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## The Case for Retreat

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*Most people say, "I'm not leaving." You know, it's what Americans do: they wave a flag and say, "We are strong, we'll persevere, we'll build it back, we'll be better, we'll be stronger." [But] we knew different. We knew different.*

—Member of the Oakwood Beach Buyout Committee,  
Staten Island, New York (July 2013)

“I issue a challenge to anyone here to come up with a better word than *retreat*.” These words, uttered in a glass-walled conference room in Lower Manhattan in early 2015, rouse predictable laughter from the audience of urban planners, policy makers, real estate developers, and academics, assembled here for a roundtable discussion of strategies to adapt the New York City region to climate change. “Retreat is like defeat,” a man’s voice intones to murmurs of assent. “People do not want to give up their homes,” the first speaker acknowledges. There are nods all around. The conversation moves on. *Retreat*, I

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hear again and again in meetings like this, is a bad word for an unpopular, if not unthinkable, concept. To suggest that people move away from the water is, I am repeatedly told, “politically toxic,” “infeasible,” and even “impossible.”

This is common sense, something I too would once have hesitated to question. Retreat, it seemed to me, was likely to play out as an all-too-familiar story of government-planned relocation proceeding against the will of people forced to move. But nearly two years to the day prior to that roundtable in Manhattan, I attended a community meeting in another New York City borough, Staten Island, which upended my assumptions. Just over four months had passed since Hurricane Sandy struck the city, killing forty-four people—all but one of them on Staten Island’s south shore. The storm ravaged the homes of thousands more, those at this meeting among them. To my surprise, though, the mood at the meeting belied the recent devastation. People were anxious, yes, but many were smiling. There was a palpable sense of relief and even optimism. Several times, people referred to themselves as “blessed” and others agreed. They were blessed, they said, because New York State governor Andrew M. Cuomo had announced that he would support a home buyout program on Staten Island. Should enough homeowners in a neighborhood agree, the state would purchase and demolish their damaged houses and restore the wetlands that once flourished along much of the city’s coastline. While many south shore homeowners had lived in these neighborhoods for decades, if not generations, this meeting established that at least some of them were prepared to give up their waterfront property so that it could become public land and provide protection from future storms. In other words, these homeowners were ready to retreat.

So too, it turns out, were hundreds of other homeowners on Staten Island, where residents organized their own “buyout groups” after Sandy to lobby for parts of at least eight different neighborhoods to be unbuilt. But Staten Islanders seeking a move to higher ground were fighting an uphill battle. Aside from Cuomo, most political leaders refused to acknowledge retreat as a possibility, let alone a necessity, and dismissed those who wanted buyouts as anomalous, out of step with the city at large. “The only place where more than just a small handful want to relocate is a couple of communities on Staten Island,” said Senator Charles Schumer. “Otherwise just about everybody—you take Nassau, Suffolk, Queens—they all want to rebuild and come back, and I think that’s great. That shows the spirit of New York” (quoted in Kaplan 2013). Then mayor Michael R. Bloomberg spoke similarly at the launch of the city’s climate change adaptation plan the summer after Sandy. In his speech, Bloomberg (2013) was adamant: “As New Yorkers, we cannot and will not abandon our waterfront. It’s one of our greatest assets. We

must protect it, not retreat from it.” He surveyed many “layers of defense”—nearly \$20 billion worth—proposed for the city, but gave no mention to the more than twenty-five hundred New Yorkers who had already formally preregistered their interest in a state buyout (New York State Homes and Community Renewal 2013: 20). For those who wanted to move to higher ground, retreat was not an abandonment of the waterfront, as Bloomberg put it, but rather an investment in it, one that would strengthen its natural resources while assuring the recovery and long-term safety of its present inhabitants.

Although retreat, often called “managed retreat,” remains on the fringes of conversations about climate change adaptation, people throughout the world are already moving away from the water out of fear or necessity. There are many more who want to move but lack the resources to do so, from New York City’s Staten Island to Papua New Guinea’s Carteret Islands (Edwards 2013), from Panama (Displacement Solutions 2014) to Alaska (Shearer 2012). In each of these places, groups of residents are working to organize their own retreat from environments they perceive as uninhabitable. Despite vastly different circumstances, these residents are engaged in a similar struggle for recognition and support from, paradoxically, the very governments and institutions responsible for planning, implementing, and managing retreat once it becomes necessary. Government officials with the power to plan retreat tend to dismiss it as an option to be averted at any cost, however. Retreat, for them, is not a valuable adaptation strategy but a useful threat to encourage alternate courses of action, such as timely reductions in greenhouse gas emissions or investments in the “hard” defenses of levees and seawalls.

In this article, I contrast dominant official representations of retreat as marginal, unpopular, and infeasible with existing cases of collective movement away from rising waters that demonstrate just the opposite. First, I define *retreat* and address the core concerns that make many officials hesitate to talk about it. I then situate retreat in relation to an emerging body of research on relocation and climate change, before delving into cases of collective retreat in Valmeyer, Illinois, after the Great Midwest Flood of 1993, and in Oakwood Beach, Staten Island, after Hurricane Sandy in 2012. I have selected these cases because they are counter-intuitive, serving to challenge common misconceptions about retreat. Some of these misconceptions are geographical: namely, that climate-related migration is a phenomenon external to the United States and that if retreat does occur, it will be confined to peripheral sites on coastal edges. Some of these misconceptions are political and social: that retreat will be a top-down process, one inevitably resisted by local communities. And some of these misconceptions are cultural: that retreat equals failure and defeat, while conquest and growth equal progress.

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For the long-standing communities of Valmeyer and Oakwood Beach, by contrast, retreat proved an empowering process and a remarkable achievement, even as it entailed loss.

Nearly twenty years apart, these cases reveal how the growing awareness of climate change alters the meaning of this kind of collective movement. When Valmeyer moved to higher ground it was neither called retreat nor understood as a response to climate change. Rather than taken as a sign of defeat, Valmeyer's relocation was represented as progress and as a patriotic act. Two decades later, when Sandy devastated Staten Island, to move away from the water was instead represented as capitulation. Political speeches and media coverage portrayed retreat as an admission of weakness rather than as a show of strength in the face of irreversible climate change. Retreat is a powerful and controversial concept whose cultural and political significance will grow as the planet warms and the seas rise, and it is already a valuable and necessary addition to the language of climate change adaptation. Without taking retreat seriously as a concept, strategy, and existing practice, meaningful conversation and action around climate change adaptation will continue to prove illusory. Understanding community-organized relocation efforts as forms of retreat unifies this emerging practice with other social movements and political projects that seek more sustainable ways of settling on earth.

