votes in the 2018 election).

105. Ortner, *supra* note 101.

106. Shepherd et al., *supra* note 11, at 20. *See also* Kinsella & Lerude, *supra* note 102; Ortner, *supra* note 101.

environmental regulations. Without the *Chevron* doctrine, so that argument goes, courts will more frequently overturn EPA and other agency regulations instead of upholding them.[107]

However, there are likely two strong interrelated arguments to contradict this assertion and alleviate this concern. First, a less deferential standard of judicial review does not inherently mean that courts will strike down every interpretation; this was the main takeaway from the statistical analysis above, with proof from Florida courts that have continued to uphold agency interpretations (including environmental regulations) since the state's prohibition on deference. Second, just because an environmental agency's interpretation *is* struck down by a court does not automatically mean it is to the detriment of environmental protection, as has also been observed in Florida courts. Three key environmental cases have been decided in Florida since the amendment became effective; each has a different outcome and reveals more about what a prohibition on agency deference looks like in practice.

As a primer, Florida's Department of Environmental Protection (DEP) was created in 1993 by the legislature and is tasked with, among other things, "coordinating the development, review, and implementation of the state's energy policy."[108] That same statute also confers rulemaking authority upon DEP.[109] These DEP regulations, which (like all regulations) are necessarily interpretations of those statutes, are sometimes challenged by businesses and citizens. When those challenges result in interpretations being struck down by the court, the result is sometimes a negative environmental impact—but not always.

A. Struck Down on Erroneous Interpretation and Abuse of Discretion

In 2019, Florida's First DCA controversially[110] struck down DEP's denial of a business's permit application to drill for oil in the Everglades.[111] At first glance, that indeed seems a worrisome outcome for the environment, but a deeper read of the opinion reveals more.

The legislature delegated power to DEP to accept or deny these kinds of permits in a natural resources statute,[112] and in 1999 the same court had affirmed DEP's interpretation of this statute as being a

107. *See, e.g.,* Chevron *Case Imperils Environmental Protections To Benefit Big Oil*, *supra* note 20.

108. Fla. Stat. § 20.255 (2024).

109. *Id.*

110. *See, e.g.,* Jim Saunders, *Court clears way for drilling in Everglades*, THE FLA. TIMES-UNION (Feb. 7, 2019, 6:54 PM), https://www.jacksonville.com/story/news/2019/02/07/court-clears-way-for-drilling-in-everglades/6057158007/.

111. *Kanter Real Est., LLC*, 267 So. 3d at 485.

112. Fla. Stat. § 377.241 (2018).

balancing test.[113] In this instance, the court stated that whether it deferred to DEP as it had previously or reviewed the interpretation de novo, DEP's understanding of the balancing test was still correct; the question was whether DEP applied said test correctly here.[114] Holding that DEP had clearly misinterpreted a provision within the aforementioned statute, and that the DEP Secretary had committed a fact-finding "abuse of discretion" besides, DEP was ultimately found to have improperly applied the balancing test and the agency's action was struck down.[115]

From this holding can be drawn the necessary conclusion that even without the 2018 amendment and under the previous standard of deference, this court would still have rejected DEP's interpretation and ordered the acceptance of the requested permit. Moreover, the important lesson here is not that de novo review resulted in an environmental protection being struck down, but that the agency tasked with such environmental protection in this instance improperly abused its discretion and erroneously interpreted its authority. This fact stands with or without agency deference, at the state or federal level.

B. Struck Down on Improper Interpretation that Did Not Comply with Statute, and In Practice Did Not Protect Environment

In a science-heavy opinion released in 2023, Florida's First DCA again rejected a DEP interpretation of one of its authority-granting statutes—but this time with a clear environmentally-friendly outcome.[116] Several environmental advocacy groups challenged Basin Management Action Plans (BMAPs) created by DEP on the grounds that the agency had not complied with two statutory requirements in designing and using those BMAPs.[117] Specifically, they argued that DEP's BMAPs did not include sufficient details regarding certain pollutants for the springs.[118] The challenge was ultimately, then, based upon the groups' belief that the agency had misinterpreted (or simply

113. Coastal Petroleum Co. *v.* Fla. Wildlife Fed'n, Inc., 766 So. 2d 226, 228 (Fla. 1st DCA 1999).

114. *Kanter Real Est., LLC*, 267 So. 3d at 488.

