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## Stronger Than the Storm: Disaster Law in a Defiant Age

Alexander B. Lemann

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# Stronger Than the Storm: Disaster Law in a Defiant Age

*Alexander B. Lemann\**

## TABLE OF CONTENTS

Introduction .....	437
I. Advance and Retreat .....	445
II. The Impulse to Rebuild .....	457
A. Recovery as Revenge .....	458
1. Revenge in Tort Theory .....	458
2. Against Nature: Revenge in the Disaster Context .....	461
B. Recovery as Culture .....	467
C. Recovery as Resistance .....	474
D. Other Factors .....	479
III. Repair Without Rebuilding .....	484
A. Suing the Storm .....	485
B. Culture, Relocated .....	488
1. Resettlement .....	489
2. Memorials .....	492
C. Resistance, Redirected .....	496
Conclusion .....	497

## INTRODUCTION

On September 30, 2005, almost exactly a month after Hurricane Katrina made landfall, the mayor of New Orleans convened a group of

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civic leaders to begin the process of rebuilding the city.<sup>1</sup> The civic leaders, known as the Bring New Orleans Back Commission (“BNOB”), faced a staggering task: 80% of the city had been under a toxic soup of floodwater in the wake of the storm, and the Corps of Engineers had finished pumping it out only a week earlier.<sup>2</sup> The city government was in disarray. None of the major functions associated with urban life in modern America was operating normally.<sup>3</sup> Vast swaths of the city had no electricity or drinking water, and the police force was in shambles.<sup>4</sup> Order was being maintained by the National Guard, and with the city jail flooded, prisoners were being held in makeshift cages made of chain-link fences and razor wire built inside the city’s Amtrak station.<sup>5</sup> The bodies of those killed in the storm were still largely unaccounted for.<sup>6</sup>

Behind the immediate chaos, a broader question loomed: how should the city rebuild? In the months following the storm, a study conducted by the RAND Corporation at the request of the BNOB estimated that the parts of the city that had been under more than four feet of water would regain no more than 30% of their population within three years.<sup>7</sup> Foreseeing sparsely populated neighborhoods heavily sprinkled with abandoned, rotting houses, most experts believed that attempting to maintain the city’s original footprint with only a fraction of its population was a recipe for disaster.<sup>8</sup> Meanwhile, the intense devastation meted out on the city highlighted what appeared at the time to be an unavoidable truth: many of the city’s neighborhoods sat well below sea level and thus would never be truly safe.<sup>9</sup> The only way to keep New Orleanians out of harm’s way for the indefinite future, it seemed, was to move them to higher ground.

To address this issue, the BNOB called in a set of experts: a panel of urban planning professionals from around the country affiliated with the

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1. GARY RIVLIN, *KATRINA: AFTER THE FLOOD* 158 (2015).

2. *Id.* at 124–26.

3. *Id.* at 159–61.

4. *Id.* at 122.

5. *Id.*

6. *Id.* at 123, 126–27.

7. KEVIN MCCARTHY ET AL., RAND GULF STATES POL’Y INST., *THE REPOPULATION OF NEW ORLEANS AFTER HURRICANE KATRINA* 27 (2006), [http://www.rand.org/content/dam/rand/pubs/technical\\_reports/2006/RAND\\_TR369.pdf](http://www.rand.org/content/dam/rand/pubs/technical_reports/2006/RAND_TR369.pdf) [<https://perma.cc/P34P-M7J6>].

8. See Richard Campanella, *Delta Urbanism and New Orleans: After*, *PLACES* J. (Apr. 2010), <https://placesjournal.org/article/delta-urbanism-and-new-orleans-after/> [<https://perma.cc/U32Q-RM7B>].

9. Timothy M. Kusky, *Time to move to higher ground*, *BOS. GLOBE* (Sept. 25, 2005), [http://archive.boston.com/news/globe/editorial\\_opinion/oped/articles/2005/09/25/time\\_to\\_move\\_to\\_higher\\_ground/](http://archive.boston.com/news/globe/editorial_opinion/oped/articles/2005/09/25/time_to_move_to_higher_ground/) [<https://perma.cc/93GE-86X8>].

Urban Land Institute, whose members flew to New Orleans in November 2005 to conduct a “summit” and come up with a solution to the “footprint problem.”<sup>10</sup> After a few weeks of study and a handful of public meetings, the group released its preliminary findings: a set of the worst-flooded neighborhoods in New Orleans, the BNOB argued, should be abandoned and allowed to revert to “green space.”<sup>11</sup> These determinations eventually landed on the front page of the New Orleans Times-Picayune, accompanied by a large map depicting the neighborhoods slated for abandonment covered by opaque green circles.<sup>12</sup>

The “green dot map,” as it came to be known, triggered a political firestorm.<sup>13</sup> Displaced residents reacted with fury to the idea that they would be forbidden from returning to their homes and reconstructing their lives, and meetings held after the plan became public were jammed with people objecting forcefully to the idea of the city government preventing them from rebuilding.<sup>14</sup> Within a week, the mayor announced that he would oppose the plan’s call for a moratorium on building permits in the green dot neighborhoods.<sup>15</sup> The BNOB was unceremoniously disbanded,

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10. RIVLIN, *supra* note 1, at 168–69.

11. Frank Donze, *Don’t Write Us Off, Residents Warn: Urban Land Institute Report Takes a Beating*, TIMES-PICAYUNE, Nov. 29, 2005, at A1.

12. Frank Donze & Gordon Russell, *4 Months to Decide: Nagin Panel Says Hardest Hit Areas Must Prove Viability; City’s Footprint May Shrink; Full Buyouts Proposed for Those Forced to Move; New Housing to Be Developed in Vast Swaths of New Orleans’ Higher Ground*, TIMES-PICAYUNE, Jan. 11, 2006, at A1.

13. Richard Campanella, *A Katrina Lexicon: How We Talk About a Disaster So Monumental We Can’t Agree on What to Call It*, PLACES J. (July 2015), <https://doi.org/10.22269/150727> [hereinafter Campanella, *A Katrina Lexicon*] [<https://perma.cc/DG6S-HS9C>]; ROBERTA BRANDES GRATZ, *WE’RE STILL HERE YA BASTARDS: HOW THE PEOPLE OF NEW ORLEANS REBUILT THEIR CITY* 41 (2015) (noting that the green dot map was “explosive” and “galvanized a potent, citywide opposition”).

14. See Frank Donze, *Let Us Decide on Rebuilding, Residents Say: Don’t Stymie Neighborhoods, City Officials Told at Meetings*, TIMES-PICAYUNE, Jan. 15, 2006, at B1 [hereinafter Donze, *Let Us Decide*]; Gordon Russell & Frank Donze, *Rebuilding Proposal Gets Mixed Reception: Damaged Neighborhoods Must Prove Viability; Critics Vocal at Meeting, but Most Content to Watch and Wait*, TIMES-PICAYUNE, Jan. 12, 2006, at A1.

15. RIVLIN, *supra* note 1, at 217. The mayor explained that he was “a property-rights person” and that he believed that the people of New Orleans could “decide intelligently for themselves where they want to rebuild.” *Id.* He later insisted that the city could make no promises in terms of restoring services to the neighborhoods in question: “If you go in those areas, God bless you . . . We’ll try to provide you with support as best we can. But understand we’re concentrating city resources in the areas that are in the immediate recovery zone.” *Id.* at 239.

and all talk of retreat was off the table.<sup>16</sup> New Orleanians would be free to rebuild where they saw fit.

The utter failure of New Orleans's attempt to enforce retreat from its most vulnerable areas is best seen as the opening act in a drama that is likely to play out across the United States over the course of the next few decades. Although predicting the exact amount of sea level rise the world is likely to experience in any particular span of time is impossible, conservative estimates project roughly three feet of increase in sea level by 2100.<sup>17</sup> At least one recent study has suggested that seas could rise by several feet within the next 50 years.<sup>18</sup> The effects of a several-foot increase in sea levels are likely to be dramatic. One study estimated that a three foot increase in sea level would displace roughly 4.2 million Americans, and a six foot increase would displace 13.1 million Americans.<sup>19</sup> Indeed, the effects of inundation are already beginning to be felt. Routine tidal flooding is disrupting life in many coastal communities, closing streets, killing plants, polluting water supplies, and making roads impassable.<sup>20</sup> Inundation caused by rising sea levels is only one aspect of

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16. Richard Campanella, "Bring Your Own Chairs": *Civic Engagement in Postdiluviol New Orleans*, in *CIVIC ENGAGEMENT IN THE WAKE OF KATRINA* 23, 35 (Amy Koritz & George J. Sanchez eds., 2009) [hereinafter Campanella, "Bring Your Own Chairs"].

17. Justin Gillis, *Seas Are Rising at Fastest Rate in Last 28 Centuries*, N.Y. TIMES (Feb. 22, 2016), <http://www.nytimes.com/2016/02/23/science/sea-level-rise-global-warming-climate-change.html> [https://perma.cc/9Z7F-YZTP].

18. Justin Gillis, *Scientists Warn of Perilous Climate Shift Within Decades, Not Centuries*, N.Y. TIMES (Mar. 22, 2016), <http://www.nytimes.com/2016/03/23/science/global-warming-sea-level-carbon-dioxide-emissions.html> [https://perma.cc/2ERJ-JJPQ].

19. Tatiana Schlossberg, *Rising Sea Levels May Disrupt Lives of Millions*, *Study Says*, N.Y. TIMES (Mar. 14, 2016), <http://www.nytimes.com/2016/03/15/science/rising-sea-levels-global-warming-climate-change.html> (discussing Matthew E. Hauer et al., *Millions Projected to be at Risk from Sea-level Rise in the Continental United States*, 6 NATURE CLIMATE CHANGE 691 (2016)) [https://perma.cc/RWF4-ZFVM]. The study's authors concluded that coastal inundation could lead to a population shift comparable to the "Great Migration" of African-Americans out of the South in the 20th century. *Id.*

20. Gillis, *Seas Are Rising at Fastest Rate in Last 28 Centuries*, *supra* note 17 (noting that "increasingly routine" flooding is "making life miserable in places like Miami Beach; Charleston, S.C.; and Norfolk, Va., even on sunny days"); Justin Gillis, *Flooding of Coast, Caused by Global Warming, Has Already Begun*, N.Y. TIMES (Sept. 3, 2016), <http://www.nytimes.com/2016/09/04/science/flooding-of-coast-caused-by-global-warming-has-already-begun.html> [https://perma.cc/9MA3-5QEW].

the looming flooding problem: climate change is also projected to increase the severity of rain storms and hurricanes, worsening catastrophic flooding events in inland areas as well as on the coasts.<sup>21</sup>

The nation's ever-increasing flood risk has led to a chorus of calls for some form of retreat.<sup>22</sup> Observing that policies at all levels of government have for nearly a century encouraged coastal development in various ways, experts in planning, climate change, and disaster law have argued that government now needs to begin the process of moving people away from the areas most exposed to flood risk.<sup>23</sup> There are a range of legal mechanisms available to implement retreat, but for the most part they have

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21. U.S. GLOBAL CHANGE RES. PROGRAM, CLIMATE CHANGE IMPACTS IN THE UNITED STATES: THE THIRD NATIONAL CLIMATE ASSESSMENT 9, 37, 40 (Jerry M. Melillo, Terese Richmond & Gary W. Yohe eds., 2014), [nca2014.globalchange.gov](http://nca2014.globalchange.gov) [<https://perma.cc/G2HC-GMTQ>]. This problem was vividly illustrated in August 2016, when rainfall in southern Louisiana caused flooding that killed 13 people and displaced tens of thousands. The event was the eighth since May 2015 involving a quantity of rainfall statistically rare enough to have only a 0.2 percent chance of occurring in any given year (also known as a 500-year flood). Jonah Engel Bromwich, *Flooding in the South Looks a Lot Like Climate Change*, N.Y. TIMES (Aug. 16, 2016), <http://www.nytimes.com/2016/08/17/us/climate-change-louisiana.html> [<https://perma.cc/7UFK-BF4R>].

22. See, e.g., Robert R.M. Verchick & Lynsey R. Johnson, *When Retreat is the Best Option: Flood Insurance After Biggert-Waters and Other Climate Change Puzzles*, 47 J. MARSHALL L. REV. 695, 696 (2014); ANNE SIDERS, COLUM. LAW SCH. CTR. FOR CLIMATE CHANGE LAW, MANAGED COASTAL RETREAT: A LEGAL HANDBOOK ON SHIFTING DEVELOPMENT AWAY FROM VULNERABLE AREAS (Oct. 2013), [https://web.law.columbia.edu/sites/default/files/microsites/climate-change/files/Publications/Fellows/ManagedCoastalRetreat\\_FINAL\\_Oct%2030.pdf](https://web.law.columbia.edu/sites/default/files/microsites/climate-change/files/Publications/Fellows/ManagedCoastalRetreat_FINAL_Oct%2030.pdf) [<https://perma.cc/U53S-KVS9>]; Michael Kimmelman, *Going with the Flow*, N.Y. TIMES, Feb. 17, 2013, at AR1 (describing a proposal by Governor Cuomo to pay residents of flood-prone areas to relocate); J. Peter Byrne, *The Cathedral Engulfed: Sea-Level Rise, Property Rights, and Time*, 73 LA. L. REV. 69, 73 (2012); Lisa A. St. Amand, *Sea Level Rise and Coastal Wetlands: Opportunities for a Peaceful Migration*, 19 B.C. ENVTL. AFF. L. REV. 1, 3 (1991) (describing a strategy of “institutionalizing the presumption that humanly-constructed structures will have to give way to migrating wetlands as sea level rises”); N. Y. STATE SEA LEVEL RISE TASK FORCE, REPORT TO THE LEGISLATURE 60 (2010), [http://www.dec.ny.gov/docs/administration\\_pdf/slrffinalrep.pdf](http://www.dec.ny.gov/docs/administration_pdf/slrffinalrep.pdf) (calling for reducing “incentives that increase or perpetuate development in high-risk locations” and creating “incentives for sustainable adaptation planning,” particularly “adaptive transition of infrastructure and development over time”) [<https://perma.cc/6PKQ-AJWH>].

23. See *supra* note 22 and accompanying text.

failed to achieve any meaningful progress.<sup>24</sup> Indeed, the nation's coastal counties are still growing in population.<sup>25</sup> Perhaps in part because human perception of risk is never so keen as when risks have just been realized, calls for retreat from particular areas are often strongest in the immediate aftermath of disasters, when homes sit empty and the evidence of the risk is hard to ignore.<sup>26</sup> But as the example of New Orleans shows, the views of experts on the wisdom of retreat and the views of the people who live in risky locations often diverge, particularly after a storm.<sup>27</sup> The consensus view in the scholarly and scientific communities on the need to retreat from flood-prone areas thus runs up against a problematic obstacle: nobody wants to leave.<sup>28</sup>

In fact, flood victims' reactions to disasters are often characterized by an intense desire to rebuild that is expressed in heated, adversarial terms.<sup>29</sup>

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24. See Verchick & Johnson, *supra* note 22, at 695; Peter Byrne & Jessica Grannis, *Coastal Retreat Measures*, in *THE LAW OF ADAPTATION TO CLIMATE CHANGE* 267, 268 (Michael B. Gerard & Katrina Fischer Kuhn eds., 2012); Lisa Grow Sun, *Smart Growth in Dumb Places: Sustainability, Disaster, and the Future of the American City*, 2011 B.Y.U. L. REV. 2157, 2161 (2011).

25. See Hauer et al., *supra* note 19, at 691; see also Dan Frosch & Cameron McWhirter, *Houston's Rapid Growth, Heavy Rains, Heighten Flood Risk*, WALL ST. J. (May 19, 2016), <https://www.wsj.com/articles/houstons-rapid-growth-heavy-rains-heighten-flood-risk-1463680866> (noting that “[m]any cities in the South and along the Atlantic and Gulf coasts have grown faster than other parts of the country in recent decades and become much more prone to flooding” and that the Houston-Woodlands-Sugarland metropolitan area was the fastest growing in the country between 2010 and 2015) [<https://perma.cc/7PSR-NQYD>]. In addition to simply putting more people in flood-prone areas, population growth makes flooding worse, as land that is paved over is less able to absorb water. *Id.* (“[W]hen heavy downpours hit, the rain has no place to drain . . . . In the last 15 years, the amount of impervious surface—mostly pavement—has grown 25% in Harris county, which includes Houston . . . .”).

26. See, e.g., Kusky, *supra* note 9.

27. Compare *id.* (discussing the need to potentially relocate in the aftermath of Hurricane Katrina), with Donze, *Let Us Decide*, *supra* note 14 (discussing New Orleans residents' efforts to rebuild after Hurricane Katrina).

28. See Verchick & Johnson, *supra* note 22, at 695 (“We Americans are more interested in fortifying our castles or building them higher than in moving out of harm's way.”).

29. Although the focus of this Article is on flood risk, and especially hurricanes, the insights offered are to some extent generalizable to certain other natural disasters, particularly when the nature of the risks involved is tied to living in a certain area or in a certain manner. For instance, wildfires have become more common and more destructive in recent years, exacerbated, like floods, both by climate change and increasing settlement in certain high-risk areas. See, e.g., Max

In the wake of disasters, residents frequently respond not by treating their homes as sunk costs and dispassionately reevaluating their decision to live in flood-prone areas but by asserting, often angrily, that they will never “surrender,”<sup>30</sup> that “retreat is not an option,”<sup>31</sup> and that they are “stronger than the storm.”<sup>32</sup> This emotional response to disasters is one of the key obstacles standing in the way of the road to more resilient housing patterns, and yet it typically is ignored by the community of scholars who study disaster law and policy.<sup>33</sup>

Although there are a range of cultural, historical, geographical, and economic factors that affect the response to any individual storm, as well as factors that affect the response of any particular individual, the emotional drivers of rebuilding can be illuminated by a set of analogies. First, rebuilding can be an act of revenge. Tort theorists have seen in tort law a mechanism by which people seek revenge against those who have wronged them.<sup>34</sup> Similarly, rebuilding is revenge in that it represents a victory over the storm that destroyed one’s home. What this accomplishes

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A. Moritz & Scott Gabriel Knowles, *Coexisting with Fire*, 104 AM. SCIENTIST 220 (2016) (noting that problematic fire suppression policies are fostered by the fact that “the primary response is to *fight* fires rather than accept them as a recurring fact of life”).

30. Campanella, “*Bring Your Own Chairs*”, *supra* note 16, at 28 (showing a photograph of large banner hung over the entrance of popular, locally-owned barbershop).

31. Paul Mulshine, *Desert the Jersey Shore? Retreat is Not an Option*, STAR-LEDGER (Feb. 5, 2013, 8:24 AM), [http://blog.nj.com/njv\\_paul\\_mulshine/2013/02/desert\\_the\\_jersey\\_shore\\_retrea.html](http://blog.nj.com/njv_paul_mulshine/2013/02/desert_the_jersey_shore_retrea.html) [<https://perma.cc/Y322-JVV6>].

32. See New Jersey Going Strong, *New Jersey: Stronger than the Storm TV Commercial*, YOUTUBE (May 16, 2013), <https://www.youtube.com/watch?v=QaHQNSGIfTs> [<https://perma.cc/7AHN-V5KE>].

33. To be sure, scholars have noted the difficulty of imposing retreat in the wake of disasters and have offered a handful of explanations for this phenomenon and policy recommendations aimed at addressing it. See, e.g., Byrne & Grannis, *supra* note 24, at 270 (“Regulators often lack the political will (or authority) to prevent redevelopment, especially after a major disaster . . .”). The issue, however, has not been addressed in any real depth.

34. See, e.g., John C. P. Goldberg, *The Constitutional Status of Tort Law: Due Process and the Right to a Law for the Redress of Wrongs*, 115 YALE L.J. 524, 602 (2005) (“Redress through law, as Locke and Blackstone understood, is a substitute for vengeance.”); Scott Hershovitz, *Tort as a Substitute for Revenge*, in PHILOSOPHICAL FOUNDATIONS OF THE LAW OF TORTS 86, 87 n.11 (John Oberdiek ed., 2014) (“[A]n age-old purpose of the law of torts is to provide a substitute for violent retaliation against wrongful injury.” (quoting *Mathias v. Accor Economy Lodging, Inc.*, 347 F.3d 672, 677 (7th Cir. 2003) (Posner, J.))); Emily Sherwin, *Compensation and Revenge*, 40 SAN DIEGO L. REV. 1387, 1397 (2003).



is not retribution—inflicting pain on someone who has pained you—but expression, a performance in support of a message, a reclaiming of both material losses and normative status.