**Defining Retreat**

The term *managed retreat* once referred primarily to ecological rather than social change. When a shoreline retreats due to erosion or sea level rise, one option is to manage that retreat instead of attempting to prevent it. In this context, managing retreat means removing hard coastal defenses to create space for the coastline to move, for water to come in, and for intertidal habitats such as wetlands and salt marshes to flourish. These habitats in turn can provide "soft" defense by acting as sponges and buffering storm surge. Retreat is an established coastal management strategy in rural and agricultural areas, and it is now also being debated as a strategy to adapt to climate change in more densely populated places. Hence, *retreat* increasingly refers to the relocation of people to higher ground and associated efforts to plan and manage that movement. In practice, however, this often means restricting movement as much as facilitating it.

Government officials who resist retreat share core political, social, and economic concerns. Retreat is distinct from other kinds of climate-related migration in that it entails not just relocating a group of people but also unbuilding land

and returning it to nature in perpetuity. Relocation on its own is a politically and socially fraught process, though this has not stopped governments from forcing people to move for countless development and regeneration projects in the name of economic and social progress. With retreat, it is thus the latter act of unbuilding that stirs special fears, even as evidence suggests that those fears are misguided. Local officials in the United States, for instance, fear lost income from property taxes on top of the added costs of maintaining acquired land as open space. But residential development is itself an expense that easily outweighs its presumed economic benefits, because the cost of providing services for more people is greater than the additional taxes they pay. Restoring open space, meanwhile, increases adjacent property values and provides numerous other economic, social, and health benefits, particularly in otherwise dense urban areas (Active Living Research 2010), not to mention the extensive savings that result from mitigating flood damage.

For governments, buying people out once is a far more effective and less expensive means of flood protection than building and maintaining structural defenses, such as levees and seawalls, that will become obsolete as floods worsen and sea levels rise.<sup>1</sup> Hard defenses, moreover, have been shown to increase rather than decrease the costs of flooding, since the sense of safety they provide works to attract further development (the so-called levee effect), ultimately placing more people and property at risk. These defenses also have negative impacts on the environment and on neighboring areas to which they displace water (Tobin 1995). Despite these costs, many officials treat unbuilding land and removing it from the market as the greater risk, though the profits to be gained from remaining in dangerous places are more uncertain and short-lived than the rewards of retreating from them are (Jacob 2015; Polefka 2013).

Even if officials and the general public were to appreciate the numerous benefits of retreat, concerns would persist that it is too costly to support the movement of vast numbers of people living in places vulnerable to the effects of climate change. To succeed, retreat certainly requires substantial government financing and organizational support in conjunction with grassroots efforts, both at the site of retreat itself and in the communities to which people relocate. At the same time, concerns about costs may be overstated. Estimates of vulnerable popula-

1. A US Army Corps of Engineers study after the Great Midwest Flood of 1993, for example, found that more than \$6 billion in levee improvements would have been needed to reduce the damage that occurred, compared with a FEMA estimate that \$209 million for voluntary buyouts would have done much the same and done it “with no adverse impact to the environment and without inducing future development” (quoted in Conrad, McNitt, and Stout 1998: 40).

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tions generally incorporate not just those who are most immediately in danger but also those who potentially face longer-term risk. For instance, data on the global population in low-lying coastal zones include everyone living up to ten meters above sea level. But potentially only people within two or three meters of sea level may want or need to retreat from the water in the near future. Estimates that half of the US population lives on the coast count entire coastal counties, whereas only approximately 3 percent of the population actually lives in a high-risk coastal flood zone (Crowell et al. 2010). Retreat also acts to lower the number of vulnerable people beyond those who themselves relocate, by creating a protective buffer zone of open space that reduces risk further inland.

The costs of retreat, though undeniable, are relative and should not be seen as prohibitive. In the United States, there are precedents for voters supporting tax increases to pay for buyouts of local flood-prone property (Conrad, McNitt, and Stout 1998). Meanwhile, every year the government gives billions of dollars in subsidies to the fossil fuel industry, which arguably should be on the hook for at least some of the costs of climate-induced relocation, as the village of Kivalina, Alaska, argued in a recent lawsuit (Siders 2012). Another notion is to fund buyouts by selling development rights in upland areas or transferring them from low-lying land to higher ground (Drake 2013). There are, in short, many ways to make retreat financially viable.<sup>2</sup> A focus on the potential problems of retreat should not outweigh consideration of its possibilities and promise.

Resistance to retreat also stems, however, from deeper concerns that are more conceptual than practical, bound up with the meaning of the word itself. The prevailing definition of *retreat* is a military one: “movement by soldiers away from an enemy because the enemy is winning or has won a battle” (*Merriam-Webster* 2015)—retreat, indeed, as defeat. Etymologically, the earliest meaning of the word *retreat*, dating from around 1300, is “a step backward” (*Online Etymology Dictionary* 2015). Additional definitions cast *retreat* more positively, as a refuge or a spiritual retreat providing a safe place and span of time for reflection. Breaking the word down, *re-* means “back to the original place; again, anew, once more” and *-treat* “an attempt to heal or cure,” making retreat a process of going back, of returning, in order to heal. Contained within the word *retreat*, then, are not solely negative connotations of defeat and loss but also a positive potential for the process of giving in and giving up to prove reparative rather than harmful—particularly as societies begin considering more sustainable forms of settling and organizing.

2. For an overview of legal, policy, and regulatory tools for managing retreat, see Siders 2013.

This affective ambivalence lends *retreat* its rhetorical power and permeates debates over its meaning as a climate change adaptation strategy. In the context of climate change, *retreat* has come to form part of a broader military metaphor: other strategies to respond to flooding and sea level rise include building seawalls to “defend” ourselves or going on the “attack” by building land farther out into the water (Building Futures 2010). Here water is positioned as the immediate enemy; it is less clear whether ultimately the war is being waged against the forces of nature or the forces of anthropogenic (human-caused) climate change. This distinction matters: Does retreat mean giving in to the power of Mother Nature, or does it mean acquiescing to the human forces destroying nature? Is it possible to adapt to a changing climate while still fighting climate change?

The latter question has dogged debates over the relationship between adaptation and mitigation, which aims to curtail climate change by cutting greenhouse gas emissions. At this point, few doubt the need both to adapt to the already ensuing impacts of climate change *and* to minimize future impacts. But these endeavors do not necessarily go hand in hand; as a well-known climate science contrarian once enthusiastically explained to me, “Adaptation is agnostic!”—meaning, regardless of whether people accept that humans are causing climate change, they will want to adapt to its effects.<sup>3</sup>

### Relocation as Adaptation

What constitutes adaptation remains subject to heated debate. Human movement in particular can be taken as both a negative result of climate change and a positive response to it. J. A. G. Cooper and Jeremy Pile (2014) point out that much of what is commonly called “adaptation” in fact works to modify the environment so as to preserve human activities. For instance, they note that in coastal cities “adaptation to climate change is typically viewed simply as a need for better defences to protect human settlements, infrastructure, and activities from future flooding” (ibid.: 92). This approach, they argue, “is better termed ‘resistance’ than ‘adaptation,’” which they instead hold to mean modifying human activities to adapt to a changing environment (ibid.: 90). By this definition, retreat, which couples human relocation with land-use changes, is one of the most adaptive responses to climate change.