115. *Id.* at 490-92 ("Whether we review [DEP's] interpretation under a de novo standard, as required by [the new amendment], or with the deference required by our prior decisions, we reach the same conclusion: we reject the [DEP's] interpretation of [the statute], as it was both incorrect and clearly erroneous.").

116. Sierra Club v. Dep't of Env't Prot., 357 So. 3d 737 (Fla. 1st DCA 2023). *See also VICTORY: FDEP must rewrite Outstanding Florida Springs Basin Management Action Plans*, SIERRA CLUB FLA. CHAPTER (Feb. 19, 2023), https://www.sierraclub.org/florida/blog/2023/02/victory-fdep-must-rewrite-outstanding-florida-springs-basin-management-action.

117. *Sierra Club*, 357 So. 3d at 739.

118. *Id.* at 737.

disregarded) its statutory duties and thus was inadequately fulfilling its obligation to protect Florida's environment.

Upon a de novo review, the court agreed with the challengers that DEP had misinterpreted the statute and had not properly created detailed BMAPs meant to "restore Florida springs from pollution."[119] In practice, DEP's interpretation was struck down because it did not adequately protect the environment according to its legislatively delegated authority. This holding demonstrates that simply because an agency's interpretation of an environmental statute is struck down does not necessarily mean that it is to the detriment of the environment. Indeed, the court's rejection of DEP's interpretation in this case ultimately served to protect the environment; this is a helpful lesson that can be applied at the federal level with agencies like the EPA.

C. Upheld on Proper Inclusive Interpretation of "Protect the Environment"

Perhaps most importantly for this paper's argument is a Florida Supreme Court opinion from 2019. In *Citizens v. Brown*,[120] the court upheld a decision by the Florida Public Service Commission (PSC) to allow Florida Power and Light (FPL) "to recover certain environmental compliance costs from ratepayers" under the PSC's reading of a statute titled "[E]nvironmental cost recovery."[121] That statute defined "environmental laws or regulations" as all legal authority regarding utilities and "designed to protect the environment."[122]

Reviewing the interpretation de novo, the court held that the plain meaning of "protect" does, as the appellants urged, have a prospective and future-looking application.[123] However, in the environmental context, "protect" can also be retroactive and apply to "remediation of past harm," especially in order to better shield still unpolluted areas.[124] Therefore, the court affirmed the PSC's interpretation of "protect the environment" as allowing FPL to recover past environmental compliance costs.[125]

A Florida agency's interpretation regarding the very meaning of environmental protection was thus upheld under a de novo review by the highest court in the state—but more importantly, it was an arguably progressive meaning that included both past and future

119. Federico M. Pohls, *The Demise of Agency Deference in Florida Has Produced Mixed Results Regarding Separation of Powers and Due Process*, 48 NOVA L. REV. 120, 131 (2023).

120. 269 So. 3d 498, 506 (Fla. 2019).

121. *Id.* at 499.

122. Fla. Stat. § 366.8255(1)(c) (2018).

123. *Citizens*, 269 So. 3d at 504.

124. *Id.*

125. *Id.* at 505.

harm prevention and cost recovery. The court even acknowledged that, as opposed to most contexts where harm has future impact only, environmental harm is such that can necessitate recovery costs for past injury to best protect nature moving forward.