Second, rebuilding is culture. Although traditional regulatory efforts to enforce retreat are premised on a dichotomy between rational and irrational responses to risk, there is a growing movement among scholars of risk perception to understand many decisions about risk as culturally expressive rather than rational or irrational.<sup>35</sup> Thus, when people choose to rebuild in an area they know is prone to floods, it is possible that in doing so they are expressing deep cultural commitments rather than behaving irrationally. Because floods impact communities, rebuilding also expresses a commitment to community that may well be a fundamental aspect of self-identity.

Third and finally, rebuilding can be an act of resistance. Flood risk is disproportionately concentrated in low-income, minority communities.<sup>36</sup> When floods occur, those same communities often lack the resources to avoid their worst effects, making many storms vivid illustrations of societal inequalities.<sup>37</sup> For many of its victims, Hurricane Katrina demonstrated that the government regarded them as not worthy of protection.<sup>38</sup> Although rebuilding in these cases might be a way of countering this message, a prohibition on rebuilding only makes that message stronger. By trying to enforce retreat in the wake of floods that have disparate impacts, governments appear to signal their desire to rid themselves of particular groups entirely. Rebuilding thus becomes an act of political resistance, a way of avoiding being erased and getting even with wealthier, drier communities.

Understanding the expressive aspects of recovery helps show why efforts to prevent rebuilding in the wake of storms have failed so spectacularly. If rebuilding contains elements of revenge, expresses cultural commitments about risk, helps reinforce a sense of identity, and provides a form of resistance against unequal treatment, then society may have more success using traditional regulatory tools to enforce retreat if it also makes meaningful efforts to address the emotional significance of rebuilding.

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35. See, e.g., Dan M. Kahan, *Two Conceptions of Emotion in Risk Regulation*, 156 U. PA. L. REV. 741, 745 (2008) [hereinafter Kahan, *Two Conceptions*]; Donald Braman & Dan M. Kahan, *Overcoming the Fear of Guns, the Fear of Gun Control, and the Fear of Cultural Politics: Constructing a Better Gun Debate*, 55 EMORY L.J. 569 (2006); Dan M. Kahan et al., *Fear of Democracy: A Cultural Evaluation of Sunstein on Risk*, 119 HARV. L. REV. 1071 (2006).

36. See, e.g., Craig E. Colten, *Basin Street Blues: Drainage and Environmental Equity in New Orleans, 1890-1930*, 28 J. OF HIST. GEOGRAPHY 237, 237 (2002).

37. See *infra* notes 190–195 and accompanying text.

38. See *infra* notes 200–204 and accompanying text.

This Article begins the process of thinking through what those measures might look like—the ways in which some form of repair might be offered to those who are prevented from pursuing their own private form of recovery. Part I discusses the problem of retreat from flood-prone areas and reviews the array of legal mechanisms that have been put forward as ways of encouraging it, with particular emphasis on the call to abandon certain areas in the wake of floods. Part II presents a set of analogies that help explain the intense desire to rebuild after floods. These observations lead to new insights about what rebuilding accomplishes and why forbidding it has proven to be so difficult. Part III considers some of the ways in which the desire to rebuild might be satisfied, at least partially, without moving people back into harm's way.

### I. ADVANCE AND RETREAT

Americans have spent much of the past century enthusiastically populating low-lying, flood-prone areas.<sup>39</sup> Federal policies have for decades contributed to this problem. First, large-scale engineering projects aimed at preventing flooding from rivers and oceans have attracted development to what would otherwise be uninhabitable land, land that often ends up flooded anyway.<sup>40</sup> In addition to attracting people to risky areas, flood control projects can also make flooding itself worse in a variety of complex ways. When the banks of rivers are armored with levees to prevent flooding, water that might naturally spread out and slow

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39. See Raymond J. Burby, *Hurricane Katrina and the Paradoxes of Government Disaster Policy: Bringing About Wise Governmental Decisions for Hazardous Areas*, 604 ANNALS OF THE AM. ACAD. OF POL. & SCI. 171, 173–76 (2006); Oliver A. Houck, *Rising Water: The National Flood Insurance Program and Louisiana*, 60 TUL. L. REV. 61, 62–63, 66 (1985).

40. New Orleans East, a vast suburban neighborhood that before Hurricane Katrina was the home of much of the city's black middle class, is a stark example. The area sits well below sea level and was an empty swamp until after Hurricane Betsy, which sparked the development of a comprehensive levee system surrounding New Orleans. By including the empty swamp that became New Orleans East within the levee system, the federal government was able to add the economic boon enjoyed by developers to its cost-benefit analysis, substantially reducing the apparent burden of the project. Forty years later, the neighborhood was under eight feet of water and 68 of its residents were dead. Sebastian N. Jonkman et al., *Loss of Life Caused by the Flooding of New Orleans After Hurricane Katrina: Analysis of the Relationship Between Flood Characteristics and Mortality*, 29 RISK ANALYSIS 676, 690 (2009). Notably, this figure includes only bodies located in the neighborhood, not residents of the neighborhood who died in facilities like hospitals and shelters. *Id.*

down in a floodplain is forced downriver, increasing the risk of floods in other areas.<sup>41</sup> Preventing seasonal flooding also deprives coastal deltas of their source of silt, which accelerates subsidence and erosion and thus increases the risk of flooding from the sea.<sup>42</sup> Coastal armoring projects also risk worsening the flooding they are built to prevent. Rigid concrete walls designed to prevent the erosion of sandy beaches have actually accelerated this process by changing the way in which waves pick up and deposit sand.<sup>43</sup>

Federally subsidized flood insurance has attracted people to flood-prone areas for half a century. Because flood risk is costly, difficult to measure, and highly correlated,<sup>44</sup> private insurers had essentially stopped issuing flood insurance by the middle of the Twentieth century. In response, the federal government created the National Flood Insurance Program (“NFIP”), which provides flood insurance and requires that participating communities enact building codes that help make flood-prone areas more resistant to flood damage.<sup>45</sup> The problem is that a substantial portion of policyholders have always been charged rates that are significantly below levels that reflect the true “actuarial” risk they face.<sup>46</sup> Artificially cheap flood insurance partially socializes the costs of flooding and signals to homeowners that the risk they face is lower than it actually is.

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41. Houck, *supra* note 39, at 81.

42. Robert Giegengack & Kenneth R. Foster, *Physical Constraints on Reconstructing New Orleans*, in *REBUILDING URBAN PLACES AFTER DISASTER: LESSONS FROM HURRICANE KATRINA* 13, 21–23, 26 (Eugenie L. Birch & Susan M. Wachter eds., 2006).

43. See ORRIN H. PILKEY & KATHARINE DIXON WHEELER, *THE CORPS AND THE SHORE* 1–5 (Island Press 1998).

44. “Correlation” in the context of insurance refers to the likelihood that a given risk will be realized by multiple policyholders at the same time. The chance of an individual dying of a heart attack is unrelated to the chance of his neighbor dying of a heart attack; the chance of a home flooding is highly correlated with the chance of its neighbor flooding at the same time. See James Ming Chen, *Correlation, Coverage, and Catastrophe: The Contours of Financial Preparedness for Disaster*, 26 *FORDHAM ENVTL L. REV.* 56, 65–66 (2014) (referring to correlation as “the most insidious factor undermining the financial integrity of private insurance for catastrophic risk”).

45. See The National Flood Insurance Act of 1969, 42 U.S.C. §§ 4001–4081.

46. As of 2010, the GAO estimated that about 22% of NFIP policyholders paid subsidized rates. U.S. GOV’T ACCOUNTABILITY OFF., *GAO-10-631T, NATIONAL FLOOD INSURANCE PROGRAM: CONTINUED ACTIONS NEEDED TO ADDRESS FINANCIAL AND OPERATIONAL ISSUES* 6 (2010).

The most dramatic way the government has socialized flood risk—and thereby encouraged people to live in flood-prone areas—is by allocating massive aid packages in the wake of disasters.<sup>47</sup> The Stafford Act allows state governors to request that the President issue a “major disaster” declaration, which allows the Federal Emergency Management Agency (“FEMA”) to provide federal assistance to state recovery efforts from the agency’s Disaster Relief Fund.<sup>48</sup> The Stafford Act’s definition of “major disaster” is extremely broad and has led to federal assistance for seemingly routine events like snowstorms.<sup>49</sup> There are a handful of modern reform proposals aimed at reducing the amount of federal disaster relief by changing things like the accounting mechanics of the Disaster Relief Fund or the formula used by FEMA to determine when a disaster overwhelms state resources such that federal assistance is necessary.<sup>50</sup> Such efforts, however, seem unlikely to meaningfully reduce congressional willingness to provide funding whenever disaster strikes.<sup>51</sup>

The result of these policies, and the general modern taste for coastal living,<sup>52</sup> is a dangerous concentration of people, homes, businesses, and

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47. Less than two weeks after Hurricane Katrina made landfall, Congress allocated \$51.8 billion in aid, by overwhelming margins. Peter Baker & Amy Goldstein, *Congress Approves \$51.8 Billion for Victims*, WASH. POST (Sept. 9, 2005), [https://www.washingtonpost.com/archive/politics/2005/09/09/congress-approves-518-billion-for-victims/25a2e6e2-4abf-4475-b617-e9e13895a105/?utm\\_term=.85d6c98b916b](https://www.washingtonpost.com/archive/politics/2005/09/09/congress-approves-518-billion-for-victims/25a2e6e2-4abf-4475-b617-e9e13895a105/?utm_term=.85d6c98b916b) [<https://perma.cc/6F8T-G9LG>]. That appropriation was merely the first in a series of allocations, which eventually amounted to about \$120 billion in aid. BRUCE R. LINDSAY, CONG. RESEARCH SERV., R43537, FEMA’S DISASTER RELIEF FUND: OVERVIEW AND SELECTED ISSUES 13 (2014). The total amount of federal funds allocated after Hurricane Sandy was roughly \$60 billion. Lindsay, *supra*, at 13.

48. LINDSAY, *supra* note 47, at 2–3.

49. *Id.* at 16.

50. *Id.* at 13–18.

51. The federal government has been remarkably solicitous of the needs of disaster victims for as long as there has been a federal government. See Michele L. Landis, *Let Me Next Time Be ‘Tried by Fire’: Disaster Relief and the Origins of the Welfare State 1789-1874*, 92 NW. U. L. REV. 967, 973–1034 (1998).

52. See Daniel D. Barnhizer, *Givings Recapture: Funding Public Acquisition of Private Property Interests on the Coasts*, 27 HARV. ENV’T L. REV. 295, 309–10 (2003) (describing various factors making coastal living appealing). Barnhizer also notes that a boom in coastal development from the 1970s to the 1990s coincided with a lull in hurricane activity, making coastal investments appear safer than they actually are. *Id.* at 310; see also Robert J. Meyer, *Why We Under-Prepare for Hazards*, in ON RISK AND DISASTER: LESSONS FROM HURRICANE KATRINA 153, 160 (Ronald J. Daniels, Donald F. Kettl & Howard Kunreuther eds., 2006) (noting that between 1887 and 1969, hurricanes hit South Florida at

infrastructure in risky, flood-prone areas. A 2013 study commissioned by FEMA estimated that increasingly intense rainstorms and sea level rise would lead to dramatic increases in the size of flood zones along coasts and rivers and in the average losses per flood insurance policy.<sup>53</sup> Estimates of the cost of this increased flooding are by necessity rough, but they are nonetheless alarming. A recent study estimated that at current rates of sea level rise, as much as \$507 billion worth of existing coastal property will be underwater by 2100.<sup>54</sup> Estimates based on more recent, more dire predictions of six feet of sea level rise over the next century put those figures much higher: \$882 billion, according to the real estate website Zillow, which based its figure on maps released by the National Oceanic and Atmospheric Administration.<sup>55</sup> At six feet of sea level rise, almost 300 American cities would lose at least half their homes, and 36 cities would be completely lost.<sup>56</sup>

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an average rate of one every three years, but between 1970 and 1992, the region was hit by only two and saw an explosion in coastal development).

53. Becky Hayat & Robert Moore, Natural Res. Def. Council, *Addressing Affordability and Long-Term Resiliency Through the National Flood Insurance Program*, 45 ENVT'L L. REP. 10338, 10339–40 (2015). High-risk flood areas along rivers would increase in size by 45% by 2100, leading to an increase in the number of policyholders along rivers of 80% over the same period. The equivalent figures for coastal areas are a 55% increase in flood zones, causing a 130% increase in policyholders. *Id.* The study also estimated a 90% increase in the average loss cost per policy. *Id.*

54. KATE GORDON ET AL., *RISKY BUSINESS: THE ECONOMIC RISKS OF CLIMATE CHANGE IN THE UNITED STATES* 4 (2014), [http://riskybusiness.org/site/assets/uploads/2015/09/RiskyBusiness\\_Report\\_WEB\\_09\\_08\\_14.pdf](http://riskybusiness.org/site/assets/uploads/2015/09/RiskyBusiness_Report_WEB_09_08_14.pdf) [<https://perma.cc/3XJ9-HWM7>]. The study also estimated that there is a five percent chance that \$701 billion worth of existing coastal property would be below mean sea levels by 2100. *Id.*

55. Krishna Rao, *Climate Change and Housing: Will a Rising Tide Sink all Homes?*, ZILLOW (Aug. 2, 2016), <http://www.zillow.com/research/climate-change-underwater-homes-12890/> [<https://perma.cc/58C5-SVE6>]. Notably, this figure does not include damage to public infrastructure or commercial real estate, nor does it factor in estimated increases in the population of coastal counties over the same period, which currently range from 50% to 144%. Rob Moore, *Five Climate-Smart Actions to Reform Flood Insurance*, NATURAL RES. DEF. COUNCIL (Aug. 9, 2016), <https://www.nrdc.org/experts/rob-moore/five-climate-smart-actions-reform-flood-insurance> (discussing Zillow report) [<https://perma.cc/8YKK-TJTZ>].

56. Rao, *supra* note 55. Notably, 17.8% of Boston's housing stock would be underwater, as would 24.8% of Honolulu's housing stock and 30.5% of Miami's housing stock. *Id.*

Although engineering projects might protect major population centers from inundation in some cases, they are not likely to present a comprehensive solution to the problem of sea level rise. For the reasons noted above, flood control projects often end up worsening exposure to flood risks in various ways.<sup>57</sup> In other cases, the protection they afford is simply too expensive<sup>58</sup> or involves protecting some people in exchange for increasing the risk faced by others, which is a moral calculus that is unappealing at best.<sup>59</sup> In other areas, most notably Miami, there is essentially nothing engineers can do.<sup>60</sup> In many cases, the inescapable conclusion is that the only way to avoid flooding is to move to higher ground.<sup>61</sup>

A range of legal mechanisms exist by which governments can foster retreat, none of which have been particularly successful. The most straightforward approach is for local governments to “downzone” flood-prone areas, proactively limiting new development on private parcels.<sup>62</sup> Governments can also create setbacks or buffers so that homes built on large lots must be situated away from floodplains. Exactions can also be

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57. See *supra* notes 43–56 and accompanying text.

58. See Jon Gertner, *Should the United States Save Tangier Island from Oblivion?*, N.Y. TIMES (July 6, 2016), [https://www.nytimes.com/2016/07/10/magazine/should-the-united-states-save-tangier-island-from-oblivion.html?mcu\\_bz=1](https://www.nytimes.com/2016/07/10/magazine/should-the-united-states-save-tangier-island-from-oblivion.html?mcu_bz=1) (noting that saving a small island in Chesapeake Bay from inundation would cost an estimated \$30 million to protect a population of 470 people) [<https://perma.cc/N4SP-V9F5?safari=1>].

59. Hurricane Sandy renewed discussion of whether New York City, like London, should construct a flood control barrier across the entrance to its harbor. Mireya Navarro, *Weighing Sea Barriers as Protection for New York*, N.Y. TIMES, Nov. 8, 2012, at A21. The project was estimated to cost between \$10 and \$17 billion and worsen flooding in areas outside its protection by as much as 20%. *Id.* The idea was explicitly rejected in Mayor Bloomberg’s comprehensive plan for making the city more resilient in the face of floods. See N.Y.C. SPECIAL INITIATIVE FOR REBUILDING AND RESILIENCY, A STRONGER, MORE RESILIENT NEW YORK 49 (June 11, 2013), <http://www.nyc.gov/html/sir/html/report/report.shtml> (discussing downsides of two possible harbor barrier proposals) [<https://perma.cc/94YF-253X>].

60. See Elizabeth Kolbert, *The Siege of Miami: As Temperatures Climb, So, Too, Will Sea Levels*, NEW YORKER (Dec. 21, 2015), <https://www.newyorker.com/magazine/2015/12/21/the-siege-of-miami> (describing the “intractable” geology of South Florida: “Building a dike on porous limestone is like putting a fence on top of a tunnel: it alters the route of travel, but not necessarily the amount.”) [<https://perma.cc/QX63-4CCM>].

61. See *supra* note 22 and accompanying text.

62. Byrne & Grannis, *supra* note 24, at 272–73.

used to secure easements or other commitments from developers in exchange for necessary permits.<sup>63</sup> These approaches can limit future development and prevent redevelopment when structures are damaged.<sup>64</sup>

Although such land use decisions and the zoning laws that enforce them are the responsibility of local governments, several federal statutes encourage local governments to take issues relating to climate change, sea level rise, and flooding into account. The Coastal Zone Management Act (“CZMA”) encourages states to develop coastal management programs and makes them eligible for federal funds if they do so.<sup>65</sup> States are encouraged, but not required, to take sea level rise into account in developing their plans.<sup>66</sup> Similarly, the Disaster Mitigation Act (“DMA”) encourages states to develop disaster mitigation plans, again in exchange for federal funds.<sup>67</sup>

The requirements of the NFIP are stronger and more properly characterized as substantive. To be eligible to participate in the program—and thus allow their residents to purchase flood insurance—local governments must pass zoning ordinances that mandate certain adaptations to mitigate flood risk.<sup>68</sup> Chief among these is the requirement that within what are known as “100-year flood zones,” new properties and properties that are substantially rebuilt after being flooded must be elevated above what FEMA determines is a statistically average flood depth—the “base flood elevation.”<sup>69</sup> In many cases, this requirement can mean elevating a

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63. *Id.* at 273.

64. *Id.* at 272–73.

65. 16 U.S.C. §§ 1451–1466 (2012); *see also* John R. Nolon, *Disaster Mitigation Through Land Use Strategies*, 37 ENV'T L. L. REP. 10681, 10686–87 (2007).

66. Byrne & Grannis, *supra* note 24, at 272.

67. Nolon, *supra* note 65, at 10683–85; Disaster Mitigation Act of 2000, Pub. Law 106-390, 114 Stat. 1552–1576 (amending chapter 68 of Title 42 of the United States Code). These requirements are largely procedural in the sense that the DMA does not actually require that states implement their disaster mitigation plans, only that they develop them. Byrne & Grannis, *supra* note 24, at 272; *see also* Alice Kaswan, *Climate Adaptation and Land Use Governance: The Vertical Axis*, 39 COLUM. J. ENV'T L. 390, 408–12 (2014). Kaswan concludes her survey of federal activity in this area by noting that federal laws “do not systematically require local or state climate assessment, planning, or adaptation measures” and that “[f]ederal programs often provide willing state and local governments with valuable information and piecemeal funding but do not provide a comprehensive or coordinated land-use response.” *Id.* at 412.

68. 42 U.S.C. §§ 4022, 4102(c); 44 C.F.R. § 59.22(a)(3) (2017).

69. This is a very broad-brush description of an extremely complex regulatory regime. For more detail, see Alexander B. Lemann, *Rolling Back the*

home as much as a dozen feet above the surrounding grade, and when the expense makes doing this impractical, these zoning ordinances can force people to abandon properties that have been substantially damaged by floods.<sup>70</sup> The NFIP also requires that homeowners in 100-year flood zones with a mortgage from a federally regulated bank carry flood insurance, and in some cases the premiums are expensive enough to force people to move or to dissuade people from buying flood-prone properties in the first place.<sup>71</sup>

Still, the NFIP also serves as a vivid illustration of how profoundly difficult it is to encourage retreat. When the program was reformed in 2012 to eliminate certain categories of artificially cheap premiums,<sup>72</sup> the resulting increase in prices sparked an immediate backlash, leading Congress to undo many of its reforms only 20 months after passing them.<sup>73</sup> Although there are certainly instances in which the NFIP's requirements effectively force people out of flood-prone properties, the idea that flood insurance should be "affordable" continues to enjoy broad support,<sup>74</sup> and

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*Tide: Toward an Individual Mandate for Flood Insurance*, 26 FORDHAM ENV'T L. REV. 166, 182–87 (2015).