Until recently, though, scholars and activists alike framed human move-

3. For a thorough discussion and critique of “agnostic adaptation” in relation to the latest Intergovernmental Panel on Climate Change (IPCC) report, see Kuh 2015.

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ment primarily as a failure to adapt, or even as a kind of maladaptation. Ben Orlove (2005: 599) calls the lack of attention to migration in discussions of climate change adaptation “a striking form of silence” considering the central role migration played for past societies confronted by climate variability (including the United States during the 1930s dust bowl). Migration “lies entirely outside the acceptable range of proposals” for adaptation, Orlove writes, in part because it would “contradict the political frameworks under which the contemporary debate over global warming takes place” (ibid.). Within these frameworks, premised on state sovereignty and national borders, climate migration is treated as a threat to regional stability and global order—as one of the risks posed by climate change rather than as a process with the power to reduce risk (Podesta and Ogden 2007).

Work on migration and climate change has since demonstrated that there is little empirical support for the oft-dire predictions of climate-induced mass movement. Migration, first of all, is not driven by any one force in isolation but depends on a range of social, political, and economic factors as well as environmental ones (Hunter, Luna, and Norton 2015; Tacoli 2009). Second, climate change is more likely to intensify existing patterns of migration than to radically alter them, such that the vast majority of movement will continue to be internal and over relatively short distances rather than international. Third, not all of those people who live in places vulnerable to the effects of climate change will want to move or be able to do so; “migration,” as Cecilia Tacoli (2009: 516) points out, “requires financial resources and social support, both of which may decline with climate change, which may thus result in fewer rather than more people being able to move.” These dynamics, together with the challenge of forecasting the regional- and local-level effects of climate change, make it exceedingly difficult to predict the scale and distribution of population movements that will result, let alone to determine their outcomes based on numbers alone.

The circumstances under which relocation proves adaptive for those who do move remains an open question. Recent studies highlight the benefits of voluntary, temporary migration for individuals and households faced with environmental pressure (Hunter, Luna, and Norton 2015; Tacoli 2009).<sup>4</sup> Little is known, however, about the effects of permanent planned relocation, “a relatively uncharted topic in the context of climate change” (Ferris 2014: 5). In other contexts, though, the devastating consequences of forced relocation are clear, whether this relocation results from disasters (Erikson 1976), urban renewal (Fullilove 2004), or large-

4. For a critique of the promotion of circular migration as a response to climate change, see Felli 2013.



scale development projects such as dams (Weerasinghe et al. 2014). But as climate change renders certain places uninhabitable, relocation plans that enable people to move in advance of disaster offer a positive alternative to sudden displacement (Bronen 2011). The uncertainty that inheres in determinations of whether, or when, a place has become unsafe creates at least some room for agency on the part of those making relocation decisions (Weerasinghe et al. 2014). Yet it is not necessarily or exclusively the people who may have to move who are making these decisions. Retreat depends on support from governments and institutions that have their own interests and stakes in the outcome of climate-related relocation.

### The Politics of Climate-Related Relocation

When people decide to migrate they do so for a range of reasons that extend beyond environmental change. Governments tasked with managing relocation are likewise motivated by a number of factors. While governments and related institutions may develop and implement relocation plans primarily in response to climate change, these plans are also likely to serve other, existing agendas. In the Maldives, for instance, a government-mandated relocation program after a 2004 tsunami served the purpose of “clearing entire areas for tourism,” a use that the government viewed as “more profitable” than the subsistence fishing practiced by present inhabitants (Maldonado 2014: 74). The Maldives government also recently revived a controversial decades-old plan to resettle the population onto a smaller number of islands (Burkett 2015; Kothari 2014). “Environmental exigencies,” Maxine Burkett (2015: 82) explains, “now fuel a plan that was once a strategy based on economic and political pressures.”<sup>5</sup> Planning relocation is not a disinterested act, nor is it one oriented solely toward future environmental conditions. Rather, desire for relocation, both on the part of those seeking to move and of those seeking to manage that movement, arises and gains meaning within a particular political, historical, and cultural context.

This context also determines who is seen as a “climate migrant” and, by implication, as someone whose relocation *needs* to be managed. Carol Farbotko (2012:

5. Relatedly, in New Orleans after Hurricane Katrina, proposals from planners and government officials to return parts of some neighborhoods to open space “were viewed by many as extensions of the old urban renewal policies that had decimated communities around the United States” (Fields 2009: 335). “Public skepticism over current debates about reducing the urban footprint [or] reintroducing wetlands into the city in the form of new urban parks,” write Rachel Breunlin and Helen A. Regis (2006: 744), “is informed by a mindfulness of long histories of urban renewal and interstate highway and park construction, which caused their own form of devastation in mostly black residential neighborhoods.”

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833) points out that managing climate-related migration is presented as “largely a project of managing the poor” rather than managing “those likely to be displaced from their waterfront mansions.”<sup>6</sup> Certainly, climate change will disproportionately affect the poor, who will also need more resources in order to move. But management may serve less as a way to equitably distribute those resources than to restrict migration not deemed profitable, or to enforce it in places inhabited by poorer people, places deemed more valuable when put to another use. As Giovanni Bettini (2014: 187) argues, the growing acceptance of migration as a viable way to adapt to climate change remains premised on the firm belief “that migration flows . . . need to be (if not curbed) ‘combed’ through management.” This management works to differentiate “those able to render their mobility a fruitful investment and those fleeing because of desperation (or unable to move)” (ibid.: 188). Climate migration becomes a development project, meaning that its management is not just about keeping people safe but also about “*transforming* the ‘vulnerable’” to ensure that environmental sustainability dovetails with enhanced economic productivity (ibid.: 189).

When framed in terms of development, climate-related migration is considered necessary and adaptive only for particular people and places. Retreat from the small islands of New York City, for instance, appears impossible, while retreat from the small island nations of the Pacific and Indian Oceans seems inevitable. Extensive media coverage depicts these latter islands as on the verge of disappearance and life on them as a constant crisis. Ethnographic studies, however, demonstrate that the evacuation of these nations is not a foregone conclusion but an actively contested one (Farbotko and Lazrus 2012; Mortreux and Barnett 2009; Rudiak-Gould 2013). Farbotko (2010) critiques the dominant representations of disappearing islands as “wishful sinking,” noting that these nations have long been described as economically unsustainable in colonial and development discourses (whereas the subsistence practices of many inhabitants make their lifestyles significantly more *environmentally* sustainable than those of most New York City residents). Environmental discourse, she argues, continues to treat the “islands as expendable,” even as more valuable if they vanish, because “only after they disappear will the islands become an absolute truth of the urgency of climate change, and thus act as a prompt toward saving the rest of the planet” (ibid.: 47–48). Thus, Farbotko explains, “conceptions of the islands as fundamentally impoverished and

6. The figure of the climate migrant is racialized as well as classed, argues Andrew Baldwin (2013). Climate migrants are conceived alternately as threat and victim, each of which “mark[s] the migrant as different from some purportedly normal, unmarked body” and serves to “authorise some form of moral intervention—whether increased policing or humanitarian assistance” (ibid.: 1475).

dependent became the basis of their meaning as spaces of climate change,” giving rise to the view that “rising sea levels merely hasten a preordained exit toward spaces of modernity, such as Australia” and other mainland economies (*ibid.*: 52). Small island nations and their inhabitants are repeatedly represented as natural victims of climate change, bound eventually to retreat, regardless of the reality on the ground.<sup>7</sup> Meanwhile, retreat in the United States remains relatively invisible, even as people are moving away from the water en masse.