From *Citizens* can be gleaned three important lessons for looking to the future of judicial review of statutory interpretation at the federal level post-*Chevron*. One, courts can (and should) be trusted with interpreting environmental statutes and understanding when the environmental context requires at least some special consideration. The Florida Supreme Court could have chosen to stop at the dictionary definition of "protect" as meaning "prevention of future harm," but it did not. Instead, the court discussed how pollutants and other contaminants expand the meaning of "protect the environment" to include remedial damage. Second, the court clearly did not need to defer to the agency's interpretation in order to rule as it did. Citing the recent amendment before launching into its own statutory interpretation discussion,[126] the court's analysis did not hinge on whether the agency's understanding was permissible, reasonable, or clearly erroneous—and one can imagine a federal court similarly considering an EPA interpretation with the same independent eye. Third, after *Citizens* Florida (a state with typically more conservative ideologies and laws) recognizes an environmentally friendly understanding of an important statutory authority that may encourage other states as well as federal courts to follow suit, but which may alleviate the concern that environmental protections can never be affirmed or gained following the *Loper Bright* decision.

Finally, to assume that environmental agencies require a deferential standard of judicial review to be upheld discounts both the agency and the bench; an executive interpretation upheld without the mandate of agency-friendly deference is arguably a stronger indication of the propriety of that interpretation.[127]

V. BACK FROM THE DEAD? A BRIEF EXAMINATION OF THE "ZOMBIE *CHEVRON*" CONCERN AT THE FLORIDA AND FEDERAL LEVEL

The final component to discuss in comparing Florida post-amendment to the potential federal administrative state post-*Chevron* is a concept that has been coined "zombie *Chevron*," a term derived from Justice Gorsuch's concurrence in *Kisor v. Wilkie*.[128]

126. *Id.* at 504.

127. *See generally VeggieTales: A Snoodle's Tale* (Warner Home Video May 18, 2004) ("A gift that's demanded is no gift at all.").

128. 139 S.Ct. 2400, 2425 (U.S. 2019) ("So the [*Auer*] doctrine emerges maimed and enfeebled—in truth, zombified."); *see* Cass R. Sunstein, *supra* note 19, at 570.

Before *Loper Bright*, the general concern of zombie *Chevron* at the federal level seemed to be that the Court would strike down *Chevron* while keeping a version of agency deference that would function as if the doctrine is back from the dead, or that lower courts might continue to apply a *Chevron*-like deferential standard. This particular fear has also been expressed within Florida jurisprudence after the amendment's passage,[129] and an analysis at the state level might help shed light.

In discussing a zombie *Chevron* issue as it relates to Florida caselaw, at least two articles analyze the 2020 opinion from Florida's Second DCA, *Department of Highway Safety and Motor Vehicles (DHSMV) v. Chakrin*.[130] Decided after the state's amendment took effect, the Second DCA held in *Chakrin* that the lower court had departed from the essential requirements of law and thus quashed the court's reversal of DHSMV's decision.[131]

This case involved DHSMV's interpretation of section 322.271(4)(a) of the Florida Statutes—specifically the phrase "drug-free," which the agency understood to include alcohol consumption.[132] Under this interpretation, the agency had refused to reinstate a citizen's driving license under the statute because he had admitted to drinking a beer, which the agency found violated the requirement that the citizen remain drug-free for five years before the reinstatement hearing.[133] Based on the recent amendment prohibiting deference to agencies, the lower court did not consider prior caselaw but instead held that chapter 322 and specifically section 322.271(4) did not explicitly include "alcohol," subsequently striking down DHSMV's interpretation and resultant action.[134] The Second DCA in turn found that the court had committed two errors: "fail[ing] to apply controlling case law of this court that was directly relevant . . . and . . . fail[ing] to apply the unambiguous language of section 322.271(4)."[135]

Regarding prior precedent, the Second DCA noted that the lower court seemingly understood the recent amendment as "removing the circuit court's duty to follow any case law that interpreted the statute at the time when the agency-deference rule was in effect"; the court repudiated this interpretation and stated that not only is that assertion absent from the amendment, but the rule remains that lower

129. *See, e.g.*, Federico M. Pohls, *supra* note 119, at 143; *Florida's Zombie* Chevron *Problem*, FUERST ITTLEMAN DAVID & JOSEPH (Oct. 30, 2020), https://fidjlaw.com/floridas-zombie-chevron-problem/.