70. See, e.g., Renee Peck, *Elevated Houses Making a Mark on Post-Katrina New Orleans Landscape*, TIMES-PICAYUNE (Aug. 23, 2008), [http://blog.nola.com/reneepeck/2008/08/elevated\\_house\\_making\\_a\\_mark\\_o.html](http://blog.nola.com/reneepeck/2008/08/elevated_house_making_a_mark_o.html) [https://perma.cc/2XSN-RJ4R]; Adam Nossiter, *Rebuilding New Orleans, One Appeal at a Time*, N.Y. TIMES (Feb. 5, 2006), <http://www.nytimes.com/2006/02/05/us/national/special/rebuilding-new-orleans-one-appeal-at-a-time.html> [https://perma.cc/V5V7-JJX9].

71. See Lemann, *supra* note 69, at 196–200, 212–13, 212 n.191, 213 n.192.

72. See Biggert-Waters Flood Insurance Reform Act of 2012, § 100205, Pub. L. No. 112-141, Title II, 126 Stat. 916 (2012); see also Lemann, *supra* note 69, at 192–96 (describing reforms enacted by Biggert-Waters).

73. See Homeowner Flood Insurance Affordability Act of 2014, Pub. L. No. 113-89, 128 Stat. 1020.

74. For example, a bill designed to encourage private insurers to issue flood insurance policies—in large part in the hope that such policies would be more affordable than those issued by the NFIP—passed the House in April 2016 by a vote of 419 to 0. See Flood Insurance Market Parity and Modernization Act, H.R. 2901, 114th Cong. (as passed by House of Representatives, Apr. 28, 2016); see also 162 CONG. REC. H1952 (2016) (statement by Rep. Ross, the bill's sponsor, emphasizing the need to provide "more affordable consumer options in the flood insurance marketplace"). The Senate never voted on the bill. S. 1679, 114th Cong. (2015). The bill was re-introduced in both the House and the Senate in 2017. See Flood Insurance Market Development Act of 2017, H.R. 1422, S. 563, 115th Cong. (2017). As this Article goes to press, the NFIP is again the focus of a reform effort, as it is due for reauthorization before the end of 2017. See Thomas Kaplan & Mary Williams Walsh, *White House Asks Congress for \$29 Billion in Hurricane*



using insurance premiums to encourage retreat in any large-scale way appears to be a political non-starter. Even the mechanisms the NFIP already employs often fall short. The program's reliance on the presence of a mortgage as the trigger for requiring flood insurance and on banks and financial regulators for enforcement means that in many areas surprisingly few people are required to maintain flood insurance, and even those who are required to have flood insurance often do not.<sup>75</sup>

Even when governments decide to use their zoning power to enforce retreat, they encounter a more serious obstacle: the Takings Clause of the United States Constitution.<sup>76</sup> In *Lucas v. South Carolina Coastal Council*, the United States Supreme Court held that South Carolina's Beachfront Management Act had effected a taking by preventing the plaintiff from constructing any permanent, habitable structure on two beachfront lots.<sup>77</sup> The state law had been enacted in 1988 in response to the problem of coastal erosion due to sea level rise, and it expressly sought to accomplish "a gradual retreat from the [beach sand dune] system over a forty-year period."<sup>78</sup> To that end, the law prohibited new construction on the seaward side of a line representing the most landward point of erosion in the previous 40 years and subjected areas on the landward side of that line to a set of regulations governing the size and setback of new buildings.<sup>79</sup> The Court held that depriving the plaintiff of all the economic value of his

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*Aid*, N.Y. TIMES (Oct. 4, 2017), <https://nyti.ms/2yIuaO6> [<https://perma.cc/D5G8-XJ8G>].

75. See Lemann, *supra* note 69, at 196–200 (describing shortcomings of NFIP's lender mandate). In Orleans Parish, which includes the urban areas of the city of New Orleans as well as the particularly low-lying and heavily flooded suburban area of New Orleans East, only 40% of homeowners had flood insurance before Hurricane Katrina. *Id.* at 199. A related problem is the program's reliance on the "100-year flood" as its statistical fulcrum. *Id.* at 180–81. Properties located in areas that have less than a one percent chance of flooding in any given year are not required to carry flood insurance. The recent flooding in Louisiana demonstrated the problem with this approach; much of the damage was in areas that had only a 0.2% or even 0.1% chance of flooding in any given year. See Edward P. Richards, *Why Was the Louisiana Flood of August 2016 So Severe?*, LSU LAW CTR. CLIMATE CHANGE LAW AND POL'Y PROJECT (Aug. 24, 2016), <https://sites.law.lsu.edu/coast/2016/08/why-was-the-louisiana-flood-of-august-2016-so-severe/> [<https://perma.cc/W453-ZDR3>].

76. U.S. CONST. amend. V.

77. *Lucas v. S. C. Coastal Council*, 505 U.S. 1003 (1992).

78. Byrne & Grannis, *supra* note 24, at 275. The state's first effort to regulate coastal development, which included the creation of the South Carolina Coastal Council, came in 1977 in response to the federal CZMA. *Lucas*, 505 U.S. at 1007.

79. Byrne & Grannis, *supra* note 24, at 275.

property constituted a taking and thus triggered the state's obligation to compensate him.<sup>80</sup> *Lucas* is broadly understood to mean that states cannot "baldly prohibit all new development in upland areas judged likely to be submerged by future sea-level rise without likely involving the payment of compensation."<sup>81</sup>

*Lucas* suggested one possible solution: a state law that denies a property owner all beneficial use of land does not constitute a taking if background principles of property and nuisance law would also bar use of the property.<sup>82</sup> One of those background principles is the public trust doctrine, which treats traditional public rights to land as inherent in any private title to it.<sup>83</sup> Many states recognize a right of public access to tidal areas, and in some cases this right extends to dry beaches above high-tide lines.<sup>84</sup> As sea levels rise, private land thus can become subject to the public trust without the state having to effect a taking.<sup>85</sup> Innovative forms of zoning like rolling easements allow building restrictions to move inland as oceans do.<sup>86</sup> Still, this approach allows governments to enforce retreat only after sea level rise has made it a *fait accompli*; prohibiting development in areas that will be inundated in the future, or are above sea level but subject to high risk of flooding during storms, still runs afoul of *Lucas*.<sup>87</sup>

The expense of having to pay compensation is not the only barrier to proactive retreat; it is simply unpopular,<sup>88</sup> and because of the decentralized and intensely local nature of land-use regulation,<sup>89</sup> meaningful proactive retreat would require an incredible exercise of foresight and self-abnegation. Many communities in particularly risky locations are extremely small and would have to essentially will themselves out of

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80. *Id.*

81. *Id.*; see also John R. Nolon, *Land Use and Climate Change: Lawyers Negotiating Above Regulation*, 78 BROOKLYN L. REV. 521, 548–58 (2013).

82. *Lucas*, 505 U.S. at 1029.

83. Byrne & Grannis, *supra* note 24, at 276.

84. *Id.*

85. *Id.*

86. *Id.* at 278–81.

87. *Id.*; *Lucas*, 505 U.S. at 1003.

88. See Barnhizer, *supra* note 52, at 349 ("Perhaps more than any other obstacle, it is the political opposition to meaningful restrictions on coastal land use that limits the effectiveness of attempts to initiate a retreat from coastal floodplains.").

89. See Marc R. Poirier, *Takings and Natural Hazards Policy: Public Choice on the Beachfront*, 46 RUTGERS L. REV. 243, 256, 268 (1993) (noting that beachfront property owners are "relatively concentrated in a geographic area [and] have a clear common interest in protecting [their] community and property" and thus will have an increased "ability to act effectively as an interest group").

existence to retreat from the flood risk they face. There are countless examples, but Tangier Island in Chesapeake Bay is a good one. After decades of slow population decline, the island is currently home to about 400 people, and it will be virtually underwater by the end of the century.<sup>90</sup> Still, rather than picking up and leaving, the town is lobbying the federal government to spend tens of millions of dollars constructing an elaborate system of fortifications that will protect it, at least temporarily.<sup>91</sup> Even state governments have a hard time putting the long-term interests of their populations ahead of the intense short-term interests of people who live on the coasts.<sup>92</sup>

The perennial unpopularity of even purely voluntary buyouts is another illustration of the problem. Voluntary public acquisition of flood-prone properties has the dual benefits of being politically palatable and achieving permanent removal of structures from floodplains, leading some commentators to hail it as the only floodplain management technique that offers a real chance of success.<sup>93</sup> Indeed, buyout efforts do have a history of achievement, most notably in the wake of the 1993 flooding on the Mississippi River, which led to the relocation of two towns.<sup>94</sup> Still, buyouts are costly in the short term,<sup>95</sup> and participation rates are often disappointing.<sup>96</sup> There are ways in which existing buyout programs could

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90. Gertner, *supra* note 58.

91. *See id.*

92. The experience of the North Carolina Coastal Resources Commission is a vivid cautionary tale. In 2010, the Commission's science panel studied the problem of sea level rise and concluded that the ocean along the State's coast could rise anywhere from 15 to 55 inches by 2100. It then recommended that the State adopt a figure of 39 inches for planning purposes, and the Commission drafted a policy ordering coastal counties to use that figure in evaluating private development and public infrastructure projects. The backlash was intense. Officials in the Outer Banks, which would be virtually erased by 39 inches of sea level rise, successfully lobbied state lawmakers to set aside the Commission's forecast and look 30 years into the future instead, estimating only eight inches of sea level rise during that time period. *See* Lori Montgomery, *On N.C.'s Outer Banks, Scary Climate-Change Predictions Prompt a Change of Forecast*, WASH. POST (June 24, 2014), [https://www.washingtonpost.com/business/economy/ncs-outer-banks-got-a-scary-forecast-about-climate-change-so/2014/06/24/0042cf96-f6f3-11e3-a3a5-42be35962a52\\_story.html](https://www.washingtonpost.com/business/economy/ncs-outer-banks-got-a-scary-forecast-about-climate-change-so/2014/06/24/0042cf96-f6f3-11e3-a3a5-42be35962a52_story.html) [<https://perma.cc/5VJN-SF2B>].

93. Barnhizer, *supra* note 52, at 350; Hayat & Moore, *supra* note 53, at 10344.

94. Barnhizer, *supra* note 52, at 351. For a discussion of these relocation efforts, see *infra* Part III.B.1.

95. Barnhizer, *supra* note 52, at 351.

96. Hayat & Moore, *supra* note 53, at 10343 ("Participation rates in buyout programs have historically been very low."); *NJ Eyes Nearly 700 Homes for Post-*

be strengthened and the process for participating in them streamlined that offer some hope of further success.<sup>97</sup> For example, several commentators have developed creative ways of making buyouts cheaper<sup>98</sup> or more appealing,<sup>99</sup> but these proposals involve paying far less than current market price for individuals' homes or making affordable flood insurance conditional on agreeing to a buyout in the event of a future flood. Unfortunately, the current political climate offers little reason to expect that such measures are likely to win broad support.<sup>100</sup>

Most commentators agree that none of the existing measures for encouraging retreat are up to the gargantuan task ahead.<sup>101</sup> As two scholars concluded, "retreat is at present mostly a legal theory."<sup>102</sup> Absent a concerted policy, retreat is likely to occur in a scattered, piecemeal fashion, as individual residents reach their own tipping points at which coastal living is no longer palatable. Atlantic City, one of the many places already experiencing the first signs of inundation,<sup>103</sup> provides a glimpse of what this future might look like. Buffeted by economic problems, the city is experiencing a "slow death" at the hands of sea level rise, featuring "sporadic super storms[,] routine nuisance flooding, crumbling infrastructure, and endemic poverty" as damaged homes are gradually

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*Sandy Buyouts*, ASSOCIATED PRESS (Apr. 22, 2014), [http://www.nj.com/news/index.ssf/2014/04/nj\\_eyes\\_nearly\\_700\\_homes\\_for\\_post-sandy\\_buyouts.html](http://www.nj.com/news/index.ssf/2014/04/nj_eyes_nearly_700_homes_for_post-sandy_buyouts.html) (noting that officials were not targeting worst-hit, shorefront communities because there are "very few willing sellers in these towns") [<https://perma.cc/LU4R-X8ZL>].

97. Hayat & Moore, *supra* note 53, at 10343.

98. Barnhizer argues for "givings recapture" in the calculation of just compensation for condemned property. This would entail reducing a property's market value by the value of the government subsidies the market value implicitly includes, such as subsidized flood insurance, flood control structures, and any other benefits "directly traceable to past government flood responses." See Barnhizer, *supra* note 52, at 354–72.

99. Hayat and Moore argue that the NFIP should offer homeowners reduced flood insurance rates in exchange for a commitment to relocate in the event of a serious flood. Hayat & Moore, *supra* note 53, at 10344–47.

100. See *supra* note 74 and accompanying text.

101. See, e.g., Hayat & Moore, *supra* note 53, at 10340 ("[The] NFIP, as currently implemented, is ill-prepared to deal with the reality that flood risk is increasing in response to climate change and that billions of dollars' worth of properties will become uninhabitable by the end of the century.").

102. Byrne & Grannis, *supra* note 24, at 268.

103. Michael Edison Hayden, *Atlantic City Gambles on Rising Seas*, NAT'L GEOGRAPHIC (May 4, 2016), <http://news.nationalgeographic.com/2016/05/160502-rising-seas-climate-change-atlantic-city/> [<https://perma.cc/5UFH-L992>].

abandoned, eroding the city's tax base and making life ever more untenable for those left behind.<sup>104</sup>

Indeed, retreat policies have so far been implemented almost exclusively reactively rather than proactively.<sup>105</sup> Thanks to a host of cognitive biases, the risk of flooding never appears so great as when a flood has just occurred.<sup>106</sup> The period after disasters also frequently strikes planners and officials as an opportune time to revisit things like patterns of settlement and infrastructure investments, as recreating the status quo requires an affirmative decision to invest.<sup>107</sup> The result is that, from a policy perspective, post-disaster retreat can appear to be the lowest-hanging fruit. Many experts have offered proposals that aim not to move people away from flood zones in tranquil times, but

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104. *Id.*; see also Virginia Eubanks, *My Drowning City Is a Harbinger of Climate Slums to Come: Federal Legislation Is Hastening the Collapse of Working Class Neighborhoods Near Water*, NATION (Aug. 29, 2016), <https://www.thenation.com/article/low-water-mark/> (describing effects of “climate redlining” in Troy, New York) [<https://perma.cc/L4E9-KHQ2>]; Ian Urbina, *Perils of Climate Change Could Swamp Coastal Real Estate*, N.Y. TIMES (Nov. 24, 2016), <http://nyti.ms/2gj7AT6> [<https://perma.cc/Z2ED-E78X>].

105. Byrne & Grannis, *supra* note 24, at 268–69.

106. The “availability heuristic” suggests that risks that are easily called to mind, perhaps because they have recently been realized, are often overestimated. See Meyer, *supra* note 52, at 158–59. This effect has been observed in studies of people's responses to natural disasters. Jerry M. Burger & Michele L. Palmer, *Changes in and Generalization of Unrealistic Optimism Following Experiences with Stressful Events: Reactions to the 1989 California Earthquake*, 18 PERSONALITY AND SOCIAL PSYCHOL. BULL. 39 (1992). Indeed, participation in the NFIP spikes after floods. Mark J. Browne & Robert E. Hoyt, *The Demand for Flood Insurance: Empirical Evidence*, 20 J. OF RISK AND UNCERTAINTY 291, 291 (2000). Another important cognitive bias affecting perception of disaster risk is the tendency to believe that the overall statistical likelihood of an event will be represented over a short sample of time, which leads to the underestimation of the risk of floods during quiet periods and overestimation during busy periods. Meyer, *supra* note 52, at 160.

107. See, e.g., Cite Editorial Committee, *A Path Forward to Rebuild Houston Post-Harvey*, HOUS. CHRON. (Sept. 1, 2017), <http://www.houstonchronicle.com/opinion/outlook/article/Cite-A-path-forward-to-rebuild-Houston-12168352.php> (calling for relocation of those who lived in Houston's flood zones) [<https://perma.cc/52M9-HU2N>]; Judith Browne-Dianis & Anita Sinha, *Exiling the Poor: The Clash of Redevelopment and Fair Housing in Post-Katrina New Orleans*, 51 HOW. L.J. 481 (2008) (describing decision to demolish New Orleans' public housing projects in the wake of Hurricane Katrina).

rather to put in place mechanisms that will force people to abandon their homes in the wake of floods.<sup>108</sup>

The trouble with this approach is vividly illustrated by the experience of New Orleans after Hurricane Katrina. As the city's dramatic failure to implement the retreat envisioned by the green dot map shows,<sup>109</sup> the period after a major flood is one freighted with emotion, and both individual victims and the officials who represent them have a tendency to treat returning and rebuilding as an act of deep significance. Although some victims may react to being flooded with resignation and resettle elsewhere, the dominant post-disaster tone is often one of defiance, anger, and determination to rebuild.<sup>110</sup> In these environments, proposals to mandate retreat are often not welcomed, to put it mildly.<sup>111</sup> The following Part offers a new way of understanding this reaction.

## II. THE IMPULSE TO REBUILD

What the dominant policy prescriptions ignore is what makes them so hard to implement: being flooded in a catastrophic event triggers a set of emotional responses that often lead to an intense, frequently adversarial desire to rebuild. These responses are complex and usually heavily dependent on facts unique to the particular area and storm at issue. Nevertheless, the impulse to rebuild can be understood at least in part as consisting of a set of sometimes overlapping reactions. First, rebuilding can be an act of revenge in roughly the way a tort suit can be an act of revenge. Second, rebuilding can be a form of culture, an expression of a commitment to a particular way of life and community. Third, rebuilding can be an act of resistance in that it defies and undoes the harm resulting from governmental failures to prevent flooding.

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108. See, e.g., Hayat & Moore, *supra* note 53, at 10344–47; Barnhizer, *supra* note 52, at 368; David A. Lewis, *The Relocation of Development from Coastal Hazards through Publicly Funded Acquisition Programs: Examples and Lessons from the Gulf Coast*, 5 SEA GRANT L. AND POL'Y J. 98, 100 (2012).

109. See *supra* notes 1–16 and accompanying text.

110. See, e.g., Donze, *Let Us Decide*, *supra* note 14; Coral Davenport & Campbell Robertson, *Resettling the First American 'Climate Refugees'*, N.Y. TIMES (May 2, 2016), <https://www.nytimes.com/2016/05/03/us/resettling-the-first-american-climate-refugees.html?mcubz=1> [<https://perma.cc/9WFT-GSMG>].

111. See *infra* notes 209–221

### A. *Recovery as Revenge*

Like a tort, a flood causes a disruption in a preexisting normative equilibrium, triggering a desire for correction, a need to get even. Getting even is not simply retribution—hurting one who has hurt you—but a performance that seeks to correct the way in which a wrong affects the normative position of its victim. Floods, however, are torts without tortfeasors, and this fact changes the way revenge is taken. Instead of forcing a tortfeasor to pay his victim, flood victims avenge themselves by rebuilding, often reflexively and in a way that is emotionally and rhetorically charged. Policies that ignore this aspect of rebuilding in favor of forced relocation set themselves up for failure. Just as the tort system provides a necessary avenue of recourse in a society that has banned violent retribution, the revenge analogy suggests that disaster victims should be provided with some avenue of recourse against the storms that have wronged them.

#### 1. *Revenge in Tort Theory*

Scholars have long detected in tort law strong glimmers of the concept of revenge. Indeed, tort is often treated as a substitute for revenge.<sup>112</sup> In his analysis of the mechanism by which tort law substitutes for revenge, Scott Hershovitz examines three possible versions of the idea. First, tort law might be a kind of bribe, paid by the government to induce people to forego the messy and unpleasant business of taking personal vengeance against those people who have wronged them.<sup>113</sup> A second version of the substitution of tort for revenge sees a tort suit as a kind of revenge in and of itself. On this account, tort damages are primarily a way of inflicting harm on a wrongdoer in the same way as an act of vengeance does.<sup>114</sup> A third possibility, one espoused by Hershovitz, is that both tort law and revenge are tools for accomplishing the same thing: corrective justice.<sup>115</sup>

In claiming that tort law is a substitute for revenge because both achieve corrective justice, Hershovitz advances a particular version of corrective justice, one that differs in significant ways from the classical

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112. *See supra* note 34.