### **Retreat from the River: Valmeyer and the Great Midwest Flood**

By contrast with the low-lying atoll islands of the South Pacific, the cornfields, prairies, and rocky bluffs of the American Midwest are probably the last landscape that comes to mind upon imagining retreat. Yet despite the usual depiction of retreat as a coastal phenomenon, people in the United States have predominantly moved away from its rivers. It was the bursting Mississippi and Missouri Rivers during the Great Midwest Flood of 1993 that spurred the expansion of federal funding to buy out flood-prone property and return floodplains to open space (Chagnon 1996; Wilkins 1996). The Great Midwest Flood was the costliest disaster ever to befall the United States until Hurricane Katrina (Watson 1996). Spawned by snowmelt and record-breaking rains that dramatically raised river levels, it flooded over thirty thousand square miles of land across nine states (Ayres 1993), breaching more than one thousand levees (FEMA 2003: xiii). This massive failure of structural flood control measures launched a “revolution in social policy” in favor of nonstructural ways of reducing risk, such as home buyouts (Conrad, McNitt, and Stout 1998: 44). There were ten thousand buyouts after the 1993 floods (*ibid.*: 34), and by 1998 an estimated twenty thousand home buyouts and relocations were under way or completed across at least thirty-six states (*ibid.*: 123). Over the past decade, the Federal Emergency Management Agency (FEMA) has continued to provide the bulk of financial support for more than seven thousand additional buyouts, with inland states receiving the majority of funding (Cater and Benincasa 2014).

The risks of climate change, like its causes, are not solely external but also spring from within. River flooding currently affects in excess of 21 million people per year worldwide, a number expected to more than double by 2030, primarily due to climate change (Luo et al. 2015). This is because warmer air holds more moisture, leading to heavier rains; extreme precipitation events have already

7. The latest science, in fact, suggests atoll islands may be growing in response to sea level rise (Warne 2015), while New York is going under at more than twice the global rate (Gerken 2015).

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increased over midlatitude regions, such as the American Midwest, where they are very likely to become more frequent and intense in the years to come (IPCC 2014: 11). Even those parts of the United States projected to suffer from worsening droughts may still see their flood risk increase (AECOM 2013: ES-6). When the rains do fall, they will do so in more concentrated bursts, leaving dried-out land unable to absorb the water.<sup>8</sup>

Despite these risks, and the reality of already devastating floods, riverine retreat attracts little attention compared with coastal retreat. Perhaps the congruence of coastlines and national borders incites greater anxiety about the loss of territory that will accompany retreat from the rising seas. Certainly, the density and rapid development of oceanfront property stokes added worry over the costs of giving it up and the shortage of comparable space. The special challenges facing coastal cities with complex and aging infrastructure also warrant considerable attention. There is, as well, a sense that the path of rivers has always shifted, giving their erratic movement a more natural feel than that of the oceans coming in, even with this movement increasingly subject to the effects of anthropogenic climate change.

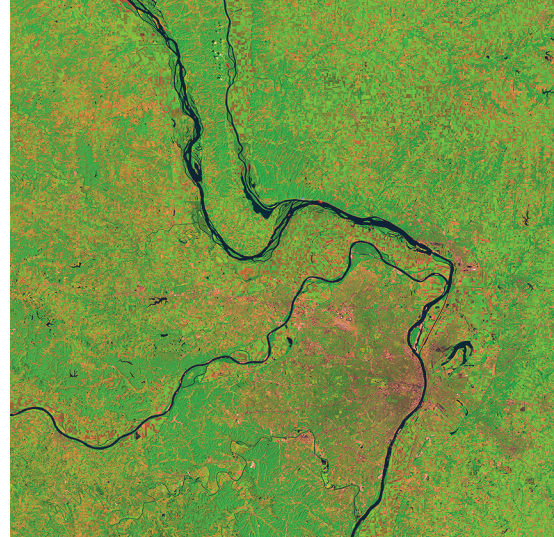
Moving along with rivers thus signals historical continuity more than it does novel and irreversible change. “One who knows the Mississippi,” wrote Mark Twain ([1883] 2015), “will promptly aver . . . that ten thousand River Commissions, with the mines of the world at their back, cannot tame that lawless stream, cannot curb it or confine it, cannot say to it, Go here, or Go there, and make it obey; cannot save a shore which it has sentenced; cannot bar its path with an obstruction which it will not tear down, dance over, and laugh at.” Nevertheless, there have been repeated attempts to channelize and control the flow of rivers such as the Mississippi in order to open proximate land to stable, permanent uses. The feeling of security that results leads more to move into harm’s way, even as it proves illusory time and again.

One of the many places that the Great Midwest Flood submerged in 1993 was the southern Illinois town of Valmeyer, population nine hundred, about thirty miles downstream from St. Louis along the Mississippi River. The town’s name reveals the importance of land and family to its residents; short for “Valley of the Meyers,” *Valmeyer* denotes both the town’s location in the American Bottom

8. These conditions additionally increase the risk of mudslides, another danger that is prompting retreat from certain areas. Buyouts are supported, for instance, by most property owners in Oso, Washington, the site of the deadliest landslide in US history in 2014 (Kamb and Brunner 2015). County officials actually considered buyouts for Oso a decade prior to the slide, but the option was not approved, nor was it discussed with residents (Le 2014). Mudslides are further exacerbated by wildfires, which are also becoming more frequent due to climate change (USGS 2015).



**Figure 1** One of Harold Fisk's maps of the Mississippi River's historical meandering, created in 1944 for the US Army Corps of Engineers. Retrieved June 5, 2015, from [lmvmapping.ercd.usace.army.mil](http://lmvmapping.ercd.usace.army.mil).



**Figure 2** National Aeronautics and Space Administration (NASA) images showing the Mississippi River before and during the Great Midwest Flood of 1993. Created by Jesse Allen, Earth Observatory, using data provided courtesy of the Landsat Project Science Office. Retrieved May 14, 2015, from [earthobservatory.nasa.gov/IOTD/view.php?id=5422](http://earthobservatory.nasa.gov/IOTD/view.php?id=5422).