130. 304 So. 3d 822 (Fla. 2d DCA 2020).

131. *Id.* at 829.

132. *Id.* at 824-25.

133. *Id.*; *see also* Fla. Stat. § 322.271(4)(a)3 (2018). ("[petitioner must have] been drug-free for at least 5 years prior to the hearing").

134. *Chakrin*, 304 So. 3d at 828-29.

135. *Id.* at 829.

courts must follow higher court precedent until it is overturned.[136] The Second DCA focused on its prior ruling in *DHSMV v. Abbey*, which it said the lower court should not have ignored in its analysis since *Abbey* remained higher court precedent notwithstanding the amendment.[137] In its discussion, the Second DCA noted that *Abbey* was not decided solely on the grounds of pre-existing agency deference; rather, the *Abbey* court ultimately found through its analysis of the same statute that DHSMV's interpretation of drug-free as including alcohol was not simply *a* permissible reading, but that "in view of related statutes and legislative intent, it was the *only* reasonable interpretation."[138] The Second DCA reiterated that this ruling was based on "reasons beyond mere deference to DHSMV interpretation."[139] For example, the *Abbey* court evaluated a similar and consistent past agency decision as well as legislative intent and policy.[140]

Further, the *Chakrin* court conducted its own statutory interpretation analysis, which it held the lower court did not sufficiently do even outside of the *Abbey* opinion; in doing so, the DCA upheld the interpretation of drug-free as including alcohol based on plain meaning and consideration of legislative intent.[141] The Second DCA finally stated that the circuit court should not have "substitute[d] its arbitrary conclusion that the dictionary definition it selected could not be used to reach the plain meaning of the term simply because it was a potentially broad one."[142]

One article discussing zombie *Chevron* at the state level concludes that *Chevron*-era caselaw after *Chakrin* thus "remains a jurisprudential revenant" in Florida.[143] But based upon the Second DCA's actual ruling in *Chakrin*, it seems more likely that this is indeed a "touch of hyperbole."[144] Calling this an example of zombie *Chevron* glosses over the basis of the actual holding in both *Abbey* and *Chakrin*. As demonstrated, the Second DCA in *Chakrin* did not reprimand the lower court for a failure to defer to the agency's interpretation, but rather for a refusal to follow prior binding precedent. And that prior precedent was explained by the court as not solely a product of *Chevron*-esque deference, but rather of a thorough independent review

136. *Id.*

137. *Id.* at 831.

138. *Id.* (emphasis in original).

139. *Id.* at 832.

140. Dep't of Highway Safety and Motor Vehicles v. Abbey, 745 So. 2d 1024, 1025 (Fla. 2nd DCA 1999).

141. *Chakrin*, 304 So. 3d at 833.

142. *Id.* at 833-34.

143. *Florida's Zombie* Chevron *Problem*, *supra* note 129.

144. Federico M. Pohls, *supra* note 119, at 144 ("That *Chakrin* represents a 'zombie *Chevron*' problem may be a touch of hyperbole, considering the [DCA] made a careful reading of *Department of Highway Safety & Motor Vehicles v. Abbey* to conclude that agency deference was not the sole legal standard that informed the [DCA's] ruling in that case.").

of the statute's meaning and legislative intent. Moreover, *Chakrin* was ultimately decided not through the court's deferring to the DHSMV's interpretation, but through the court's looking to its own prior holding in *Abbey* as well as a fresh statutory analysis.