113. Hershovitz, *supra* note 34, at 87 (noting that tort damages are sometimes seen as “a payoff to prevent private violence”).

114. *Id.* at 4; Sherwin, *supra* note 34, at 1387. For Sherwin, the damages available in tort law—even those not explicitly labeled “punitive”—frequently diverge from what is necessary to compensate the plaintiff and thus can be explained only as a way of “provid[ing] satisfaction to the victims of legal wrongs.” *Id.* at 1389.

115. Hershovitz, *supra* note 34, at 89.

Aristotelian model.<sup>116</sup> For Hershovitz, corrective justice is not, per Aristotle, about making plaintiffs “whole” by undoing wrongful transactions and thus returning them to the position they would have been in had the wrong not occurred.<sup>117</sup> Instead of the “make whole” metaphor, which he notes is a product of the mid-nineteenth century,<sup>118</sup> Hershovitz suggests a return to the older notion that tort damages offer the plaintiff “satisfaction,” with the “animating metaphor” of tort law being “getting even.”<sup>119</sup> Instead of attempting to restore a preexisting allocation of goods, getting even is about restoring an equality of status and social standing.<sup>120</sup>

Revenge is also a way of getting even. In revenge cultures, the focus was on impermissible behavior and what one party’s treatment of another said about their relative positions. As Hershovitz puts it, “you may do unto others as they do unto you.”<sup>121</sup> Revenge cultures thus did not permit just any act of retributive violence against a wrongdoer but rather a particular response carefully calibrated to be proportional to the wrong and allow the victim to get even.<sup>122</sup> Drawing on work by Bill Miller, Hershovitz relates some of the workings of the system of *lex talionis*<sup>123</sup> in medieval Iceland.<sup>124</sup> In that society, proportional violent retribution was a backstop designed to encourage the payment of compensation to the victim.<sup>125</sup> A “plaintiff” got even by demanding from a “tortfeasor” the amount of money the tortfeasor would be willing to pay to avoid having the same harm inflicted upon him.<sup>126</sup> If the parties could not agree on the price, they would resort to a

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116. *Id.* at 89–90.

117. Scott Hershovitz, *Corrective Justice for Civil Recourse Theorists*, 39 FLA. ST. U. L. REV. 109, 117 (2011). Hershovitz’s problem with this account is that it simply is too far afield from what is practically possible in the vast majority of cases. When plaintiffs have suffered any kind of emotional or physical harm, awards of money damages do not serve to return them to the status quo ante. In fact, they fall so far short of that goal that there must be a different sense in which they are doing corrective justice. *Id.* at 116–17.

118. *Id.* at 118 (citing John C.P. Goldberg, *Two Conceptions of Tort Damages: Fair v. Full Compensation*, 55 DEPAUL L. REV. 435, 447–62 (2006)).

119. *Id.*

120. Hershovitz, *supra* note 34, at 95.

121. *Id.*

122. Hershovitz, *supra* note 117, at 122–23.

123. *Lex Talionis*, BLACK’S LAW DICTIONARY (10th ed. 2014) (“The law of retaliation, under which punishment should be in kind—an eye for an eye, a tooth for a tooth, and so on—but no more”).

124. Hershovitz, *supra* note 117, at 122–23 (citing WILLIAM IAN MILLER, *EYE FOR AN EYE* 49–51 (2006)).

125. *Id.* at 123.

126. *Id.*



neutral third party, the “oddman,” who would render a decision, “prevent[ing] getting even from getting out of hand by selling both parties on a plausible conception of evenness.”<sup>127</sup>

Despite courts’ and commentators’ frequent invocation of the “making whole” language, the metaphor of getting even arguably fits more comfortably as a descriptive account of our modern tort system. Viewed in this light, there are two features of tort law that come into sharp relief. First, the adjudication of a tort case is a performance, and the degree to which tort suits offer justice is a function of whether the performance is successful.<sup>128</sup> Second, and relatedly, the success of the tort system in doing justice for those who have been wronged is measured by the messages it sends. For those scholars who emphasize the role of revenge in tort law, the wrongs with which tort concerns itself are not only, or even chiefly, about misallocation of goods but also about shifts in the status of the parties. A tort that is left unaddressed implies that the tortfeasor may permissibly treat his victim in a certain way, lowering the victim’s social standing in the community.<sup>129</sup> By finding the tortfeasor liable and awarding damages, society corrects that message, marking the tortfeasor’s treatment of his victim as impermissible and restoring the victim to his status as a person deserving of a certain standard of treatment.<sup>130</sup> Indeed,

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127. MILLER, *supra* note 124, at 9.

128. Hershovitz, *supra* note 117, at 125 (“Whether courts succeed in doing justice depends on whether people regard the remedies awarded as sufficient to render prevailing plaintiffs even.”). Revenge, too, was a performance, one that could be effective even when it did not result in the wrongdoer’s injury. In a duel, the parties often deliberately fired in such a way as to miss each other, an acknowledgement that the public act of each party being vulnerable to the other’s deadly force was enough to reestablish their equality, without either of them needing to die. See Harwell Wells, *The End of the Affair? Anti-Dueling Laws and Social Norms in Antebellum America*, 54 VAND. L. REV. 1805, 1809 n.113, 1824 n.156 (2001).

129. Hershovitz, *supra* note 34, at 94 (“[T]he threat is to your social standing, which is diminished if people think it was okay to treat you that way . . .”). Hershovitz here relies on Pamela Hieronymi, *Articulating an Uncompromising Forgiveness*, 62 PHILOSOPHY AND PHENOMENOLOGICAL RESEARCH 529, 546 (2001) (“I suggest that a past wrong against you, standing in your history without apology, atonement, retribution, punishment, restitution, condemnation, or anything else that might recognize it as a *wrong*, makes a claim. It says, in effect, that you can be treated this way, and that such treatment is acceptable.”).

130. Sherwin, *supra* note 34, at 1389 (“[T]he object of compensatory remedies is not simply to adjust the absolute position of the claimant, but also to adjust an outcome in which the relative positions of the claimant and the wrongdoer are deemed to be unfair.”); *id.* at 1397 (“The outcome of the remedy is not simply a

the link between tort law and revenge has led many scholars to see tort law as a necessary aspect of government in a society that has outlawed private acts of vengeance.<sup>131</sup>

## 2. *Against Nature: Revenge in the Disaster Context*

It may seem odd to speak of taking revenge against an unthinking, unfeeling meteorological phenomenon of limited duration, such as a hurricane. And in a basic sense it is of course true that victims cannot inflict harm on natural disasters in retribution for the harm the disasters have inflicted on them. There is nevertheless a sense in which the human response to natural disasters is characterized by a vehement emotional reaction that bears a strong resemblance to certain aspects of revenge. Hurricanes are like tortfeasors in that they inflict harm on victims in ways that are perceived as unjust. Like torts, these harms are about more than just the allocation of losses. They are also about status and equality and the particular messages that uncompensated losses send about the status of those people who bear them. Lacking an institution like tort law that provides an avenue of recourse against the storms that have wronged them, disaster victims, like tort victims in the days before the development of tort law, are left to take matters into their own hands.<sup>132</sup> This they do by rebuilding.

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correction of loss, but an adjustment in the comparative positions of the parties.”); John C.P. Goldberg & Benjamin C. Zipursky, *Accidents of the Great Society*, 64 MD. L. REV. 364, 369 (2005) (arguing that features of negligence law that can be seen as “remnants of primitive notions of vengeance” express values that “link up in deep ways to basic principles of liberty and democratic equality” and that by empowering individuals to seek redress from those who wrong them, tort law “affirms the notion that each of us is equal in owing and being owed various obligations by others”).

131. See Goldberg, *supra* note 34, at 541; Sherwin, *supra* note 34, at 1399; Roscoe Pound, *The End of Law as Developed in Legal Rules and Doctrines*, 27 HARV. L. REV. 195, 198–202 (1914).

132. Plaintiffs have made various attempts to hold more traditional entities responsible for the harms they have experienced in floods exacerbated by climate change. Property owners in Mississippi and Alaska have sued fossil fuel companies, seeking to hold them responsible for contributing to the harms of hurricanes and sea level rise, respectively, but both suits were dismissed. See *Comer v. Murphy Oil USA*, 607 F.3d 1049 (5th Cir. 2010) (reinstating district court decision dismissing case on standing and political question grounds); *Native Vill. of Kivalina v. ExxonMobil Corp.*, 696 F.3d 849 (9th Cir. 2012). It is possible that the legal system’s inability to assign blame for the harms of such events contributes to the sense that nature itself is the only appropriate target of victims’ ire.

The rhetoric of revenge is often pervasive in the wake of disasters. Public responses by elected officials, media, and victims frequently portray storms as “enemies” that “assault” and “attack” their victims, leaving in their wake devastation that is often compared to a “war zone.”<sup>133</sup> In New Orleans in the wake of Hurricane Katrina, it was not uncommon to see graffiti addressed to Hurricane Katrina itself, often referring to the storm as a “bitch” and pledging to return to the city, as if that would frustrate the storm.<sup>134</sup> Messages of defiance were displayed around the city: a popular, locally owned barbershop put a banner above its entrance reading “NO SURRENDER! OPEN.”<sup>135</sup> Survey data suggests that this sentiment was not limited to graffiti. Just over a year after Hurricane Katrina, the Kaiser Family Foundation conducted a door-to-door survey of more than 1,500 randomly selected people in various parts of New Orleans to solicit their views on the impacts of Hurricane Katrina and the rebuilding process.<sup>136</sup> Seventy-five percent of respondents said that low-lying areas of the city destroyed by Hurricane Katrina should be rebuilt,

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133. Justin Pidot, *Deconstructing Disaster*, 2013 B.Y.U. L. REV. 213, 221–25 (2013). Pidot quotes comments by Vermont Governor Peter Shumlin after Hurricane Irene—“I kind of felt like I was coming out of a war zone”—and New York City Mayor Michael Bloomberg after Hurricane Sandy—“To describe it as looking like pictures we have seen at the end of World War II is not overstating it.” *Id.* at 224. Lisa Grow Sun & RonNell Andersen Jones, *Disaggregating Disasters*, 60 U.C.L.A. L. REV. 884, 916 n.157 (2013) (noting remarks by General Russell Honore, commander of the federal military response to Hurricane Katrina, calling the “hurricane itself ‘an enemy that pulled a classic military maneuver, speeding toward land with overwhelming force.’”); Sarah E. Jenkins, *What Happens Next: Metaphor in Disaster Recovery Policy*, 2015 B.Y.U. L. REV. 151, 161–62 (2015) (noting Mississippi Governor Haley Barbour’s comparison of Hurricane Katrina’s destruction to destruction of Hiroshima and Louisiana Governor Kathleen Blanco’s analogy to the reconstruction of Europe after World War II in testimony before Congress).

134. See, e.g., James Johnson, *Aggregates Unseen: Imagining Post-Katrina New Orleans*, 10 PERSPECTIVES ON POLITICS 659, 664–65 (2012) (“Hey Katrina!! That’s all you got? You big sissy!!! We will be back!!!”); *id.* (“Katrina is a bitch”); GETTY IMAGES, <http://www.gettyimages.com/detail/video/new-orleans-resident-painted-this-katrina-you-bitch-we-news-footage/475166500> (last visited Nov. 12, 2017) (“Katrina you bitch we will survive.”) [<https://perma.cc/5Q7C-KTBN>]; WORD ON THE STREET, [https://wordsonthestreet.files.wordpress.com/2010/10/401242171\\_6a0f404796\\_b\\_d.jpg](https://wordsonthestreet.files.wordpress.com/2010/10/401242171_6a0f404796_b_d.jpg) (last visited Sept. 20, 2017) (“I survived Betsy but Katrina was a bitch.”) [<https://perma.cc/26G7-CD9N>].

135. Campanella, “*Bring Your Own Chairs*”, *supra* note 16, at 28.

136. KAISER FAMILY FOUND., GIVING VOICE TO THE PEOPLE OF NEW ORLEANS: THE POST-KATRINA BASELINE SURVEY (May 2007), <http://kff.org/medicaid/poll-finding/report-giving-voice-to-the-people-of/> [<https://perma.cc/Z3FH-F5C4>].

and 95% said that the region's levee system should be rebuilt stronger than it had been before.<sup>137</sup> Eighty-six percent of respondents said they were planning to remain in the area.<sup>138</sup>

Similar messages appeared after Hurricane Sandy, instructing the storm to “shove it”<sup>139</sup> and “rot in hell.”<sup>140</sup> Indeed, in the aftermath of Hurricane Sandy, the state of New Jersey commissioned a series of ads with the slogan “Stronger Than The Storm,” which featured shots of the Jersey shore in a state of placid normalcy, as well as citizens planting flags with the slogan “Stronger Than The Storm” into the sand on pristine beaches.<sup>141</sup> In a sentiment echoed along the coast, the mayor of Sea Bright, New Jersey, a small town on a barrier island that had seen its entire business district wiped out and three quarters of its population rendered homeless, immediately rejected any suggestion of retreat. “We’re not retreating,” she said: “[i]t is antithetical to the [New] Jersey mindset, and particularly to the Sea Bright mindset. We’re known for being strong, for being resilient, for not backing down.”<sup>142</sup>

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137. *Id.* at 5, 25 (asking whether respondents supported rebuilding the levee system to withstand a Category 5 hurricane; it had previously been designed to withstand only a Category 3 storm).

138. *Id.*

139. Jennifer H. Cunningham et al., *Hurricane Sandy Starts to Hit: First Outages as Rain Arrives and Wind Picks Up in New York City, Streets are Empty After Subway Closure*, N.Y. DAILY NEWS (Oct. 29, 2012, 5:29 PM), <http://www.nydailynews.com/new-york/gov-mta-suspend-subway-bus-rail-service-article-1.1194081> (photograph depicting woman painting graffiti onto her boarded-up house: “Shove It Sandy”) [<https://perma.cc/QRY4-K64W?safari=1>].

140. Ned Berke, *Blame Obama for Sandy? Someone Seems to Think So*, SHEEPSHEAD BITES (Nov. 5, 2012), <http://www.sheepsheadbites.com/2012/11/blame-obama-for-sandy-someone-seems-to-think-so/> (showing photograph depicting graffiti on destroyed wall that said “Rot in Hell Sandy” alongside a drawing of a hand with middle finger extended) [<https://perma.cc/9554-KK3D>].

141. *See New Jersey: Stronger than the Storm TV Commercial*, *supra* note 32. An official comment accompanying the State’s official YouTube video declares that “[w]e’re resilient, we’re Jersey-tough, we are Stronger than the Storm.” *Id.* The ad campaign caused a minor political scandal, as it was funded with federal relief money and yet prominently featured Governor Chris Christie, who at the time was running for reelection. *See Alec MacGillis, The Chris Christie Scandal Just Got Worse*, NEW REPUBLIC (Mar. 18, 2014), <https://newrepublic.com/article/117066/christies-stronger-storm-jersey-shore-post-sandy-ad-cover> [<https://perma.cc/TM6Z-UFYY>].

142. *Should Worst-Flooded Areas Be Left after Sandy?*, ASSOCIATED PRESS (Jan. 21, 2013), [http://www.cleveland.com/business/index.ssf/2013/01/should\\_worst-flooded\\_areas\\_be.html](http://www.cleveland.com/business/index.ssf/2013/01/should_worst-flooded_areas_be.html) [<https://perma.cc/PYX6-BTJN>].

For many people, the rhetoric itself is the problem. On this view, treating “nature and humans [as] involved in a conflict in which nature is an enemy that must be resisted”<sup>143</sup> leads to “a ‘knee-jerk reaction . . . to rebuild the same roads and bridges that existed before and bigger, more expensive homes.”<sup>144</sup> As in cases of war or terrorism, failing to rebuild after disasters thus is rhetorically framed as a failure, a defeat. This makes moving out of harm’s way impossible: “The rhetoric of conflict forecloses, or at least renders more difficult, decisions to rebuild in more sensible, safer locations because, in the narrative of armed conflict, such [a] response represents capitulation and retreat.”<sup>145</sup> The link between the rhetoric and the desire to rebuild seems obvious enough; if disasters are the enemy and the enemy wants to destroy people, then it is only natural that victims want to resist the enemy by foiling its plans. For those focused on rhetoric, the solution is simple: change the rhetoric.<sup>146</sup>

Adopting this kind of adversarial personification in the face of hardship feels beguilingly natural, and yet it is worth asking *why* this way of thinking and speaking is so common. Why does it occur to victims to

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143. Pidot, *supra* note 133, at 230; Sun & Jones, *supra* note 133, at 915 (“[W]ar rhetoric today plays an increasingly prominent role in the narrative of both natural and technological disaster response.”); *see also* Frederick L. Bates & Walter G. Peacock, *Disaster and Social Change*, in *SOCIOLOGY OF DISASTERS: CONTRIBUTION OF SOCIOLOGY TO DISASTER RESEARCH* 291, 291 (Russell R. Dynes et al. eds., 1987).

144. Pidot, *supra* note 133, at 234.

145. *Id.* at 235; *see also* Sun & Jones, *supra* note 133, at 925 n.210 (“[T]reating disasters as a war against nature . . . may encourage society to focus on disaster mitigation measures that attempt to control or subjugate nature rather than those measures that respect natural forces and try to limit population growth in the most dangerous locales.”); Byrne & Grannis, *supra* note 24, at 268 (“Because the negative connotations associated with the term ‘retreat’ might make implementing these types of policies politically difficult, policymakers may also want to consider relabeling it.”).

146. *See* Jenkins, *supra* note 133, at 151, 176 (arguing for a shift away from the metaphor of war and conflict and towards a metaphor of resilience in post-disaster recovery); Pidot, *supra* note 133, at 256 (“Political leaders should also consider the language they use in discussing disaster . . . . Emphasizing the human role in creating circumstances in which natural events can lead to devastation may facilitate more rational development policy.”); Sun & Jones, *supra* note 133, at 948 (“Now is the time to use this new awareness of the conflation of war and disaster to critically assess the tone and language used to convey disaster information and policy . . . .”); Byrne & Grannis, *supra* note 24, at 268 (“Because the negative connotations associated with the term ‘retreat’ might make implementing these types of policies politically difficult, policymakers may also want to consider relabeling it.”).

refer to weather patterns as autonomous enemies, express a desire to harm them, or talk as if rebuilding our homes will represent a kind of victory over them? One part of the explanation may simply be that anger is a natural reaction to traumatic events, and when trauma is caused by disasters, victims' sense of anger finds its outlet in the unthinking forces of nature.<sup>147</sup> Another part of the answer lies in the difference between revenge as it is typically understood and revenge as a form of corrective justice. The point is not so much to inflict pain, or to shift losses, as it is to correct the message sent by the wrongful act about the relative status of the parties. When people treat hurricanes as enemies and vow to beat them, they are not trying to harm the hurricane so much as they are trying to repair the harm they have visited upon the victims.<sup>148</sup>

Therefore, correcting the harm often involves more than just recreating a set of physical goods that existed before the storm. Just as tort suits can serve to correct the messages sent by the wrongs that prompt them, the act of rebuilding one's home helps correct a message sent by the destruction of a flood. A flood can be an insult, like a tort. Homes were destroyed, the flood implies, because they were not worthy of being protected, or perhaps because they were constructed poorly or in areas that were foolish to inhabit in the first place.<sup>149</sup> Perhaps their owners were not

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147. The Department of Veterans Affairs' National Center for Post-Traumatic Stress Disorder notes that "trauma can be connected with anger in many ways": "After a trauma, you might think that what happened to you was unfair or unjust. You might not understand why the event happened and why it happened to you. These thoughts can result in intense anger." *Common Reactions After Trauma*, NAT'L CTR FOR PTSD TRAUMA, U.S. DEPT. OF VETERANS' AFFAIRS, <https://www.ptsd.va.gov/public/problems/common-reactions-after-trauma.asp> (last visited Sept. 19, 2017) [<https://perma.cc/RG8D-2THD>].