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floodplain and one of its founding families of German immigrants, from whom a number of present-day inhabitants descend (Wilkerson 1993). Historical flooding of the Mississippi provided the town's farmers with fertile soil and its older residents with childhood memories of amphibious boats, front-yard fishing, and washing away the mud that the river left in its wake, as recounted in *Valmeyer, IL: The Documentary* (dir. Danny Moore; 2015). By the 1940s, however, the floods had grown deep enough for Valmeyer to seek protection from the US Army Corps of Engineers (fig. 1). The corps constructed a large levee system, effectively rendering the three-mile-distant river "out of sight, out of mind" for nearly fifty years (Knobloch 2005: 41). Until 1993, that is, when the Mississippi burst its banks and overtopped Valmeyer's levee, coursing through the town and filling houses with up to sixteen feet of floodwater that took months to fully subside, only to flood once again (fig. 2).

"There's not a book out there that says, 'This is how you move a flooded town,'" then mayor of Valmeyer Dennis M. Knobloch says in *Valmeyer, IL*. But move the town was exactly what they did; rather than rebuild in place, after the flood Valmeyer's residents voted to relocate to the top of a nearby bluff. A series of community meetings had made the preference for a collective relocation plan clear. Individual buyouts would disperse the community, while rebuilding to FEMA floodplain elevation standards was undesirable for some and unaffordable for others. "We felt that the only way we could keep the town together, and continue to have a Valmeyer," Knobloch explained in the documentary, "would be trying to relocate the town."

Approximately two-thirds of the town's nine hundred residents eventually moved to the new site. All told, the relocation took twenty-two government agencies (Watson 1996) and \$35 million in federal and state funding (Brown 1996). Many residents, however, attribute the success of the relocation to their mayor—as one resident states in *Valmeyer, IL*, "He was the one that pretty well pushed FEMA and all the other organizations that you had to go through to get stuff done"—while Knobloch himself views it as the result of residents' collaborative efforts: "The people sat down at the table and planned all of this," he recounts in the documentary, explaining that they formed seven citizens' committees to facilitate designing and moving to the new town. An article in *Smithsonian* magazine described the complex and collaborative work involved: "Farmers found themselves plowing through state and federal building codes. Bank tellers and businessmen mastered blueprints. Secretaries and school teachers decided details from sewers to streetlamps" (Watson 1996). The *New York Times* put it like this: "Almost as therapy, ordinary people are remaking a town from scratch" (Wilker-

son 1993). The picture that emerges from these accounts is of an ideal democratic process that brings together people from all walks of life to debate and ultimately deliver their vision of a better collective future, with the support of a government acting on the wishes of those it represents.

Accounts of Valmeyer's relocation depict the town's move as the means to recover an American dream, one thought lost in the muddy waters. "There we were," said a resident recalling life before the flood, "living the quote unquote American dream. . . . Both working, paying the mortgage, two kids in school. And like that, we're homeless" (quoted in Watson 1996). Two years later, this resident was one of the "old Valmeyer" inhabitants to move into homes in the "new Valmeyer." Life began afresh, and in many ways alike: "The first school prom. The first church bell. The first community garage sale. The first grass" (Brown 1996). Bucolic, all-American images abound; there is no hint that helping this community regain and even improve on what they had before could be controversial in any way. Nor is there any sense, yet, that global climate change presents a more fundamental and existential challenge to this way of life than the river alone does. It is still possible to move away from the threat and move on, to return to normal.

Media coverage emphasized the historical continuity of Valmeyer's move, making it appear as natural as the Mississippi's cresting waves. The *Smithsonian* article lauded Valmeyer residents as "new pioneers" who, after the flood, rediscovered an earlier "pioneer spirit" (Watson 1996). The *New York Times* framed them similarly: "Like the original Swiss settlers on the rich Mississippi River bottom land at the turn of the century, residents of Valmeyer are homesteaders in a strange new land" (Brown 1996). With development no longer constrained by floodplain building regulations, the new Valmeyer grew "from blueprint to boomtown" with old Valmeyer left "clogged by weeds, flat as an ocean floor . . . again what the river made it—a floodplain" (Watson 1996). Those who opted to remain behind seem in this telling like the ones consigned to the past. Those who moved to higher ground, meanwhile, maintained their traditions but embodied a brighter future. With retreat reconfigured as Manifest Destiny, a tale of supposed triumph through territorial expansion, it remained able to support rather than challenge the dominant ideology of unstoppable growth and progress.

In the case of Valmeyer, Illinois, as well as in neighboring Missouri where two smaller towns likewise relocated after the Great Midwest Flood, retreat was considered a success and even valorized. However, countless other places that have sought government support for buyouts and relocation fared less well and received scant attention. This is especially true of coastal cities, and particularly of poorer areas. A report on buyouts issued in 1998 notes the eagerness of New Orleans

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residents for flood mitigation measures such as buyouts seven years prior to Hurricane Katrina. The report points out, however, that in an urbanized area with a lack of undeveloped space, “the voluntary buyout option may have limited utility” despite having “clearly aroused considerable local interest” (Conrad, McNitt, and Stout 1998: 172).

“There are more offers from flood victims to sell than funds available,” the report states, explaining that there are “numerous poorer communities and neighborhoods where residents with repetitive loss and substantially damaged properties have signed up for buyouts, but the communities have no funds” to pay the share required by the federal government (*ibid.*: 163–64). In these places, people may be more likely to be displaced but less likely to be fairly compensated, leaving them unable to rebuild their lives somewhere safer. Meanwhile, there is little awareness of retreat as a viable option not because there is no public desire for retreat but because government support has been lacking and government policies are inadequate to accomplish it.<sup>9</sup> Hence retreat winds up as a road not taken more often than it does a historical precedent.

### Retreat in a Climate-Changed City: Staten Island after Sandy

Twenty years after retreat from the rural, riverine town of old Valmeyer was seen as progress, retreat from New York City took on a very different meaning. “The future of the city lies along its coastline,” Mayor Bloomberg (2013) announced at the 2013 launch of his administration’s climate change adaptation plan. The year before, Hurricane Sandy had flooded over fifty square miles of the city’s five boroughs (New York City Special Initiative for Rebuilding and Resiliency 2013: 13). But Bloomberg assured his audience that climate change was not going to halt the pace of growth and development. “Demand for housing in Lower Manhattan,” where Sandy submerged streets, sparked blackouts, and shut down subways, “has never been stronger,” the mayor said as he laid out a vision in which the city would not retreat but would build even *farther* out into the water, filling new land along Manhattan’s Lower East Side to provide space for a “Seaport City” with “thousands of new residents and hundreds of businesses” (Bloomberg 2013). This was progress, in the mayor’s view. Bloomberg reminded listeners that before his time in office, “the city allowed the waterfront to become polluted, degraded, and

9. The Stafford Act, for instance, restricts the amount of FEMA disaster relief that can be spent on mitigation activities, including buyouts. As Robin Bronen (2011: 367) notes, government funding “is designed to help rebuild individual homes in their current location, not rebuild communities in a new one.”



abandoned.” By contrast, his mayoralty was dedicated to “reversing that history and reclaiming the waterfront,” a project that was “not going to stop now” (*ibid.*). Indeed, new buildings—along with rents and property values—had soared along New York City’s waterfront under Bloomberg, as industrial areas were rezoned for residential redevelopment (Rosenberg 2014). From the perspective of those profiting from these changes, to reclaim the waterfront for nature rather than for development was to abandon the city’s tried-and-true path of economic—if not social or environmental—progress.