Zombie *Chevron* implies that courts continue to apply a disallowed deferential standard or that, like the argument here, courts blindly follow past precedent that was decided based on a deferential standard. If that were truly happening here, then this aspect of the zombie *Chevron* concern would be a valid one—but that is not what really happened. *Abbey* was not decided on a *Chevron* Step Two basis; the court did not defer to the agency because its interpretation of "drug-free" including alcohol was a permissible construction. The court upheld the interpretation because "drug-free" in that statute's context could *only* be understood to include alcohol, given legislative intent, surrounding statutory text, and plain meaning. Neither was *Chakrin* decided through veiled deference to the agency, but rather based upon the DCA's fresh interpretive analysis and consideration of its own caselaw—both of which are typical and expected attributes of judicial opinions. The argument that *Chakrin* represents a reanimated agency deference standard in Florida after the 2018 amendment does not have much life to it.

As for the federal level, author Cass R. Sunstein wrote in 2021 that if the Supreme Court ultimately chose to "discipline and constrain" then-current *Chevron* doctrine, then what was blasted as a frightening undead deference could actually represent a "reasonable path forward."[145] Even before the *Loper Bright* opinion, it appeared unlikely that the Court would elect to retain *Chevron* in a limited form like this, but Sunstein's point is well taken. Considering it and the above deeper analysis of *Chakrin*, it seems probable that, just as in Florida, the fear of a federal zombie *Chevron* will simply remain a horror story that does not come to fruition.

CONCLUSION

Just as Stephen King's Pennywise returns to haunt the children of Derry, Maine, every twenty-seven years,[146] a new U.S. Supreme Court decision changing the landscape of agency deference every forty years may prove haunting to administrative law practitioners, theorists, and professors (and certainly students), as well as citizens who are impacted by and interested in agency regulations. The latest go-around in 2024 is no different, as the well-known *Chevron* doctrine was formally overruled by the Court's *Loper Bright* decision. Many praise the death of *Chevron*, while many others have grieved it.

145. Cass R. Sunstein, *supra* note 19, at 583.

146. *See* STEPHEN KING, IT (1986).

As mentioned in Part I, one esteemed legal author opined that *Chevron*'s reversal would lead to a "large shock to the legal system."[147] In the absence of evidence to the contrary, this view is not unreasonable. But, as this paper has demonstrated, such contrary evidence *does* exist within Florida's caselaw since a voter-approved constitutional amendment prohibiting agency deference took effect. Through analyzing statistics, drawing various comparisons between Florida and the federal level (including the respective histories of agency deference standards and zombie *Chevron* concern), and discussing how Florida can very well represent a predictive analogy for what happens federally post-*Chevron*, this paper demonstrates that the demise of *Chevron*—while significant jurisprudentially—will very likely not upheave the federal administrative state.

For all the reasons discussed throughout this paper, there is good reason to believe that the 2024 version of the Deference Curse will not be as novel as the 1944 and 1984 renditions. The death of *Chevron* certainly will not kill the federal administrative state, nor is it a foregone conclusion that environmental regulations will all be struck down and protections all lost. *Loper Bright* may well deeply impact how the administrative state is perceived by professionals and the public, which is understandable given that for the last forty years, the highly deferential *Chevron* has been the known and oft debated standard. But beyond courts abandoning the two-step dance and reviewing agency interpretations according to the Court's mandate that judges "exercise their independent judgment" in *Loper Bright*[148] (and authors rewriting administrative law textbooks), all signs seem to point instead towards a more muted change in course. Florida's own experience, brought about by a specific and complete constitutional prohibition, demonstrates that agencies' statutory interpretations can still be upheld and affirmed without *Chevron*-like deference—even in the environmental context that is understandably of great importance to many citizens and professionals.

Given this paper's discussion, Florida likely provides good evidence that the death of *Chevron* will not prove as momentous as many fear for agencies and their statutory interpretations, and that the outlook of administrative law and environmental policy may not nearly be so bleak as a quick online search might indicate. Though *Chevron*, and the known federal agency deference more generally, did not survive the U.S. Supreme Court's October 2023 term, the sky may not fall after all. Indeed, the Sunshine State rather seems to promise sunny skies for the federal administrative state after the Court's 2024 interment of *Chevron*.

147. Cass R. Sunstein, *supra* note 19, at 572.

148. *Loper Bright*, 603 U.S. at 412.