148. Like corrective justice theorists, those scholars who study disaster recovery frequently speak in terms of "repair" and often see rebuilding as an act involving repair of more than just physical damage. See Kevin Rozario, *Making Progress: Disaster Narratives and the Art of Optimism in America*, in *THE RESILIENT CITY: HOW MODERN CITIES RECOVER FROM DISASTER 27* (Lawrence J. Vale & Thomas J. Campanella eds., 2005) ("When offices, stores, and homes are suddenly and unexpectedly annihilated, it is necessary not only to manufacture new material structures but also to repair torn cultural fabrics and damaged psyches.").

149. See, e.g., Richard Reeves, *Hurricane\$, Earthquake\$ and Flood\$: If People Want to Build Their Houses in Dangerous Places, Why Should the Rest of Us Pay When Disaster Strikes?*, 26 WASH. MONTHLY 10 (1994) (arguing, in the wake of the Northridge earthquake, against the idea that "taxpayers [should] subsidize Californians and other folks rich enough, lucky enough, or foolish enough to live at water's edge or in the picturesque path of fire, mudslide, or

foresighted or resourceful enough to take precautions that would have saved their homes or their loved ones.<sup>150</sup> The destruction of a flood suggests and reinforces all of these narratives.

Rebuilding, like revenge, counters these messages. By rebuilding, victims assert that they are indeed stronger than the storm. They assert that they have the fortitude, resources, and self-sufficiency to overcome hardship. They assert that their homes, communities, and lives are no less worthy of consideration than those of the unharmed and that we all might in fact be equal. The alternative—retreat—is indeed a form of defeat. And defeat hurts not just because it involves the giving up of a tangible thing—territory, one’s home—but because it tells the defeated that they are less than the victors: less strong, less determined, less resourceful, less deserving of respect.<sup>151</sup> By rebuilding, individuals complete a narrative arc that places disasters in the middle of a redemptive story that ends with opportunity and progress, rather than at the end of a tragic story that ends with loss and death.<sup>152</sup>

The messaging works on the level of community as well. By rebuilding, communities insist that they are capable, resilient, resourceful, and strong and that they possess these qualities in measures equal to or exceeding other, drier communities. All of these ideas are frequently made explicit. The narrative of triumphant rebirth has long been a major part of the civic consciousness in cities destroyed by disasters. Chicago and San

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tremors”); see also M. Justin Davis & T. Nathaniel French, *Blaming Victims and Survivors: An Analysis of Post-Katrina Print News Coverage*, 73 SOUTHERN COMM’N J. 243, 249–51 (2008) (“[N]ews coverage repeatedly presumed that the people of New Orleans had detailed, prior knowledge of the dangers that hurricanes pose to the Gulf Coast region.”).

150. See Karen E. Belinky, Letter to the Editor, *Toll of Riding Out Storm*, USA TODAY, Sept. 25, 2005, at 20A (“Every U.S. News Agency repeatedly told residents within reach of the storm that Katrina would likely cause catastrophic damage. Yet it appears that through sheer ignorance or foolish bravado, many residents . . . decided that mandatory evacuation notices didn’t apply to them. Now they’re sitting on rooftops . . . expecting emergency personnel to risk their lives to save them. Is this the definition of complete selfishness or simple stupidity?”); see also Jon Hanson & Kathleen Hanson, *The Blame Frame: Justifying (Racial) Injustice in America*, 41 HARV. C.R.-C.L. L. REV. 413, 462–68 (2006) (collecting additional examples).

151. Alice Fothergill, Enrique G.M. Maestas & JoAnne DeRouen Darlington, *Race, Ethnicity and Disasters in the United States: A Review of the Literature*, 23 DISASTERS 156, 164 (1999) (“Many minorities had greater difficulties recovering [from disasters] due to lower incomes, fewer savings, greater unemployment, less insurance, and less access to communication channels and information.”).

152. Rozario, *supra* note 148, at 33–34.

Francisco are notable American examples.<sup>153</sup> Although modern citizens are perhaps less willing to overlook the death toll of disasters in treating them as opportunities for new beginnings, the instinct to see recovery as an affirmative demonstration of a city's pluck and grit remains.<sup>154</sup>

Just as rebuilding in the wake of disaster conveys a set of corrective messages, forbidding rebuilding carries messages of its own. In foreclosing rebuilding, the government prevents its citizens from correcting a harm they have experienced and prevents them from making the implicit claims about equality, self-sufficiency, and autonomy that rebuilding represents. Like an insult that stands unwithdrawn and unaddressed, the damage wrought by the storm remains. When governments attempt to prevent rebuilding, they are asserting, often explicitly, that flooded residents should never have lived where they lived, even if they did so for generations. When governments close off certain areas, they are signaling that they view those communities as a drag on the resources of the broader polity that is not justified by the benefit they provide by being there. The implicit message is that communities that should not come back are expendable and that the larger city, region, or state would be better off without them.

### *B. Recovery as Culture*

Rebuilding also expresses certain attitudes about risk and culture, attitudes that often strike very deep emotional chords. In work that reconceptualizes the ways in which individuals respond to risk, often referred to as "cultural cognition theory," Dan Kahan has identified three models for understanding our reactions to the risks we face.<sup>155</sup> Under the "rational weigher theory," individuals process information about risk dispassionately and then use that information to make utility-maximizing decisions.<sup>156</sup> The "irrational weigher theory," by contrast, begins with the

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153. *See generally id.*

154. The cover of the report commissioned by the New York City mayor's office to develop plans for increasing the city's resiliency in the face of climate change contains a definition of "resilient": "1. Able to bounce back after change or adversity. 2. Capable of preparing for, responding to, and recovering from difficult conditions. Syn: TOUGH. See also: New York City." N.Y.C. SPECIAL INITIATIVE FOR REBUILDING AND RESILIENCY, A STRONGER, MORE RESILIENT NEW YORK 2 (June 11, 2013), <http://www.nyc.gov/html/sirr/html/report/report.shtml> [<https://perma.cc/CYS6-RDW7>].

155. Kahan, *Two Conceptions*, *supra* note 35, at 745

156. *Id.* The rational weigher theory, a central feature of neoclassical economics, sees no role for emotion in risk cognition, beyond the notion that individuals can be risk averse in varying degrees. *Id.* at 746. Thanks to the



premise that people are not capable of accurately evaluating the risks they face in everyday life and instead are subject to a variety of emotions and cognitive shortcuts that distort their perception of risk in certain predictable ways.<sup>157</sup> The irrational weigher theory treats these distortions as irrational and suboptimal in the sense that they lead people to make decisions that they would not make were they in possession of accurate assessments of the risks they face.<sup>158</sup>

In contrast to the rational and irrational weigher theories, Kahan offers the “cultural evaluator theory.”<sup>159</sup> Of central importance to the cultural evaluator theory is the idea that our responses to risk are expressive rather than simply rational or irrational. For Kahan, “when an individual is assessing what position to take on a putatively dangerous activity, she is . . . not weighing (rationally or irrationally) her expected utility but rather evaluating the social meaning of that activity.”<sup>160</sup> By selecting which risks to engage in, individuals are thus “adopting stances towards states of affairs that appropriately express the values that define their identities.”<sup>161</sup> Emotions are seen not as clouding what might otherwise be rational assessments of risk but as “enabling individuals to perceive what stance toward risks coheres with their values,”<sup>162</sup> which is based on the social meaning of behaviors and is “unlikely to be tied in any systematic way to the actuarial magnitude of those risks.”<sup>163</sup>

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contributions of behavioral economics, the rational weigher theory has been largely debunked to the extent that it purports to describe the behavior of actual human beings. *See, e.g.*, Christine Jolls, Cass R. Sunstein & Richard Thaler, *A Behavioral Approach to Law and Economics*, 50 STAN. L. REV. 1471, 1476–85 (1998).

157. Kahan, *Two Conceptions*, *supra* note 35, at 746–48.

158. *Id.* at 748 (“The point,” for the irrational weigher theory, “isn’t merely that emotion-pervaded reasoning is less accurate than cooler, calculative reasoning; rather it’s that habitual submission to its emotional logic ultimately displaces reflective thinking, inducing ‘behavioral responses that depart from what individuals view as the best course of action’—or at least would view as best if their judgment were not impaired.” (quoting George F. Loewenstein et al., *Risk as Feelings*, 127 PSYCHOL. BULL. 267, 271 (2001))). For the irrational weigher theory, our responses to risk are a problem; the solution to which is the “delegation of regulatory authority to politically insulated, scientifically trained risk experts” who are capable of putting in place rules that “form[] [individuals’] conduct to the preferences they would hold . . . if they had the cognitive capacity to form considered and rational beliefs.” *Id.* at 761.

159. *Id.* at 748.

160. *Id.* at 749.

161. *Id.* at 748–49.

162. *Id.* at 750.

163. *Id.* at 754.

Cultural cognition theory sees battles over regulatory interventions aimed at managing risk not as simple disagreements over optimal social policy capable of being resolved by data but rather as fundamental conflicts between competing worldviews.<sup>164</sup> Debates over gun control illustrate the point nicely. Kahan sees those people who generally oppose gun control as “individualist[s]” for whom “being rendered defenseless” is far worse than simply being exposed to some risk of getting shot.<sup>165</sup> Such people are, for Kahan, “not so much afraid of dying as afraid of death without honor.”<sup>166</sup> Opposing groups that do not share the same cultural values thus often end up talking past each other when debating the appropriate response to risk: “If part of what disturbs (some) people about gun control is the condition of servility it expresses to cede protection of themselves and their families exclusively to the state,” Kahan asks, “how responsive is it to print out a regression analysis that shows more lives are saved on net than are lost when handguns are banned?”<sup>167</sup>

Cultural cognition theory has important implications for the way in which government regulates our exposure to risk. Where the irrational weigher theory sees the role of government as stripping emotion out of risk perception in the interest of achieving values-neutral, optimally efficient social policy, the cultural evaluator theory highlights the problem with this approach: in many cases, it forces law to diverge from the deeply held normative positions of the citizens it is supposed to govern.<sup>168</sup> “If individuals’ factual beliefs are expressive of cultural worldviews,” Kahan

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164. *Id.* at 748–52.

165. *Id.*

166. *Id.*; *see also id.* at 757 (noting that people may rationally “care about meanings and not just about consequences”).

167. *Id.* at 762; *see also id.* at 763 (“Part of what motivates [proponents of gun control] is an egalitarian and communitarian cultural style that despises the individualistic connotations of private gun ownership.”); Dan M. Kahan, *The Cognitively Illiberal State*, 60 STAN. L. REV. 115, 134–36 (2007) [hereinafter Kahan, *The Cognitively Illiberal State*]. It is worth emphasizing that the cultural evaluator theory is a way of reframing debates between competing views about the desirability of various risks, not an endorsement of one view over another. Acknowledging that opponents of gun control are rationally expressing cultural values when they take those positions does not mean that they are correct that any particular form of gun control should not be adopted. Nor does it place the underlying emotions and value judgments beyond debate or contestation. *See* Kahan, *Two Conceptions*, *supra* note 35, at 762–63. The theory does, however, help resolve debates in that it highlights the often divergent and deeply felt normative commitments that underlie opposing views and suggests avenues towards reconciling those views. *See infra* notes 257–261 and accompanying text.

168. Kahan, *The Cognitively Illiberal State*, *supra* note 167, at 118–19.

notes, “then experts who treat those beliefs as ‘blunders’ unentitled to normative respect in a ‘deliberative democracy’ are necessarily shielding regulatory law from citizens’ visions of the good society.”<sup>169</sup> The solution is not to abandon the project of dispassionate risk analysis but rather to frame discussions about risk in ways that affirm rather than denigrate individuals’ cultural identities and to frame regulatory solutions as expressive of a range of social meanings.<sup>170</sup>

Responses to flood risk are also deeply imbued with cultural meaning. As with gun control, there are people for whom freedom and individualism are defining values that suggest government should not be involved in determining which areas are too risky to inhabit.<sup>171</sup> Individuals may rationally prefer to live in a society that permits them to live where they choose in exchange for a very real risk of death or the loss of a home over a society that enforces retreat in the interest of protecting life. The paternalism inherent in the idea that certain areas should be off limits to permanent habitation is usually justified by the fact that the costs of flooding are to some degree spread nationally.<sup>172</sup> There is certainly a tension between claims that property owners have the right to use their property as they see fit and the demand that flood insurance be affordable, beaches be replenished, or federal relief be provided in the wake of major storms. The trouble is that pointing out this inconsistency does not resolve the debate, as is true in the numerous other instances in which individuals keenly value the freedom to engage in activity that imposes costs on others.<sup>173</sup>

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169. Kahan, *Two Conceptions*, *supra* note 35, at 761.

170. *Id.* at 765. Kahan refers to these techniques as “cultural identity affirmation” and “expressive overdetermination.” *Id.*

171. See Gary Rivlin, *Why the Plan to Shrink New Orleans Failed: Revisiting the Great Katrina Footprint Debate*, FIVETHIRTYEIGHT (Aug. 27, 2015), <http://fivethirtyeight.com/features/why-the-plan-to-shrink-new-orleans-after-katrina-failed/> (“‘This is America’ was a popular refrain voiced by black and white residents alike during the debate over the city’s future. If they had the money, people said, who was the government to tell them they couldn’t rebuild?”) [<https://perma.cc/2KMK-8R4D>].

172. See, e.g., Editorial: *How Federal Flood Insurance Puts Homes at Risk*, N.Y. TIMES (Aug. 31, 2017), <https://nyti.ms/2wWxYyk> (arguing that buyouts of risky properties would save the federal government money) [<https://perma.cc/9BRW-DSEX>].

173. The debate over public health measures to combat obesity often features this dynamic. See, e.g., Margot Sanger-Katz, *Making a Soda Tax More Politically Palatable*, N.Y. TIMES (Apr. 3, 2016), <https://nyti.ms/2lnHu51> [<https://perma.cc/6BPK-2AGF>].

The degree of flood risk one chooses to accept is also a judgment that is in part cultural. It may not even be possible to say that there is a particular level of flood risk that is “optimal” in the sense of being purely divorced from cultural values and judgments; in the wake of Hurricane Katrina, some people claimed that the entire city of New Orleans should be abandoned.<sup>174</sup> Deltaic plains have always been flood-prone and yet have always been home to some of the world’s largest cities.<sup>175</sup> There are many instances in which rebuilding after a natural disaster is entirely rational.<sup>176</sup> No one, for example, thinks that Lisbon should have been abandoned after its devastating earthquake in 1755.<sup>177</sup>

This problem can be seen on a smaller scale in the ongoing struggle to “solve” the problem of what the NFIP refers to as “repetitive loss properties.”<sup>178</sup> Congress has enacted various reforms over the years in an effort to reduce the enormous costs associated with insuring these properties.<sup>179</sup> The scope of the problem these properties represent is usually illustrated by the simplistic comparison of the market value of a home with the total value of insurance benefits it has received under the NFIP,<sup>180</sup> as if a home’s market value was the only relevant measure of its worth.<sup>181</sup> Rising sea levels associated with climate change will affect this calculus in many places, but it is not productive to pretend that eliminating flood

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174. See, e.g., Kusky, *supra* note 9.

175. RICHARD CAMPANELLA, *DELTA URBANISM: NEW ORLEANS* viii (2010) [hereinafter CAMPANELLA, *DELTA URBANISM*].

176. *Id.* at xiv.

177. Instead, the government imposed seismic building codes to help mitigate the impact of future earthquakes. See ROBERT R.M. VERCHICK, *FACING CATASTROPHE: ENVIRONMENTAL ACTION FOR A POST-KATRINA WORLD 1* (2010).

178. Repetitive loss properties are properties that have had two or more flood claims of \$10,000 or more in ten years. U.S. GOV’T ACCOUNTABILITY OFFICE, *supra* note 46, at 7 (testimony before Congress).

179. See RAWLE O. KING, CONG. RES. SERV., RL 32972, *FEDERAL FLOOD INSURANCE: THE REPETITIVE LOSS PROBLEM* (2005), <http://www.fas.org/sgp/crs/misc/RL32972.pdf> [<https://perma.cc/T975-88T2>].

180. See, e.g., Eric Lipton, Felicity Barringer & Mary Williams Walsh, *Federal Flood Insurance Program, Already Fragile, Faces New Stress*, N.Y. TIMES, Nov. 13, 2012, at A1.

181. To be clear, this Article does not argue that repetitive loss properties are not a problem that should be addressed. Its quarrel is with the assumption that the market value of a home provides a complete account of its worth for the purpose of deciding whether or not it is appropriate for anyone to live there. A home may have emotional, cultural, or even economic significance that is not fully reflected in the price it would fetch on the open market.

risk altogether is an attainable—or even desirable—goal. Choosing the right level of flood risk requires a turn to culture.<sup>182</sup>

Indeed, the cultural valence of attitudes about flood risk is likely to be even more pronounced than that of other risks because it is inherently local and thus linked to a sense of community.<sup>183</sup> Flood risk has been part of the culture of southeastern Louisiana for as long as it has been settled by humans.<sup>184</sup> Traditional regional architecture typically features structures that are elevated several feet off the ground.<sup>185</sup> Evacuating in the face of oncoming hurricanes has been a fact of life for generations. As the response to the recent flooding in Baton Rouge has shown, even the process of rebuilding after a flood is subject to a kind of cultural normalization, as people share knowledge gained after Hurricane Katrina about matters like how to remove moldy drywall and apply for grant money from FEMA.<sup>186</sup> These practices are not just adaptations that help minimize risk but also indications of the degree to which exposure to flood risk is simply an accepted part of the local culture. Another way of looking at this

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182. A turn to culture is often necessary even when there is an objective “right answer” to a problem of risk management. Cultural cognition theory emphasizes that individual reactions that diverge from objective “answers” should not be dismissed as wrong because they are responding to an activity’s cultural valence and not statistics concerning its probability of harm. Robert R.M. Verchick, *Culture, Cognition, and Climate*, 2016 U. ILL. L. REV. 969, 980 (2016).

183. Because attitudes toward risk are often culturally determined, they are sometimes subject to a kind of groupthink: “insofar as one of the primary sources of information people have about the relationship between their values and a putatively dangerous activity is what persons who share their commitments think about it, perceptions of danger naturally feed upon one another among persons who share cultural commitments.” Kahan, *Two Conceptions*, *supra* note 35, at 757.

184. See CHRISTINE A. KLEIN & SANDRA B. ZELLMER, *MISSISSIPPI RIVER TRAGEDIES: A CENTURY OF UNNATURAL DISASTER* 36–37 (2014); CAMPANELLA, *DELTA URBANISM*, *supra* note 175, at 27–28.

185. See PIERCE F. LEWIS, *NEW ORLEANS: THE MAKING OF AN URBAN LANDSCAPE* 64 (2d ed. 2003); Craig E. Colten, *Suburban Sprawl and Poor Preparation Worsened Flood Damage in Louisiana*, *THE CONVERSATION* (Aug. 22, 2016), <http://theconversation.com/suburban-sprawl-and-poor-preparation-worsened-flood-damage-in-louisiana-64087> (noting that damage associated with flooding near Baton Rouge was worsened by newer homes being built on slabs rather than elevated above grade like traditional architecture) [<https://perma.cc/64VV-VC8P>].

186. See Campbell Robertson & Alan Blinder, *After Baton Rouge Flooding, Learning Lessons from New Orleans*, *N.Y. TIMES* (Aug. 22, 2016), <http://www.nytimes.com/2016/08/23/us/baton-rouge-flooding-lessons-katrina.html> [<https://perma.cc/ZL7T-NBJ5>].

phenomenon emphasizes the costs associated with adopting positions that run counter to the interests or dominant cultural values of one's community.<sup>187</sup>

When governments forbid rebuilding, they are picking sides in a battle that is inherently cultural while attempting to disguise their actions as purely dispassionate risk analyses. Just as debates over gun control involve clashing worldviews and thus cannot be resolved to the satisfaction of all sides by appeals to particular sets of data, debates over the appropriateness of forbidding settlement in areas deemed too risky involve competing cultural attitudes towards risk and the role of government that cannot be resolved by actuarial tables alone. When governments foreclose rebuilding in the wake of disasters, they impermissibly ignore the value judgments of their own citizens,<sup>188</sup> setting up the kind of crisis that occurred in New Orleans after the release of the green dot map.<sup>189</sup>

Indeed, rebuilding after a storm is expressive not just in the sense that it declares support for certain abstract values like individualism but also in the sense that it expresses and reinforces membership in a community. For many, being a resident of a neighborhood, city, region, or state is a vitally important aspect of self-identity. In such cases, returning home after a storm represents a refusal to abandon that identity, the way a diehard sports fan who refuses to give up on her team after a dismal season strengthens her identity as a fan. Rebuilding after a flood thus claims not just the myriad positive qualities associated with the ability to rebuild and the equality of status with those who were not flooded but also a cultural commitment to a particular way of life and a particular region or neighborhood.