Progress looks very different on the south shore of Staten Island, the city’s so-called forgotten borough, where I have spent the past two and a half years conducting interviews and ethnographic research on Sandy’s aftermath. Instead of postindustrial-gone-luxury high-rise, Staten Island’s south shore neighborhoods retain the feel of the seasonal beach communities they once were. There are still narrow streets of small wooden bungalows surrounded by stalks of towering phragmites. Though there are also plenty of newer, larger houses, attached duplexes, and condominium complexes, buildings that began encroaching on the wetlands in force after the Verrazano-Narrows Bridge linked Staten Island to Brooklyn in 1964. The ensuing decades of private development, coupled with soaring population growth and inadequate public infrastructure, proved the source not of progress but of problems—most notably flooding, which grew worse and worse in the years leading up to Hurricane Sandy. From the vantage point of many residents who experienced these changes firsthand, unbuilding the waterfront undoes a costly and destructive mistake. Retreat would chart a wiser course for the future, strengthening the waterfront rather than abandoning it—and abandoning them.

Abandoned was how residents had long felt in one Staten Island neighborhood, Oakwood Beach, where recurrent flooding came to a head years before Sandy. In 1992 a powerful nor’easter—the Storm of No Name, some call it—struck the city. Nearly five feet of water inundated Oakwood Beach, leading residents to organize a flood victims committee to lobby government for better coastal protection. The government eventually agreed to do a series of studies, but funding ran out and little changed. Building continued on wetlands adjacent to the neighborhood despite community opposition. Flooding grew worse. When Sandy struck on the night of October 29, 2012, the highest water levels citywide were recorded in Oakwood Beach, which was hit with a ferocious fourteen-foot storm surge. After the storm, residents once again organized a committee—the Oakwood Beach Buyout Committee. The time had come, they decided, to get out.

The Oakwood Beach Buyout Committee, with unanimous support from nearly two hundred neighboring households, created a buyout plan and began pushing

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it to local officials. Working through the city turned out to be “a dead end,” in the words of one committee member, and so they focused their efforts on the state. And they succeeded: less than three months after Sandy’s landfall, Governor Cuomo announced a state buyout program for affected homeowners. “Climate change is real,” Cuomo said (2013). “There are some parcels that Mother Nature owns. She may visit once every few years, but she owns the parcel and when she comes to visit, *she visits*.” The state designated the streets selected by the Oakwood Beach Buyout Committee the first “enhanced area” eligible for the program. Homeowners opting to participate would receive prestorm fair market value for their damaged houses plus incentives for being in a target area and for relocating within New York City. “It’s just amazing,” one Oakwood Beach resident said to me later that year. “We are so lucky.” The governor’s support of Oakwood Beach encouraged homeowners in at least seven other Staten Island neighborhoods to organize their own buyout groups, in the hopes of showing that they too shared the will to retreat and thus should also be included in the program and offered buyouts (figs. 3 and 4).



Figure 3 Photograph taken by the author, October 5, 2013



Figure 4 Photograph taken by the author, April 26, 2014

Shortly after the launch of the state buyout program, however, the city announced its own program for homeowners wishing to relocate. This program preempted the state's program for all city residents, including Staten Islanders living outside the already designated Oakwood Beach buyout area. Unlike the state buyout program, the city's program was not retreat. While a state buyout would return purchased land to nature and prohibit any future construction, the city would retain the right to turn acquired land over to developers, so long as they rebuilt in a more flood-resistant way. Though participants in both programs would receive roughly the same amount of money to relocate, redeveloping rather than retreating from the land altered the meaning of moving in consequential ways that made the city's program far less appealing for many.

Staten Island is a borough with a culture of sacrifice, notable for its high number of firefighters, police officers, 9/11 first responders, sanitation workers, and other public servants. Residents who wanted to retreat emphasized that they were not seeking safety solely for themselves but believed that their actions would also help protect their broader community. "If this is an area that takes in water, that becomes a sponge, that goes back to nature," one resident explained to me, "everybody wins. It's a hell of a sacrifice for the greater good." Another homeowner noted that the benefits of buyouts would extend beyond Staten Island to taxpayers at large, because "if you buy the houses out, you never have to pay flood insurance [claims], you're not gonna have to pay a [disaster] payment again, so the United States is actually saving money." The advantages of retreat would thus accrue to all, whereas the redevelopment plans favored by the city would likely advantage only an elite few. Moreover, redevelopment threatened to harm those whom retreat would protect, both by potentially worsening flooding for people who remained living near acquired areas and by placing prospective new residents at risk. "I would prefer the land going back to nature than to see some other family ten, twenty, thirty years from now going through this kind of thing," one man told me. "It's gonna happen again." While retreat would be a personal sacrifice for the public good, redevelopment would sacrifice others for private gain—a stark and unpalatable contrast.

Months of meetings, petitions, and demonstrations eventually resulted in just two additional neighborhoods winning buyouts from the state. Yet even these successful efforts were framed as defeat. For instance, when the *New York Times* N.Y./Region section ran a front-page feature on the Oakwood Beach buyout, it depicted the neighborhood as a place where people had simply given up. "This is the way a neighborhood ends," read the first sentence, printed alongside a large photograph showing a darkened street of shuttered houses awash in an eerie red

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glow. The article casts the story of retreat in a similarly grim light: “In the storm’s aftermath, many people here vowed that they would return,” it narrates, but then “the state announced a [buyout] program” and “Gov. Andrew M. Cuomo said the area should be returned to nature.” “One by one, people have been accepting the offers, emptying out their houses, turning out the lights for the last time” (Gregory 2013). Rendering completely invisible the sustained and dedicated community action that achieved the buyout, this article instead depicts passive residents individually relenting in the face of a government directive.

Retreat is neither a passive act nor a defeatist one, though it is often represented as such. In part, this may be wishful thinking—or another form of “wishful sinking”—that as places disappear due to climate change the people who live in them will quietly dissipate too. One Oakwood Beach resident put it to me like this: “Men didn’t get smarter and egos didn’t diminish. So it’s hard [for officials] to say, ‘We made a mistake.’ . . . It’s much easier for them to say, ‘Let’s just let them go away.’” She and other Staten Islanders may be physically going away, but the movement for retreat that they advanced is not. “The game changed” with Sandy, this resident believes, and now the experience of Oakwood Beach can “help other communities” that decide they too want to retreat. She hopes their experience will also help government officials to “really, really, really recognize that community effort and involvement plays a role in this.”