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187. Verchick, *supra* note 182, at 980–81. On this view, a resident of a flood-prone coastal community who favors retreat is something like a Yankees fan living in Boston. *Id.*

188. Kahan, *Two Conceptions*, *supra* note 35, at 761.

189. Richard Campanella, a professor of geography at Tulane who at one point advised the BNOB, made a similar point during the uproar over the proposal in an editorial in the *Times-Picayune*. Noting that participants in the “great footprint debate” could be grouped into warring “philosophies, . . . each with its own logic, passion, experts, and dogma,” Campanella argued that individuals’ views on the matter were determined by “a tangle of personal, cultural, financial, nostalgic, practical, and scientific factors.” Richard Campanella, *In Post-Katrina New Orleans: Abandon? Maintain? Concede?*, TIMES-PICAYUNE, [http://www.nola.com/katrina/index.ssf/2006/04/new\\_orleans\\_footprint\\_katrina.html](http://www.nola.com/katrina/index.ssf/2006/04/new_orleans_footprint_katrina.html) (last updated May 20, 2015 at 9:49 AM) [<https://perma.cc/8RSS-54XB>].

*C. Recovery as Resistance*

Rebuilding after a storm can also be an act of defiance against an unfair and discriminatory system. Because flood risk is often correlated with race and socioeconomic status,<sup>190</sup> and because the harms associated with “natural” disasters are often exacerbated by governmental policies and actions of one form or another, storms frequently appear to expose and exacerbate societal inequalities. Like the victim of a tort who in taking revenge attempts to restore an equality of status with a tortfeasor, those who rebuild after a storm are in many cases trying to get even, in this case with their whiter, wealthier, drier neighbors and with the government that seems to have treated them as expendable.

Storms reinforce an ugly and painful reality about American society: we often treat the poor and minorities as less deserving of protection from all nature of risks and seem less willing to help when those risks are realized. In the month before Hurricane Katrina, New Orleans officials distributed a DVD in low-income areas of the city, the purpose of which “was to let people know New Orleans was too broke to help even the infirm or the disabled in the event of a major hurricane. Our main message, the DVD’s producer told the Times-Picayune, ‘is that each person is primarily responsible for themselves.’”<sup>191</sup> The city, along with the state and federal governments, then proceeded to prove the truth of this warning. No means of evacuation were provided in advance of the storm for those who did not own cars—an estimated 100,000 people<sup>192</sup>—and many of them spent several days in appalling conditions at the convention center and the

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190. CHRISTOPHER DALBOM ET AL., COMMUNITY RESETTLEMENT PROSPECTS IN SOUTHEAST LOUISIANA: A MULTIDISCIPLINARY EXPLORATION OF LEGAL, CULTURAL, AND DEMOGRAPHIC ASPECTS OF MOVING INDIVIDUALS AND COMMUNITIES 3 (2014); Fothergill, Maestas & Darlington, *supra* note 151, at 161 (“[D]isaster-connected deaths were disproportionately high among ethnic minorities.”). In New Orleans, land that is farther from the river and thus lower in elevation was historically much more likely to be inhabited by black people. Craig E. Colten, *Basin Street Blues: Drainage and Environmental Equity in New Orleans, 1890-1930*, 28 J. OF HIST. GEOGRAPHY 237, 237 (2002).

191. RIVLIN, *supra* note 1, at 49 (2015).

192. STAFF OF THE SELECT BIPARTISAN COMM. TO INVESTIGATE THE PREPARATION FOR AND RESPONSE TO HURRICANE KATRINA, FAILURE OF INITIATIVE: FINAL REPORT 113 (2006). Those living in flooded areas were significantly more likely to lack access to a car. BROOKINGS INST., NEW ORLEANS AFTER THE STORM: LESSONS FROM THE PAST, A PLAN FOR THE FUTURE 13 (Oct. 1, 2005), <https://www.brookings.edu/research/new-orleans-after-the-storm-lessons-from-the-past-a-plan-for-the-future> [<https://perma.cc/2C28-SBYS>] [hereinafter FAILURE OF INITIATIVE].

Superdome.<sup>193</sup> The direct impacts of the storm itself were similarly disparate: the homes of 80% of the city's black population flooded, compared with 54% of the city's white population.<sup>194</sup>

For many, Hurricane Katrina was so chilling in part because it "exposed" these truths.<sup>195</sup> But Hurricane Katrina was certainly not the first illustration of these problems. During the catastrophic Mississippi River floods of 1927, black refugees were subject to horrific conditions in segregated Red Cross camps.<sup>196</sup> After Hurricane Frederic made landfall on the Gulf Coast in 1979, 33 counties in Mississippi, Alabama, and Florida were declared disaster areas.<sup>197</sup> FEMA "restored power in black communities only after it was restored in white areas, and black communities received less emergency shelter, ice, food, and assistance than did white communities."<sup>198</sup>

That there was a message in Hurricane Katrina's devastation was not lost on its victims.<sup>199</sup> For many people, the storm demonstrated that society

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193. See FAILURE OF INITIATIVE, *supra* note 192, at 117–23 (describing conditions at the Superdome and convention center and delays in completing evacuation). Although much has been written about the conditions at the Superdome—the city's official shelter for those who did not evacuate—and the convention center—which became an unofficial shelter for reasons that have never been determined, it is worthwhile to be reminded of the basic facts: an estimated 19,000 people gathered at the convention center, which had no food, water, security personnel, electricity, lighting, air conditioning, or functioning toilets. *Id.* at 118. The Superdome, where roughly 12,000 people gathered, was in somewhat better shape: it had food, water, and National Guard troops on hand. *Id.* at 117, 120.

194. ALAN BERUBE & BRUCE KATZ, BROOKINGS INST., *KATRINA'S WINDOW: CONFRONTING CONCENTRATED POVERTY ACROSS AMERICA 2* (Oct. 1, 2005), <https://www.brookings.edu/research/katrinawindow-confronting-concentrated-poverty-across-america> [<https://perma.cc/77KB-QTUF>]. Notably, black people did not make up a disproportionate share of the 818 fatalities in Louisiana for which race is recorded. Jonkman et al., *supra* note 40, at 685. The data, however, is incomplete: it covers only two-thirds of the total number of Katrina-related fatalities in Louisiana. See *id.*

195. See, e.g., David Brooks, *The Storm After the Storm*, N.Y. TIMES, Sept. 1, 2005, at A23 ("[Floods] expose the underlying power structures, the injustices, the patterns of corruption and the unacknowledged inequalities.").

196. KLEIN & ZELLMER, *supra* note 184, at 70.

197. *Id.* at 167.

198. *Id.*; see also Daniel A. Farber, *Disaster Law and Inequality*, 25 LAW & INEQUALITY 297, 298–302 (2007) (describing history of racially disparate treatment in disaster recovery).

199. Or on Kanye West, who notoriously interrupted a live televised charity fundraiser after Hurricane Katrina to declare that "George Bush doesn't care about



regarded them as unworthy of concern or protection. “We were abandoned. City officials did nothing to protect us,” one victim testified before the bipartisan House committee that was set up to investigate governmental actions before and after Hurricane Katrina.<sup>200</sup> “We never felt so cut off in all our lives.”<sup>201</sup> Charmaine Marchand, who represented the Lower Ninth Ward in the Louisiana Legislature, noted the widespread “perception that the white establishment in New Orleans left its black citizens to die.”<sup>202</sup> “If it were affluent whites who were flooded and stranded on the side of the highway,” Marchand added, “I don’t think America would have let them starve.”<sup>203</sup> This sentiment was widely held: a survey of refugees taken in a shelter in Houston a week and a half after the storm found that 68% of evacuees believed that “the federal government would have responded more quickly to rescue people trapped by floodwaters if more of them had been wealthier and white rather than poorer and black.”<sup>204</sup>

Although rebuilding might help counter this message, being forbidden from rebuilding only makes the message stronger: not only does the government not care about residents enough to keep them safe, such behavior suggests, it would prefer if they could be simply erased from their city altogether.<sup>205</sup> During the “footprint debate” in New Orleans, members of the city’s white elite spoke openly about the opportunity Hurricane Katrina gave them to demographically cleanse the city. Mere weeks after Hurricane Katrina made landfall, members of the city’s elite were meeting

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black people.” Jon Caramanica, *The Education of Kanye West*, N.Y. TIMES (Aug. 26, 2007), <https://nyti.ms/2l2YmSf> [<https://perma.cc/6892-EK48>].

200. FAILURE OF INITIATIVE, *supra* note 192, at 6.

201. *Id.* A review of the psychological literature on the impacts of natural disasters noted that

“social class and race contribute[] to residents’ psychological reactions to disasters” and described a study showing that “[i]n a small South Carolina town, founded on slave labour, the African-American victims recalled—in the context of needing assistance from others after the storm—their grandparents’ stories of slave days. In particular, they recounted how their ancestors were dependent on the white plantation masters and slave owners.”

Fothergill, Maestas & Darlington, *supra* note 151, at 161–62.

202. Frank Etheridge, *Last of the Ninth*, SALON (Sept. 13, 2005, 8:25 PM), <http://www.salon.com/2005/09/13/ninth> [<https://perma.cc/NL7T-3VWR>].

203. *Id.*

204. KAISER FAMILY FOUND., *supra* note 136, at 41.

205. William P. Quigley, *What Katrina Revealed*, 2 HARV. L. & POL’Y REV. 361, 374 (2008) (arguing that the BNOB rebuilding plan indicated that “[p]oor and working people are movable, interchangeable, and disposable”).

to discuss rebuilding the city with “better services and fewer poor people.”<sup>206</sup> Although the work of the Urban Planning Commission on the footprint question was framed in the race-neutral language of risk and sustainability, the effect was the same: one study showed that the Commission’s proposal meant closing off the homes of 80% of the city’s black population.<sup>207</sup>

Again, the message was not lost. After the first public presentation of the proposal, the city councilwoman who represented the Lower Ninth Ward and most of New Orleans East angrily told reporters that her neighbors were “not going to allow themselves to be shoved into the back of the bus.”<sup>208</sup> When the commission regrouped and released a revised version of its plan—in this iteration, a four-month moratorium would be placed on building permits in certain neighborhoods, which would be converted into “green space” if they did not in that time prove their long-term viability—the reaction was even more intense.<sup>209</sup> At a packed public meeting, residents angrily accused the mayor of “taking part in a ‘Katrina cleansing’” and attacked the plan for trying to “turn ‘black people’s neighborhoods into white people’s parks.’”<sup>210</sup> Survey data taken six months later showed that more than half of black people in New Orleans believed that they “were being given worse treatment and opportunities in the rebuilding process than white[] [people].”<sup>211</sup>

New Orleans is not the only example of this phenomenon. There is a long history of tension arising over post-disaster efforts to increase resiliency that are perceived as thinly veiled forms of social engineering. After devastating fires in both Chicago and San Francisco, proposals to

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206. Christopher Cooper, *Old-Line Families Escape Worst of Flood and Plot the Future*, WALL ST. J., Sept. 8, 2005, at A1 (describing planned meeting of 40 city business leaders in Dallas to “begin mapping out a future for the city”). One wealthy businessman, James Reiss, was willing to be quoted in the Wall Street Journal, explaining that “[t]hose who want to see this city rebuilt want to see it done in a completely different way: demographically, geographically and politically . . . I’m not just speaking for myself here. The way we’ve been living is not going to happen again, or we’re out.” *Id.* Reiss was later named to the mayor’s BNOB. RIVLIN, *supra* note 1, at 136; *see also* GRATZ, *supra* note 13, at 33–34.

207. RIVLIN, *supra* note 1, at 177.

208. *Id.* at 176.

209. *Id.* at 209–15.

210. *Id.* at 214. Marc Morial, the mayor of New Orleans from 1994–2002, attended the meeting to offer his own view on the plan: “It’s telling people who have lost almost everything that we’re going to take the last vestige of what they own.” *Id.* at 215.

211. KAISER FAMILY FOUND., *supra* note 136, at 6, 41. Only 19% of white people shared this view. *Id.* at 4.

outlaw wood construction in favor of more fireproof—and more expensive—materials were vociferously opposed by poor immigrants, who organized sometimes violent protests and complained of class discrimination.<sup>212</sup> In Chicago, the prohibition on wood construction was seen as representing “a de facto denial of the ability of all Chicagoans to remain full citizens of their community.”<sup>213</sup> “Better a city of shacks owned by the people,” a Catholic priest said at a rally in San Francisco, “than a city of skyscrapers owned by Eastern capitalists. The extension of the fire limits will be our ruin.”<sup>214</sup> Both proposed reforms failed.<sup>215</sup>

In these circumstances, rebuilding can be an act of resistance. New Orleanians who lived in the neighborhoods targeted for elimination by the BNOB’s proposal were explicit in expressing this sentiment. At the first set of public meetings after the plan was revealed, one resident pledged to “sit in my front door with a shotgun.”<sup>216</sup> Another resident, referring to the fact that New Orleans was one of the few large cities that did not experience rioting after the assassination of Martin Luther King in 1968,<sup>217</sup> predicted that “[i]f the situation continues to erode, we are going to incite people to do what this city never did.”<sup>218</sup> At another meeting, a resident of the Lower Ninth Ward—a neighborhood slated for conversion into green space in the BNOB’s plan—said “that her home would be taken ‘over my dead body’” and another warned that “if you come to take our property, you better come ready.”<sup>219</sup>

It is by no means the case that every flood metes out a larger share of damage on minorities and the poor or that the policy of retreat would always have a disproportionate impact on already-marginalized groups.<sup>220</sup>

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212. KAREN SAWISLAK, *SMOLDERING CITY: CHICAGOANS AND THE GREAT FIRE, 1871–1874*, at 145 (1995); Lawrence J. Vale, *Restoring Urban Vitality*, in *REBUILDING URBAN PLACES AFTER DISASTER: LESSONS FROM HURRICANE KATRINA* 149, 152 (Eugenie L. Birch & Susan M. Wachter eds., 2006) (noting that in San Francisco, “Lower-income homeowners also feared that they would not be able to afford to rebuild.”).

213. SAWISLAK, *supra* note 212, at 145.

214. Vale, *supra* note 212, at 152.

215. SAWISLAK, *supra* note 212, at 121; VALE, *supra* note 212, at 153.

216. Donze, *Let Us Decide*, *supra* note 14.

217. *Id.*

218. *Id.*

219. Russell & Donze, *supra* note 12, at A1.

220. For example, preliminary reports from Houston seem to indicate that the flooding from Hurricane Harvey affected rich and poor alike. See Juliet Linderman, *Black, White, Rich, Poor: Storm Harvey Didn’t Discriminate*, CHI. TRIBUNE (Sept. 3, 2017), <http://www.chicagotribune.com/news/nationworld/ct-harvey-victims-20170903-story.html> [<https://perma.cc/XDC8-CFK4>].

But when they do, rebuilding takes on a vitally important messaging function, an insistence on the value of one's community in the face of those who have neglected it and would apparently prefer to see it disappear. This, then, is another factor that helps explain why people often feel so keenly the need to rebuild after storms and why governments often find it politically impossible to prevent them from doing so.

#### *D. Other Factors*

In sum, rebuilding can be expressive in a range of ways, all of which are vitally important to the victims of major storms. Appreciating this leads to new insights into ways in which governments may be able to make retreat more politically palatable by providing alternative means of doing the expressive work that rebuilding does. Before turning to those alternatives in Part III, it is worth pausing here to address a handful of counter-arguments that could be levelled at the idea that the difficulty in preventing people from rebuilding can be understood by focusing on its expressive elements, as well as to add a few caveats.

To many, the problems that doomed the BNOB's proposal to forbid rebuilding in certain heavily damaged, high-risk neighborhoods were largely procedural. Because so many residents of the neighborhoods in question were still scattered across the country in the months following the storm, few were able to attend the handful of public meetings the Urban Planning Commission held to discuss its plan.<sup>221</sup> The result was that residents felt stunned by the news that they would be forbidden from returning to their homes, while the commission was blindsided by the wave of opposition that followed the publication of the green dot map on the cover of the local newspaper. The importance of the flawed procedure, however, only goes so far. It would be wrong to conclude that more and better meetings are the answer to the problem of how to make retreat in the wake of disasters palatable to the people whose homes have been destroyed. The anger expressed by those who faced what would have been a second destruction of their neighborhoods did not appear to be triggered by a lack of procedure: people complained not only of feeling uninformed or being surprised but also of being shut out of their homes and prevented from rebuilding their lives.<sup>222</sup> The value people place on their homes and

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221. The meetings were largely attended by residents of comparatively dry, unharmed neighborhoods, who perhaps unsurprisingly tended to support the idea of converting heavily flooded areas into green space. Campanella, *A Katrina Lexicon*, *supra* note 13, at 29.

222. See *supra* notes 11–12 and accompanying text.

the freedom to rebuild them does not seem likely to be extinguished by a certain number of meetings.

Indeed, the Constitution already protects the ability of property owners to rebuild after storms through the Takings Clause.<sup>223</sup> Forbidding a homeowner from returning to, rebuilding, and inhabiting a home certainly would constitute a taking and thus trigger an obligation to provide compensation.<sup>224</sup> No one has ever seriously claimed otherwise, and the proposal to close off certain neighborhoods in New Orleans after Hurricane Katrina was always conceded to constitute a taking for which compensation would be offered.<sup>225</sup> Although the Takings Clause ensures a basic level of protection of property rights, it apparently does not make retreat acceptable to people.<sup>226</sup> The offer of compensation for the forced abandonment of neighborhoods did not make the green dot map politically palatable in New Orleans. Simply saying that retreat is something that can be done constitutionally does not mean that it can be done practically; the emotional obstacles remain.

The issue of eminent domain raises the broader question of the role of money in the effort to encourage retreat. The federal government, after all, is extraordinarily generous with post-disaster relief funding, at least compared with other forms of individual need.<sup>227</sup> This extreme generosity—Congress appropriated about \$120 billion in disaster relief

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223. See U.S. CONST. amend. V.

224. See *supra* notes 57–61 and accompanying text.

225. See Michelle Krupa, *Many Areas Marked for Green Space After Katrina Have Rebounded*, TIMES-PICAYUNE (Aug. 23, 2010), <http://s.nola.com/eHSuv0F> (noting that proposed conversion of neighborhoods to green space was planned to occur only after a “government buyout program”) [<https://perma.cc/4BY7-LGPK>].

226. Indeed, Louisiana was one of many states that passed new restrictions on the ability of governments to acquire property by eminent domain during the intense nationwide backlash against the Supreme Court’s decision in *Kelo v. City of New London*, 545 U.S. 469 (2005). In 2006, just a year after Hurricane Katrina, voters approved two new constitutional amendments aimed at overruling the Court’s decision. See Act No. 851, 2006 La. Acts 2957 (amending LA. CONST. art. VII § 10); Act No. 859, 2006 La. Acts 2974 (amending LA. CONST. art. I § 4); see also Frank S. Alexander, *Louisiana Land Reform in the Storm’s Aftermath*, 53 LOY. L. REV. 727 (2007). The wording of the amendments makes it at least an open question whether the state government could constitutionally condemn individual properties for the purpose of protecting their owners from future floods, even if it were willing to provide compensation. See LA. CONST. art. I § 4(B) (allowing condemnation of private property for, inter alia, “drainage, flood control, levees, coastal and navigational protection and reclamation for the benefit of the public generally”).

227. See Landis, *supra* note 51, at 969–71.

after Hurricane Katrina and \$60 billion after Hurricane Sandy<sup>228</sup>—might be seen as an adequate response to whatever harm the government causes individuals when it enforces retreat in the wake of floods. It is possible, after all, that New Orleanians who opposed the closing of their neighborhoods simply did not know that they would be entitled to compensation for the value of their homes or did not believe that their perpetually cash-starved government would be able to honor that obligation. Perhaps governments need only compensate their citizens in exchange for forcing them to abandon their homes to make the prospect politically palatable.

There are, however, reasons to think that compensation would not make retreat acceptable. Seeing recovery as an act of revenge helps show why. The receipt of money from a fund lacks this adversarial element and therefore also lacks the sense of correction that rebuilding can provide. For many tort theorists, tort law's insistence on a connection between tortfeasor and victim, which is variously referred to as the "bipolar," "relational," or "bilateral" nature of tort law, has deep normative significance.<sup>229</sup> By insisting on a connection between tortfeasor and victim, tort law "reflects the normative structure of our relationships with one another"<sup>230</sup> and thus "is at least consistent with the intuition that victims find a satisfaction in pursuing their injurers that they would not derive from recourse through a pooled fund."<sup>231</sup>

Receiving disaster aid from a fund in exchange for being forced to move elsewhere is akin to receiving compensation that does not come from a tortfeasor. It may make the victim "whole" by undoing a certain allocation of costs related to an injury, but it does nothing to offer "satisfaction," to assert a right to a certain standard of treatment at the hands of others and

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228. See LINDSAY, *supra* note 47, at 13.

229. See Alexander B. Lemann, *Coercive Insurance and the Soul of Tort Law*, 105 GEO. L.J. 55, 85–87 (2016).

230. Jules L. Coleman, *Doing Away with Tort Law*, 41 LOY. L.A. L. REV. 1149, 1155 (2008); see also John C. Goldberg & Benjamin Zipursky, *Torts as Wrongs*, 88 TEX. L. REV. 917, 975 (2010) (arguing that tort law "guides conduct by reference to, gives recognition to, and enforces duties not to mistreat others"); John C.P. Goldberg & Benjamin C. Zipursky, *Accidents of the Great Society*, 64 MD. L. REV. 364, 366–70 (2005) (arguing that tort law "is devoted primarily to articulating relational obligations and empowering victims injured by breaches of those obligations to sue for redress" and thus promotes, inter alia, "the values of holding persons responsible to members of identifiable classes of other persons" and "encouraging citizens to think of themselves as bearers of obligations to others"); Benjamin Zipursky, *Civil Recourse, Not Corrective Justice*, 91 GEO. L.J. 695, 721 (arguing that tort law "enunciates norms that designate certain courses of conduct as tortious and, in a sense, as legally wrongful, or as violations of legal rights" and thus "is injunctive and guiding").

231. Sherwin, *supra* note 34, at 1401.

thus help the victim get even. Placing the emphasis on rebuilding as an act of cultural expression only heightens the problem further: money does not lessen the pain of being forced to abandon a community, a set of values, or a way of life. The same is true if the focus is on rebuilding as an act of resistance. The fact that the government is willing to offer money in exchange for making a resident abandon a home whose destruction it was partly responsible for apparently does not do much to lessen the perceived wrong. Money lacks the redemptive, cultural, and declaratory power of rebuilding.

The federal government's generosity with post-disaster aid further supports this view. One leading view is that this generosity reveals something about this country's puritanical attitudes towards poverty: the poor are perceived to be lazy while those who are flooded are perceived to be blameless victims.<sup>232</sup> Another possibility is that the project of post-disaster recovery is normatively significant both for individuals and for society more broadly. People need the chance to get even after being flooded, and the nation needs to demonstrate that it does not allow its citizens to be wiped out by natural disasters, that this is a harm that is unacceptable.<sup>233</sup> In helping people rebuild, governments express a level of respect for their ways of life and communities and attempt to undo the perceived wrong in having allowed them to flood in the first place.

To be sure, seeing elements of revenge, culture, and resistance in the act of rebuilding one's home after a storm does not mean that the emotional impulses emphasized in this Article are the only, or even the primary, reasons local governments find it difficult to move people away from their homes in the wake of disasters. Of course, a major—maybe even *the* major—aspect of the desire to rebuild is indeed the desire to recreate an allocation of goods—one's house, for instance—that existed before a

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232. Landis, *supra* note 51, at 971, 988–98 (tracing the “intellectual and spiritual traditions prevalent among the founders” that “provide some insight into the sympathetic treatment they afforded disasters”). Another theory traces congressional attention to disaster victims to the structure of the nation's political system, which tends to favor problems that are concentrated in particular political subdivisions over those that are spread nationally. See Saul Levmore, *Coalitions and Quakes: Disaster Relief and Its Prevention*, 3 U. CHI. L. SCH. ROUNDTABLE 1, 4–6 (1996).

233. After Hurricane Katrina, the actor Brad Pitt started a foundation called “Make it Right” that set about building new homes designed by prominent architects in the Lower Ninth Ward for families whose homes had been destroyed during the flood. See MAKE IT RIGHT, <http://makeitright.org/about/history/> (last visited Sept. 19, 2017) [<https://perma.cc/YZA5-T7AD>]. The idea that the flood's destruction was something that needed to be “made right” and that this could be accomplished by building new homes for people in the same neighborhood is a perfect illustration of the broader normative significance of disaster recovery and the sense in which it contains aspects of corrective justice.

disaster. This way of looking at things, however, does not fully capture the emotional tenor of the desire to rebuild. If it did, it would not be necessary to treat rebuilding as an adversarial process, to speak of being “stronger than the storm.” After all, the storm has not gained anything by hurting those people affected and is in no position to restore anything to them.<sup>234</sup> And if all that mattered was correcting an allocation of goods, one might think that people would be much more willing to treat their losses as commensurate with the various forms of compensation that are frequently offered after major disasters.

There are also numerous other confounding factors at work. Perhaps the simplest and most obvious obstacle is cost. The financial burden of compensating residential property owners may be prohibitive for many city and state governments, although it is worth noting that the federal government has made money available to help fund retreat in certain circumstances<sup>235</sup> and could do so more broadly in the future.

A related problem is that land use regulation is largely left up to local governments.<sup>236</sup> Particularly when the costs of floods and other disasters are socialized to a significant degree through federally funded engineering projects and post-disaster aid, local governments often lack the incentive to anticipate and adequately prepare for long-term, complex risks like sea level rise. Indeed, in a way New Orleans is actually an unusually easy case, as roughly half of the city is above sea level.<sup>237</sup> This makes it possible to render policy judgments that distinguish between different areas of the city on the

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234. This thought parallels the line of attack Hershovitz levels at the classic articulation of corrective justice as a descriptive account of the tort system generally. As Hershovitz notes, there are vanishingly few cases in which the tort system is able to offer corrective justice in the sense of restoring to a victim something that was wrongfully taken by a tortfeasor. See Hershovitz, *supra* note 117, at 110–12.

235. See SIDERS, *supra* note 22, at 110–13.

236. Kaswan, *supra* note 67, at 394 n.10.

237. Cf. Andy Horowitz, *New Orleans's New Flood Maps: An Outline for Disaster*, N.Y. TIMES (June 1, 2016), <http://www.nytimes.com/2016/06/01/opinion/new-orleans-new-flood-maps-an-outline-for-disaster.html> [https://perma.cc/VYT7-955M?safari=1] (stating about 54% of New Orleans is currently below sea level).



basis of flood risk.<sup>238</sup> Many smaller coastal municipalities are facing complete inundation and thus do not have this luxury.<sup>239</sup>

Finally, it is possible that Kahan's skepticism of the irrational weigher model of risk perception is less merited in the context of flood risk. In other words, it may be the case that people are actually mistaken about the magnitude of the risk they face and that the cognitive biases identified in the psychological literature as tending to distort the general perception of disaster risk are best characterized as impairments in thinking and not value judgments. On the other hand, cognitive biases are much less likely to downplay the significance of flood risk in the immediate aftermath of a flood. During such times, the "availability heuristic" suggests that individuals are likely to *overestimate* the risk of flooding.<sup>240</sup> This is why participation in the NFIP spikes after hurricanes.<sup>241</sup>

It is important not to overstate the force of any of the myriad factors that contribute to individuals' desire to return and rebuild after floods because not everyone comes back. Some people simply are unable to return, and others decide they prefer to settle elsewhere. The goal of this Article is not to suggest unavoidable psychological imperatives but rather to offer a way of understanding a phenomenon. Armed with a deeper understanding of why residents feel the need to rebuild, scholars and policymakers can see the various ways in which it is problematic for governments to prevent residents from doing so and thus begin to think about alternative processes that provide some sense of repair without putting people right back in harm's way.

### III. REPAIR WITHOUT REBUILDING

Appreciating the various emotional aspects of rebuilding leads to new insights on how to replicate some of the salve that rebuilding provides without allowing people to move back into the same risky places. If by rebuilding people implicitly claim a range of positive qualities for themselves, express

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238. FEMA recently released newly revised flood insurance rate maps for the New Orleans area. The maps show that, thanks to small variations in local elevation—and the newly updated multi-billion-dollar levee system surrounding the city—many areas of New Orleans are not considered to be in the 100-year flood zone at all. See Mark Schleifstein, *Final New Orleans Flood Insurance Maps Show Lower Rates for Many*, TIMES-PICAYUNE (Mar. 29, 2016), [http://www.nola.com/environment/index.ssf/2016/03/final\\_new\\_orleans\\_flood\\_insura.html](http://www.nola.com/environment/index.ssf/2016/03/final_new_orleans_flood_insura.html) [https://perma.cc/XT7U-UEBJ]; see also Horowitz, *supra* note 237.

239. See Rao, *supra* note 55.

240. See *supra* note 106.

241. See *supra* note 106.

their commitments to their communities and ways of life, and get even with their unaffected peers and the governments who have neglected them, then alternatives to rebuilding should strive to accomplish similar ends. Although there are no easy answers, governments may be able to achieve these goals by conducting adversarial proceedings, preserving and replicating communities in new locations, and constructing memorials.<sup>242</sup>

#### A. *Suing the Storm*

If rebuilding after a storm can be seen as an act of revenge in the sense that a tort suit is an act of revenge, perhaps governments that seek to bar rebuilding should consider providing some form of recourse against storms, the way governments that have barred revenge have provided tort law as an alternative. An important emotional aspect of filing a lawsuit is claiming the right to tell one's story to a representative of the public.<sup>243</sup> A suit also represents societal concern for the wrong one has suffered, and a successful suit helps a plaintiff correct that wrong in various ways.<sup>244</sup> It is possible to imagine that many of these effects could be achieved by some form of adversarial proceeding set up outside the realm of the modern court system. Notably, many of these benefits do not depend on the participation of a tortfeasor; one can achieve a measure of corrective justice even when nobody is available to be cross examined, accept responsibility, or pay damages.

Legal history and indeed the history of tort law in particular is full of examples of vengeful impulses directed against non-human entities.<sup>245</sup> The deodand system in thirteenth-century England allowed those who suffered harms to take revenge against the cause of the harm: "If a cart struck and injured a victim, the victim was entitled to the cart, not simply for its value,

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242. To be clear, this Article envisions the following ideas as complements to—not replacements for—the traditional regulatory approaches to retreat that have been advanced by others. The aim is to offer ways of making the legal tools discussed in Part I more politically and psychologically palatable.

243. See THANE ROSENBAUM, *THE MYTH OF MORAL JUSTICE: WHY OUR LEGAL SYSTEM FAILS TO DO WHAT'S RIGHT* 37 (2004) ("This is the moral imperative of a public trial: the opportunity to tell your story in open court; to speak of the grievance and memorialize the hurt; to confront those who are responsible for the injury and have them account for their wrongdoing; to create an official record of the proceedings, a permanent place of memory so that the incident is not forgotten.").

244. See *supra* notes 112–132 and accompanying text.

245. See Sherwin, *supra* note 34, at 1404.

but so that he could avenge himself on the source of the harm.”<sup>246</sup> For hundreds of years, mostly between the fifteenth and seventeenth centuries, Western Europeans conducted elaborate legal proceedings against animals of all kinds.<sup>247</sup> In a thoughtful exploration of the practice, William Ewald describes a case brought in ecclesiastical court against rats in the town of Autun, France.<sup>248</sup> A formal complaint was filed, charging the rats with a felony for having “eaten and wantonly destroyed some barley crops in the jurisdiction,” and a respected local lawyer was appointed to defend them.<sup>249</sup> The rats failed to appear in court, and their lawyer resorted to a series of procedural arguments, eventually succeeding in getting the suit dismissed because the rats were never properly given notice of the complaint.<sup>250</sup> The case made the lawyer famous, earning him “a formidable reputation as a criminal defense attorney.”<sup>251</sup>

To modern ears, steeped in the values and attitudes of the enlightenment and, more recently, legal realism, these proceedings sound fanciful, or even insane. For Ewald, this is the very point of talking about them. Ewald was interested in asking a broader series of questions about the project of comparative law, by illustrating the extreme difficulty of understanding the thinking of Western Europeans as recently as 500 years ago. They are relevant here for a different reason: not to imply that due process should be afforded to hurricanes, but rather to suggest that lawsuits need not have any possibility of offering “relief” in the traditional sense to have a purpose, and to raise the possibility that perhaps suing a hurricane would not be completely insane after all. Indeed, one of the possible explanations for the widespread and serious prosecutions of animals that Ewald puts forward is that, like deodands, they were intended “to give comfort to the soul of the victim” and “to restore calm to a troubled community.”<sup>252</sup>

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246. *Id.* (citing 2 FREDERICK POLLOCK & FREDERIC WILLIAM MAITLAND, *THE HISTORY OF ENGLISH LAW* 473–74 (1895)).

247. See William Ewald, *Comparative Jurisprudence (1): What Was it Like To Try a Rat?*, 143 U. PA. L. REV. 1889, 1898–1916 (1995); Walter Woodburn Hyde, *The Prosecution and Punishment of Animals and Lifeless Things in the Middle Ages and Modern Times*, 64 U. PA. L. REV. 696 (1916); EDWARD P. EVANS, *THE CRIMINAL PROSECUTION AND CAPITAL PUNISHMENT OF ANIMALS* (1906).

248. See Ewald, *supra* note 247, at 1898–1901.

249. *Id.* at 1898.

250. *Id.* at 1898–99.

251. *Id.* at 1899. Ewald notes that the lawyer went on to write a respected treatise on the excommunication of insects and continued to represent animals with the same skill and attention he devoted to his human clients over the course of an illustrious career. *Id.* at 1900.

252. *Id.* at 1914, 1939.

A useful modern analogy might be the emerging practice of restorative justice. Although notoriously hard to define, restorative justice is an approach to criminal justice that rejects punitive incarceration in favor of some alternative approach, often characterized by a meeting or gathering in which victims of crime confront perpetrators of crime in an effort to heal the wrong that has occurred.<sup>253</sup> There are today at least four major strands of restorative justice, each to some degree incompatible with the others both in theory and in practice.<sup>254</sup> The form most applicable here is the “psychotherapeutic” strand, which sees “restoring the victim of a harm to a healthful state of psychological well-being [as] *the* fundamental act of restorative justice.”<sup>255</sup> Underlying this approach are lessons from the psychology of trauma, which sees trauma as the result of “the faltering or breaking of protective cognitive assumptions,” calling for recovery via “a process of narrative self-empowerment.”<sup>256</sup> What is needed, according to this subset of the restorative justice literature, is a process that allows victims to “rebuild assumptive worlds shaken by the traumatic experience” with techniques like truth-telling, empowerment, and narrative.<sup>257</sup>

The psychotherapeutic restorative justice literature tends to rely on the physical edifice as a metaphor, and the frequent talk of breaking down and rebuilding hints at how applicable these ideas are to the context of recovery from natural disasters.<sup>258</sup> Homes and communities are both crucial aspects of people’s cognitive landscapes, and seeing them destroyed often causes

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253. See Joseph Robinson & Jennifer Hudson, *Restorative Justice: A Typology and Critical Appraisal*, 23 WILLAMETTE J. INT’L L. & DISP. RESOL. 335, 335–39 (2016).

254. *Id.*

255. *Id.* at 348.

256. *Id.* at 349.

257. *Id.* at 349–50.

258. One technique being used in an effort to prevent mental health problems in the wake of natural disasters is called “debriefing.” It involves small groups of people involved in the disaster meeting in a single session to share individual feelings and experiences. DAVID KINCHIN, A GUIDE TO PSYCHOLOGICAL DEBRIEFING: MANAGING EMOTIONAL DECOMPRESSION AND POST-TRAUMATIC STRESS DISORDER 43–63 (2007); see also Maria R. Volpe, *Restorative Justice in Post-Disaster Situations: Untapped Potential*, 8 CARDOZO J. OF CONFLICT RESOL. 611 (2007) (noting the possibility of using restorative justice to help heal anger towards other people that often flares up in the wake of disaster, such as anger towards American Muslims in the wake of the 9/11 terrorist attacks or towards FEMA in the wake of Hurricane Katrina, but not exploring the idea of using restorative justice to redirect anger towards natural disasters themselves).

trauma.<sup>259</sup> Viewed in this light, rebuilding can be part of a process of cognitive repair as well as a kind of retribution. Restorative justice suggests that proceedings focused on empowering victims through techniques like narrative might help lessen the need to use physical rebuilding as a means of psychological restoration.

Perhaps, in the wake of major floods, allowing people to sue the storm would have similar effects. Like a French town suing rats for eating its harvest, a town destroyed by a flood might find some solace in airing its grievances against the unthinking, unfeeling forces of nature. There is certainly value in having an opportunity to tell one's story, and a government that takes the time to listen to that story suggests by doing so that what one has to say matters. To be clear, this Article does not propose that the court system be enlisted to entertain lawsuits filed against hurricanes. But some sort of governmental forum dedicated to the gathering of evidence of the impacts of climate change would perhaps make a difference. One idea would be to create a standing congressional inquiry commission like the Financial Crisis Inquiry Commission or the 9/11 Commission, tasked with collecting and recording evidence and suggesting remedies on an ongoing basis. Such an institution would provide an outlet for the anger people feel towards hurricanes while also creating an opportunity for the expressive elements of revenge.

### *B. Culture, Relocated*

If rebuilding is expressive of a set of cultural commitments—individualism, resiliency, and membership in a community—and forbidding rebuilding is expressive of a competing set of cultural commitments—efficiency and harm prevention—disputes over retreat can begin to seem intractable. Cultural cognition theory, however, suggests ways in which these competing worldviews can be reconciled to reach compromise solutions. Of overriding importance is “social meaning overdetermination.”<sup>260</sup> Instead of trying to drain all cultural meaning out of a particular regulatory approach by, for instance, treating it as objectively optimal in light of some set of empirical data, cultural cognition theory suggests that we should try to pack it full of social meaning so that competing groups can “find their values and hence their identities affirmed by it.”<sup>261</sup>

Kahan and co-author Donald Braman illustrate these ideas by recounting the history of the Native American Graves Protection and

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259. AM. PSYCHIATRIC ASS'N, DIAGNOSTIC AND STATISTICAL MANUAL OF MENTAL DISORDERS (3d ed., rev. 1987) (noting that Post-Traumatic Stress Disorder (“PTSD”) can be caused by the “sudden destruction of one’s home or community”).

260. See Braman & Kahan, *supra* note 35, at 587.

261. *Id.*; Verchick, *supra* note 182, at 982–83, 987.

Repatriation Act (“NAGPRA”), which resolved a bitter dispute over the custody of Native American remains between scientists who wanted to study them and tribes who wanted their sanctity respected.<sup>262</sup> The legislation eventually allowed tribes to grant or withhold consent for the remains to be retained by museums and anthropologists, thus affirming their significance for tribes and the legitimacy of the tribes’ claim to them while also allowing scientists to obtain consent and to delay returning the items if they play an important role in a particular scientific study.<sup>263</sup>

How can measures formulated to implement retreat be designed so that they incorporate multiple social meanings and affirm the cultural worldview of those who would strongly prefer to remain where they are? As with NAGPRA, part of the answer should be to affirm the value of the lives people lived in high-risk communities as well as legitimize the values that might lead them to oppose governmental efforts to force them out of their homes. Adversarial proceedings can have some of this effect, as they legitimize the anger people feel toward the forces that have destroyed so much of value to them and demonstrate a societal concern for their losses. Demonstrating respect for the particular communities at issue can be done in a variety of ways, including resettling them intact and memorializing them when they are destroyed by storms.<sup>264</sup> It is also possible that retreat measures could be crafted in such a way as to affirm the attitudes about the role of government and individual responsibility that underlie some opposition to them.

### *1. Resettlement*

One way in which governments may be able to make retreat palatable is by moving entire communities essentially intact. This process is known as “resettlement,” as distinguished from relocation, which involves

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262. Braman & Kahan, *supra* note 35, at 588–95.