Acknowledging demands for retreat and the grassroots activism that plays a crucial role in its success, however, threatens the political status quo and its financial bottom line. It challenges dominant interests and business-as-usual approaches that have, themselves, contributed to the need for retreat by exacerbating the larger problem of anthropogenic climate change and by being persistently unwilling to admit and mitigate it. But on Staten Island after Sandy, residents could see that it is worth fighting for retreat and worth fighting for those whose actions place people in harm’s way to finally take responsibility for it.

**Connecting Movements in the Context of Climate Change**

Flood buyouts like those I describe above are not generally recognized as climate-related migration. They are located in places not seen as the “front lines” of climate change. They occur after disasters, not necessarily in anticipation of them. They also are actually happening, albeit in a limited way, whereas many community-led efforts to relocate due to climate change have received far less support. Accounts of these efforts tell less of movement than of the near insurmountable obstacles to it. In Alaska, for instance, a number of indigenous villages

have for decades voted repeatedly to relocate yet have been unable to garner the resources to do so, despite multiple government studies attesting to the imminent danger they face (Bronen 2011; Marino 2015; Shearer 2012). In Papua New Guinea, meanwhile, residents of the Carteret Islands finally took relocation planning into their own hands after years of government inaction (Edwards 2013). An indigenous community in Panama did likewise but found it difficult to leverage enough external support and funding to actually make the move (Displacement Solutions 2014).

Retreat might reasonably be expected to follow from physical geography, to be based on factors such as elevation and proximity to the coast. Yet these cases show that it is based as much, if not more, on political and social geography. Retreat is restricted for reasons of political and financial risk even in places with extreme environmental risk. A report issued five years after the Great Midwest Flood found that the twenty thousand buyouts under way nationwide “stem largely from community-led (and federal- and state-assisted) efforts” but that many fewer people receive resources to move than want to do so (Conrad, McNitt, and Stout 1998: 124). This condemns some to live through multiple disasters. Five hundred households in Manville, New Jersey, for example, applied for buyouts after Hurricane Floyd in 1999. Of these, the town selected 274, a number that FEMA subsequently reduced to 42 (Hanley 2000). After Hurricane Irene struck Manville in 2011, the year before Sandy, only nineteen of four hundred applicants received a buyout (Tyrrell 2012). Manville is now the site of nearly one hundred post-Sandy buyouts. Even where retreat is widely viewed as necessary, there remain political and financial barriers to its achievement.

The effects of climate change are rendering retreat increasingly imperative, but relocation remains largely unrecognized “as an adaptation strategy rather than a ‘last resort,’” Burkett (2015: 78–79) notes. On an international level, she explains, this makes it difficult to use funding specifically for adaptation in order to finance retreat. Furthermore, this adaptation funding tends to be disbursed to national governments, not local communities, though research shows effective adaptation is most often a bottom-up rather than top-down process. Top-down adaptation funding may enable governments to pursue projects that are counter to the interests of those they represent. It may also allow them to avoid engaging in difficult, but vital, conversations about retreat. All told, retreat is messy. It takes democratic debate and collective decision making. Once a decision is reached, it requires acknowledgment, cooperation, and substantial support from multiple levels of government. “Voluntary buyouts are more complicated than building

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levees,” reports the National Wildlife Federation (Conrad, McNitt, and Stout 1998: 35). Yet they are also more effective, sustainable, and scalable.

Because retreat arises from local efforts, it tends to be treated as an isolated, ad hoc phenomenon. Diverse communities, however, are beginning to connect with one another as they confront climate-related relocation. The month before Hurricane Sandy, community leaders from Newtok, Alaska, visited with Carteret Islanders to discuss their respective fights for community-based relocation (Crump 2012). After Sandy, I heard the story of Valmeyer from an Illinois floodplain manager on a bought-out street in Oakwood Beach. He had traveled to Staten Island with a team of researchers hoping to learn lessons applicable back home. We met that day with a member of the Oakwood Beach Buyout Committee, who spoke of the indigenous peoples contending with the need to retreat from the Louisiana coast. Though retreat has a landscape of meanings as vast and varied as the diverse geographies in which it takes place, those grappling with it, despite their differing sites and circumstances, have begun to recognize one another as bound in a common struggle.

### The Case for Retreat

What do we gain by calling this a struggle for *retreat*? Leaving home in the context of climate change is not a neutral act. Relabeling retreat to make it *sound* more neutral is, I argue, counterproductive. Euphemisms may abound, but each carries baggage of its own. Adding “planned” or “managed” to *retreat* makes it sound like a rebranded version of policies such as managed decline and planned shrinkage that withdrew public resources from places deemed “at risk,” to deleterious and discriminatory effect. “Planned relocation” and “resettlement” insert retreat squarely into a history of forced population movements that have likewise been devastating for the people and communities involved (McAdam 2015). This history undeniably sets the scene for retreat—many of those living in the most vulnerable places do so as the direct or indirect result of forced relocation, sedentarization, or displacement—but this is a history from which retreat should depart. Examples of successful community-organized relocation provide retreat a different history and suggest ways it can have a more just, sustainable future.

Discussions of retreat are stymied in part because they do not distinguish government-supported, but community-organized, collective movement from government-dictated mass relocation or disaster- and climate-induced displacement. Forced relocation and displacement are already resulting from—and in the name of—climate change, not least from government-sponsored adaptation and

mitigation schemes (de Sherbinin et al. 2011). Use of the term *retreat* maintains space for another kind of movement in the context of climate change, one that aligns less with top-down interventions that displace people and abandon places in the name of progress than with a whole range of grassroots efforts to democratize and transform space and place—from right-to-the-city movements (Harvey 2012), to those for the right to relocate from places contaminated by industrial pollutants (Auyero and Swistun 2009; Lerner 2006), to stay put in the face of rising rents and gentrification (Newman and Wyly 2006), or to return home after disaster (Bullard and Wright 2009).

To bring together collective movements in the context of climate change under the term *retreat* suggests that the time has come to retreat not only from particular places but also from particular ways of life that are likewise proving unsustainable. The complexity and ambivalence of retreat serves as a reminder that there are no easy solutions and that it is not possible to rebuild forever or to wall ourselves off from the problems we face. *Retreat* is a powerful and evocative word, one that signals a change in direction—something we share the need for as a society even though we do not all live in places that are immediately vulnerable.