263. *Id.* at 592–93. The provisions of the Act were the product of the Panel for a National Dialogue on Museum/Native American Relations, which convened top scientists and tribal leaders and spent a year conducting meetings and drafting a report with its recommendations. See REPORT OF THE PANEL FOR A NATIONAL DIALOGUE ON MUSEUM/NATIVE AMERICAN RELATIONS, Feb. 28, 1990, *reprinted in* 24 ARIZ. ST. L.J. 487 (1992).

264. Other strategies emphasized by cultural cognition theory include emphasizing local benefits of climate change adaptation, consciously engaging local communities, and relying on local—as opposed to national—experts in communicating about risk. Verchick, *supra* note 182, at 1010–13 (discussing adaptation efforts initiated in the wake of the 2008 flooding in Iowa).

individuals moving piecemeal.<sup>265</sup> By resettling whole communities, governments help counter several of the harms associated with disasters, affirming their value in a few senses. Resettling communities necessarily implies an appreciation of their worth, in sharp contrast with simply outlawing rebuilding, which implies that the larger polity has no need of and would be better off without the community in question. Resettling communities intact suggests that the connections among members of the community, their shared relationships and culture, have value that should be preserved. It also serves to counter some of the equality harms associated with flooding. Although flooded areas receive the message that they are “less than” their drier neighbors—less deserving of protection, less able to afford drier locations, less prudent in selecting where to live—governments that relocate communities send the signal that allowing them to flood repeatedly is not acceptable. Resettlement and all the expense and attention it entails implies that a community is worth protecting, maintaining, and preserving. It is a gesture of respect.

Resettlement has a spotty record. In May 2016, residents of the tiny community of Isle de Jean Charles, Louisiana were hailed as the “First American Climate Refugees” when they agreed to move away from their tiny sliver of land and resettle in an entirely new community farther from the coast.<sup>266</sup> The community, first settled in the early nineteenth century, is composed almost entirely of members of the Biloxi-Chitimacha-Choctaw tribe, and the idea of creating a new community in a safer location was important to them: “We consider ourselves lucky because we want to put our community together again,” the tribe’s chief said.<sup>267</sup> “We know that nobody wants to leave, but it’s about staying together.”<sup>268</sup> Although a final site has not yet been chosen, plans call for the construction of a new village designed in accordance with traditional tribal architecture and with enough capacity to welcome back members of the community who have moved away from Isle de Jean Charles in past decades but would like to return.<sup>269</sup>

Still, the magnitude of the success should not be overstated. The community is already little more than a shadow of its former self. It has lost

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265. DALBOM ET AL., *supra* note 190, at 4.

266. Davenport & Robertson, *supra* note 110; *see also* Lauren Zanolli, *Louisiana’s Vanishing Island: The Climate ‘Refugees’ Resettling for \$52m*, *GUARDIAN* (Mar. 15, 2016), <https://www.theguardian.com/environment/2016/mar/15/louisiana-isle-de-jean-charles-island-sea-level-resettlement> [<https://perma.cc/4Y43-UPCA>].

267. Zanolli, *supra* note 266.

268. *Id.*

269. *Id.*

98% of its land since 1955, and its population has already dwindled from a peak of 400 residents to about 85 residents.<sup>270</sup> The only road to the community routinely floods, cutting it off completely from the outside world, and many homes have already been destroyed by hurricanes.<sup>271</sup> Meanwhile, the idea of resettling the town has been debated for well over a decade; residents voted against similar proposals in 2002 and 2009.<sup>272</sup> Even the current decision does not require residents to leave, and several insist that they will remain where they are.<sup>273</sup> The cost of resettlement is also a concern. The project is funded by a federal grant of \$48 million to resettle less than 100 people, far more than it would cost to condemn all the property in the town.<sup>274</sup>

Although Isle de Jean Charles may be the first community resettled because of climate change, it is not the first community that has been moved to avoid floods. In 1978, the entire town of Allenville, Arizona was moved after disastrous flooding.<sup>275</sup> So was Valmeyer, Illinois, which was flooded by the Mississippi River in 1993 and subsequently relocated atop a bluff two miles away.<sup>276</sup> In both cases the resettlement was made possible by federal funding, and in both cases the resettled communities were located in rural areas and were able to move to higher ground nearby.<sup>277</sup> Notably, not all of the communities that were flooded in 1993 relocated like

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270. *Id.*

271. *Id.*

272. Residents of Shaktoolik, Alaska, a 250-person town that sits on a rapidly disappearing barrier island and faces periodic flooding from storm surges, also recently decided not to relocate to higher ground. The town's mayor explained that they would "stay and defend." Erica Goode, *A Wrenching Choice for Alaska Towns in the Path of Climate Change*, N.Y. TIMES (Nov. 29, 2016), <http://nyti.ms/2gDjuqL> [<https://perma.cc/E6RJ-97PW?safari=1>]. Shishmaref, a small Inupiat community in Alaska that also sits on a barrier island, recently voted to relocate to a new site five miles inland. The vote was 89 to 78. Christopher Mele & Daniel Victor, *Reeling from Effects of Climate Change, Alaskan Village Votes to Relocate*, N.Y. TIMES (Aug. 19, 2016), <http://nyti.ms/2bmfTx5> [<https://perma.cc/4MUK-UMVX?safari=1>]; see also Robin Bronen, *Climate-Induced Community Relocations: Creating an Adaptive Governance Framework Based in Human Rights Doctrine*, 35 N.Y.U. REV. L. & SOC. CHANGE 357, 373–92 (2011) (describing challenges involved in effort to relocate Newtok, Alaska).

273. Davenport & Robertson, *supra* note 110.

274. *Id.*

275. DALBOM ET AL., *supra* note 190, at 7–8.

276. *Id.* at 7–9.

277. *Id.*



Valmeyer. Chesterfield, Missouri experienced a post-flood development boom.<sup>278</sup>

Given this history, it is hard to see resettlement as a scalable solution to the problem of rising seas. Even tiny, close-knit communities facing already-dire loss of land have had trouble agreeing to move. The cost of constructing new communities is also high and it is likely to be more feasible in some areas than in others. Finding a site for the new community of Isle de Jean Charles in rural southern Louisiana may not be an insurmountable obstacle; it is harder to know where communities along the more densely populated East Coast, like Tangier Island in Chesapeake Bay, could be placed. It is also difficult to know how resettlement could be applied to urban areas like New Orleans or Miami.

Still, resettlement should be thought of as one of the tools governments can use to foster politically palatable retreat, at least in certain limited circumstances. From the perspective of residents, resettlement is preferable because of the continuity it offers and the values it conveys.<sup>279</sup> From the perspective of governments, it presents a way of moving constituents to safety without losing them altogether.<sup>280</sup> But the national scope of the problem will require more tools.

## 2. Memorials

When governments cannot feasibly resettle communities wholesale, they may have to consider other ways of providing some of the emotional salve of rebuilding while enforcing a policy of retreat. Memorials can be a form of social meaning overdetermination in that they provide affirmation of the value of victims' communities and ways of life. This affirmation could make some form of retreat more palatable. Memorials can be powerful expressions of societal judgment about important events. By honoring the dead, memorials demonstrate the value of lives lost and the merits of the cause for which they perished, or the unacceptability of the cause of their death. There is no national memorial to the victims of traffic accidents, of which there are about 30,000 every year, but the names of the roughly 3,000 victims of the 9/11 terrorist attacks are etched in

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278. *Id.*; KLEIN & ZELLMER, *supra* note 184, at 130–31.

279. *See, e.g.*, Davenport & Robertson, *supra* note 110 (noting that resettlement allows people to be moved away from flood zones “without tearing communities apart”).

280. DALBOM ET AL., *supra* note 190, at 49 (“[T]he easiest option for all stakeholders is to do nothing. This is the default. It is the disorganized scattering of people out of coastal communities to who-knows-where.”).

bronze at a memorial located on the spot where most of them died.<sup>281</sup> This is because society views the risk of dying in a car crash as an acceptable fact of modern life, worth the gains in time and convenience from driving around in cars, but the risk of even a single American dying in a terrorist attack is regarded as unacceptable.<sup>282</sup> The message is not quite that victims did not die in vain, which Americans are often inclined to say about those who die fighting in wars, but that their deaths will be marked off as distinct from all other deaths, uniquely wrong and uniquely unacceptable.<sup>283</sup> In this sense, a memorial can also be seen as an act of revenge, or at least part of a process of revenge.<sup>284</sup> Like violent revenge, memorials mark what occurred as wrong and thereby elevate those who were wronged, restoring a measure of status when there is no way to restore the most important loss: a life.

On a less theoretical level, the 9/11 memorial provides a good illustration of the level of society's concern for the victims and the way in which their deaths will be remembered. The debate over whether and how to rebuild the Twin Towers began almost as soon as they were destroyed.<sup>285</sup> The office buildings that would replace the World Trade Center and the memorial that would honor the victims were the subject of international design competitions, which drew entries from all over the world.<sup>286</sup> The memorial eventually included the names of all the victims, listed not alphabetically but according to "meaningful adjacencies" designed to

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281. See 9/11 MEMORIAL & MUSEUM, <https://www.911memorial.org/memorial> (last visited Nov. 12, 2017) [<https://perma.cc/N4XN-8Z54>].

282. See HARRIET F. SENIE, MEMORIALS TO SHATTERED MYTHS: VIETNAM TO 9/11, at 7 (2016) ("The question of which category of victim deserves a monument is fundamentally political, and the answer depends on the meanings that society assigns to their trauma. The severity of the trauma is not the crucial factor, but rather its collective significance.").

283. See *id.*; DAVID SIMPSON, 9/11: THE CULTURE OF COMMEMORATION ("It is conventional to dignify the dead, to disguise any sense that death may be without meaning or purpose."); JOHN BODNAR, REMAKING AMERICA: PUBLIC MEMORY, COMMEMORATION, AND PATRIOTISM IN THE TWENTIETH CENTURY 3–9 (1992) (describing the movement to create a Vietnam veterans memorial as a way to correct "the attitude of many Vietnam veterans that the nation had betrayed and neglected them after their return home").

284. Edward T. Linenthal, *The Predicament of Aftermath: Oklahoma City and September 11*, in THE RESILIENT CITY: HOW MODERN CITIES RECOVER FROM DISASTER 55, 64–65 (Lawrence J. Vale & Richard Campanella eds., 2005) ("[S]uch memorials are acts of protest as much as acts of remembrance . . .").

285. SIMPSON, *supra* note 283, at 226.

286. *Id.* at 79 (noting that the memorial competition drew 5,201 entrants from 63 countries).

capture the real-life connections between the dead. The adjacencies were determined partially by an algorithm designed for the purpose and also in response to some 1,200 individual requests, all of which were accommodated.<sup>287</sup>

There is, by contrast, no national memorial to the victims of Hurricane Katrina. The city of New Orleans's official Hurricane Katrina memorial is located in a cemetery.<sup>288</sup> Designed by a local coroner, it holds the bodies of about 80 people whose remains were either unidentified or unclaimed after the storm.<sup>289</sup> In the center is a simple granite plaque bearing a few paragraphs of information about the storm.<sup>290</sup> On a neutral ground in the Lower Ninth Ward, another memorial consists of vertical blue pillars marking the depth of floodwaters.<sup>291</sup> Some memorials have been more pointed in assigning responsibility for the flooding. Standing in the water in the middle of the Mississippi River Gulf Outlet, a navigation channel created by the Army Corps of Engineers in 1965 that helped funnel Hurricane Katrina's storm surge into New Orleans, is a large, elaborately decorated metal cross.<sup>292</sup> A local non-profit formed after the storm to advocate for stronger levees is in the process of installing a series of historical markers at the site of various levee breaches. The non-profit's first marker, at the 17th Street Canal, is pointed in its criticism of the Corps.<sup>293</sup> Whatever one might say about the various Hurricane Katrina

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287. SENIE, *supra* note 282, at 158.

288. The memorial is so obscure that it was featured in a segment on the local ABC affiliate entitled "The Katrina memorial you don't know about." See *The Katrina Memorial You Don't Know About* (WGNO ABC television broadcast Aug. 12, 2015), <http://wgno.com/2015/08/11/the-katrina-memorial-you-dont-know-about> [<https://perma.cc/WZ6X-XM9C>].

289. *See id.*

290. *Id.*

291. Sara Le Menestrel, *Memory Lives in New Orleans: The Process and Politics of Commemoration*, in *HURRICANE KATRINA IN TRANSATLANTIC PERSPECTIVE* 153, 161–62 (Romain Huret & Randy J. Sparks eds., 2014).

292. Benjamin Alexander-Bloch, *At Katrina St. Bernard Memorial Remembering the Dead, Many Want to Forget*, *TIMES-PICAYUNE* (Aug. 29, 2015), [http://www.nola.com/katrina/index.ssf/2015/08/katrina\\_memorial\\_shell\\_beach.html](http://www.nola.com/katrina/index.ssf/2015/08/katrina_memorial_shell_beach.html) [<https://perma.cc/Z66Y-GAEJ>].

293. The marker reads in part:

This breach was one of 50 ruptures in the Federal Flood Protection System that occurred that day. In 2008, the US District Court, Eastern District of Louisiana placed responsibility for this floodwall's collapse squarely on the US Army Corps of Engineers; however, the agency is protected from financial liability in the Flood Control Act of 1928.

memorials that currently exist, it is clear that they do not represent a kind of national accounting in the way the 9/11 memorial does.

Would a more concerted effort at memorialization in the wake of natural disasters help create a sense of repair for victims, lessening the drive to rebuild? There is reason to think so.<sup>294</sup> If opposition to retreat is partially driven by the disrespect it expresses toward a community or way of life, then memorialization can act as a powerful counterweight. Memorials like those constructed after wars can also help cast losses as tragically permanent alterations in our lives rather than temporary setbacks to be overcome. Undertaking this effort might mean establishing memorials to the victims of particular disasters, such as Hurricane Katrina. It might also mean building a national memorial to those displaced by climate change.<sup>295</sup>

Of course, it is hard to make the strong causal claim that a Hurricane Katrina memorial would have made some discrete number of individuals willing to relocate rather than rebuild. The power of memorials lies in their ability to help shape the way a culture responds to loss. Post-flood memorials could thus be one tool, along with rhetorical strategies like not personifying hurricanes and renaming “retreat,” in the broader, nascent effort to reshape our cultural response to catastrophic floods. What is needed is a normalization of the idea that some coastal areas will disappear and that nothing can be done to save them. Using the cultural tools often brought to bear in the wake of tragedy might help further this vitally important project.

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*Historic Plaque Program*, LEVEES.ORG, <http://levees.org/historic-plaque-program/> (last visited Oct. 21, 2017) [<https://perma.cc/CBH4-BS5Z>].

294. See *Funerals and Memorials: A Part of Recovery*, CTR. FOR THE STUDY OF TRAUMATIC STRESS, [https://www.cstsonline.org/assets/media/documents/CSTS\\_funerals\\_memorials.pdf](https://www.cstsonline.org/assets/media/documents/CSTS_funerals_memorials.pdf) (last visited Nov. 12, 2017) (noting that memorials “provide an opportunity to show appreciation for the person, to grieve together, and to make a new beginning”) [<https://perma.cc/KS9G-YD8W>].

295. One intriguing possibility is the design that recently won the “Memorials for the Future” competition sponsored by the National Park Service. Entitled “Climate Chronograph,” the memorial would consist of cherry trees planted in a low-lying public park in Washington, D.C., that would die off in successive rows as they were poisoned by salt water from rising seas. See Erin Blakemore, *What Will the Memorials of the Future Look Like?*, SMITHSONIAN (Sept. 13, 2016), <http://www.smithsonianmag.com/smart-news/what-will-memorials-future-look-180960401/> [<https://perma.cc/79FW-MNJQ>].

*C. Resistance, Redirected*

If rebuilding is in some circumstances an act of resistance against governmental neglect, endangerment, and eviction, then it can begin to look like a form of false consciousness. Flood victims who insist on rebuilding in defiance of governmental efforts to get them to leave may express anger towards the storms that destroyed their homes and the government that would like to keep them from coming home, but rebuilding often simply recreates the risk that harmed them in the first place. Anger could more productively be directed at holding the government to account.

Unfortunately, sovereign immunity almost entirely forecloses lawsuits against the federal government for causing or contributing to the harms associated with floods. The Flood Control Act of 1928 indemnifies the federal government for flood damage related to the construction of levees, no matter how negligent.<sup>296</sup> Plaintiffs in New Orleans appeared to have found a way around this bar when they sued the Corps of Engineers for negligently maintaining the Mississippi River Gulf Outlet, a navigation canal, rather than a flood control structure, which was found to have funneled Hurricane Katrina's storm surge into the city and thus contributed to the flooding.<sup>297</sup> Nevertheless, the negligent maintenance of the canal was eventually held to fall within the discretionary function exception to the Federal Tort Claims Act, barring the plaintiffs' case as a matter of sovereign immunity.<sup>298</sup> The various shortcomings in the federal government's response to the storm would seem to enjoy the same protection.<sup>299</sup>

Setting aside sovereign immunity for the harms associated with flood damage—in addition to helping make victims whole financially—would provide a forum in which victims' anger could be channeled against the government for failing to keep them safe rather than for trying to make them safer by moving them to less risky areas. Lawsuits that aim to assign

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296. 33 U.S.C. § 702c (2012).

297. See *In re Katrina Canal Breaches Consol. Litig.*, 647 F. Supp. 2d 644 (E.D. La. 2009).

298. See *In re Katrina Canal Breaches Consol. Litig.*, 696 F.3d 436 (5th Cir. 2012). Somewhat bizarrely, the same Fifth Circuit panel had written a different opinion affirming the decision below in favor of the plaintiffs six months earlier. *In re Katrina Canal Breaches Consol. Litig.*, 673 F.3d 381 (2012). A separate case proceeding on a takings theory has so far enjoyed more success. *St. Bernard Parish Gov't v. United States*, 121 Fed. Cl. 687 (Fed. Cl. 2015), *appeal docketed*, No. 16-2301 (Fed. Cir. Jul. 6, 2016).

299. See *Armstead v. Nagin*, No. 05-6438, 2006 WL 3861769, at \*5–6 (E.D. La. Dec. 29, 2006) (dismissing suit against President Bush, among others, for failure to provide timely assistance after Hurricane Katrina).

responsibility for flood damage to particular governmental policies also highlight the government's shortcomings, shaping public discourse even when they do not succeed in court.<sup>300</sup> They might thus help victims shift their focus away from needing to claim a victory over the forces of nature by rebuilding and toward seeking a victory over those human actors who have contributed to the risk they face in a variety of ways.

#### CONCLUSION

The United States faces a staggering task over the next century: managing the inundation of the homes of between 4 and 13 million people.<sup>301</sup> Even though the effects of sea level rise are already beginning to be felt, there has so far been no implementation of a policy of retreat at any meaningful scale. One of the key obstacles standing in the way of safer housing patterns is the intense desire to rebuild in the wake of major floods. Understanding and addressing the roots of this impulse is of crucial importance if regulatory approaches to retreat are to be implemented successfully. Although there is no single analysis that applies to every individual in every situation, the impulse to rebuild can be seen as a form of revenge, culture, and resistance. Appreciating these aspects of rebuilding highlights the importance of the various messages it sends and suggests ways in which those same restorative messages might be sent without helping people move right back to the water's edge.

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300. Perhaps owing in part to the litigation discussed above, closing the Mississippi River Gulf Outlet became a *cause celebre* in the years following Hurricane Katrina. It was eventually blocked off by a berm in July 2009. See Bob Warren, *MR-GO Going: Closure of Waterway Begins*, TIMES-PICAYUNE (Jan. 30, 2009), [http://www.nola.com/news/index.ssf/2009/01/mrgo\\_going\\_closure\\_of\\_waterway.html](http://www.nola.com/news/index.ssf/2009/01/mrgo_going_closure_of_waterway.html) [<https://perma.cc/5CM3-U88T>]; Martha Carr, *Mississippi River Gulf Outlet Now Blocked with 352,000 Tons of Rock*, TIMES-PICAYUNE (July 24, 2009), [http://www.nola.com/news/index.ssf/2009/07/tp\\_archivethe\\_us\\_army\\_corps.html](http://www.nola.com/news/index.ssf/2009/07/tp_archivethe_us_army_corps.html) (“[M]any elected officials and residents of St. Bernard Parish, eastern New Orleans and the 9th Ward loudly criticized the waterway as the cause of the deadly flooding that decimated the region.”) [<https://perma.cc/S5VG-VGCR>].

301. See *supra* note 19 and accompanying text.