## References

- Active Living Research. 2010. “The Economic Benefits of Open Space, Recreation Facilities, and Walkable Community Design.” May. San Diego, CA: Active Living Research. [atfiles.org/files/pdf/Economic-Benefits-Active.pdf](http://atfiles.org/files/pdf/Economic-Benefits-Active.pdf).
- AECOM. 2013. “The Impact of Climate Change and Population Growth on the National Flood Insurance Program through 2100.” June. Arlington, VA: AECOM. [www.aecom.com/deployedfiles/Internet/News/Sustainability/FEMA%20Climate%20Change%20Report/Climate\\_Change\\_Report\\_AECOM\\_2013-06-11.pdf](http://www.aecom.com/deployedfiles/Internet/News/Sustainability/FEMA%20Climate%20Change%20Report/Climate_Change_Report_AECOM_2013-06-11.pdf).
- Auyero, Javier, and Débora Alejandra Swistun. 2009. *Flammable: Environmental Suffering in an Argentine Shantytown*. New York: Oxford University Press.
- Ayres, B. Drummond, Jr. 1993. “The Midwest Flooding: What’s Left from the Great Flood of ’93.” *New York Times*, August 10. [www.nytimes.com/1993/08/10/us/the-midwest-flooding-what-s-left-from-the-great-flood-of-93.html](http://www.nytimes.com/1993/08/10/us/the-midwest-flooding-what-s-left-from-the-great-flood-of-93.html).
- Baldwin, Andrew. 2013. “Racialisation and the Figure of the Climate-Change Migrant.” *Environment and Planning A* 45, no. 6: 1474–90.
- Bettini, Giovanni. 2014. “Climate Migration as an Adaption Strategy: De-securitizing Climate-Induced Migration or Making the Unruly Governable?” *Critical Studies on Security* 2, no. 2: 180–95.
- Bloomberg, Michael R. 2013. “Mayor Bloomberg Presents the City’s Long-Term

## Public Culture

- Plan to Further Prepare for the Impacts of a Changing Climate.” City of New York, Office of the Mayor, June 11. [www1.nyc.gov/office-of-the-mayor/news/200-13/mayor-bloomberg-presents-city-s-long-term-plan-further-prepare-the-impacts-a-changing](http://www1.nyc.gov/office-of-the-mayor/news/200-13/mayor-bloomberg-presents-city-s-long-term-plan-further-prepare-the-impacts-a-changing).
- Breunlin, Rachel, and Helen A. Regis. 2006. “Putting the Ninth Ward on the Map: Race, Place, and Transformation in Desire, New Orleans.” *American Anthropologist* 108, no. 4: 744–64.
- Bronen, Robin. 2011. “Climate-Induced Community Relocations: Creating an Adaptive Governance Framework Based in Human Rights Doctrine.” *N.Y.U. Review of Law and Social Change* 35, no. 2: 357–407.
- Brown, Patricia Leigh. 1996. “Higher and Drier, Illinois Town Is Reborn.” *New York Times*, May 6. [www.nytimes.com/1996/05/06/us/higher-and-drier-illinois-town-is-reborn.html](http://www.nytimes.com/1996/05/06/us/higher-and-drier-illinois-town-is-reborn.html).
- Building Futures. 2010. “Facing Up to Rising Sea Levels: Retreat? Defend? Attack?” [www.buildingfutures.org.uk/projects/building-futures/facing-up](http://www.buildingfutures.org.uk/projects/building-futures/facing-up).
- Bullard, Robert D., and Beverly Wright, eds. 2009. *Race, Place, and Environmental Justice after Hurricane Katrina: Struggles to Reclaim, Rebuild, and Revitalize New Orleans and the Gulf Coast*. Boulder, CO: Westview.
- Burkett, Maxine. 2015. “Lessons from Contemporary Resettlement in the South Pacific.” *Journal of International Affairs* 68, no. 2: 75–91.
- Cater, Franklyn, and Robert Benincasa. 2014. “Map: FEMA Is Buying Out Flood-Prone Homes, but Not Where You Might Expect.” NPR, October 20. [www.npr.org/sections/thetwo-way/2014/10/20/357611987/map-femas-buying-out-flood-prone-homes-but-not-where-you-might-expect](http://www.npr.org/sections/thetwo-way/2014/10/20/357611987/map-femas-buying-out-flood-prone-homes-but-not-where-you-might-expect).
- Chagnon, Stanley A., ed. 1996. *The Great Flood of 1993: Causes, Impacts, and Responses*. Boulder, CO: Westview.
- Conrad, David R., Ben McNitt, and Martha Stout. 1998. “Higher Ground: A Report on Voluntary Property Buyouts in the Nation’s Floodplains; A Common Ground Solution Serving People at Risk, Taxpayers, and the Environment.” July. Washington, DC: National Wildlife Federation. [www.nwf.org/pdf/Water/199807\\_HigherGround\\_Report.pdf](http://www.nwf.org/pdf/Water/199807_HigherGround_Report.pdf).
- Cooper, J. A. G., and Jeremy Pile. 2014. “The Adaptation-Resistance Spectrum: A Classification of Contemporary Adaptation Approaches to Climate-Related Coastal Change.” *Ocean and Coastal Management* 94: 90–98.
- Crowell, Mark, et al. 2010. “An Estimate of the U.S. Population Living in 100-Year Coastal Flood Hazard Areas.” *Journal of Coastal Research* 26, no. 2: 201–11.



- Crump, John. 2012. "Community Leaders Meet to Discuss Relocation in the Face of Climate Change." *Many Strong Voices* (blog), September 12. [manystrongvoices.org/blogs.aspx?id=5288](http://manystrongvoices.org/blogs.aspx?id=5288).
- Cuomo, Andrew M. 2013. "Transcript of Governor Andrew M. Cuomo's 2013 State of the State Address." Governor of New York State, January 9. [www.governor.ny.gov/news/transcript-governor-andrew-m-cuomo-2013-state-state-address](http://www.governor.ny.gov/news/transcript-governor-andrew-m-cuomo-2013-state-state-address).
- de Sherbinin, Alex, et al. 2011. "Preparing for Resettlement Associated with Climate Change." *Science* 334, no. 6055: 456–57.
- Displacement Solutions. 2014. "The Peninsula Principles in Action: Climate Change and Displacement in the Autonomous Region of Gunayala, Panama." July. Geneva: Displacement Solutions. [displacementsolutions.org/wp-content/uploads/Panama-The-Peninsula-Principles-in-Action.pdf](http://displacementsolutions.org/wp-content/uploads/Panama-The-Peninsula-Principles-in-Action.pdf).
- Drake, Susannah. 2013. "Transfer Development Rights to Upland Areas." In *Next New York: A Sketchbook for the Future of the City*, by Forum for Urban Design, 32–33. New York: Forum for Urban Design. [nextnewyork.org/#/transfer-development-rights-to-upland-areas-susannah-drake](http://nextnewyork.org/#/transfer-development-rights-to-upland-areas-susannah-drake).
- Edwards, Julia B. 2013. "The Logistics of Climate-Induced Resettlement: Lessons from the Carteret Islands, Papua New Guinea." *Refugee Survey Quarterly* 32, no. 3: 52–78.
- Erikson, Kai T. 1976. *Everything in Its Path: Destruction of Community in the Buffalo Creek Flood*. New York: Simon and Schuster.
- Farbotko, Carol. 2010. "Wishful Sinking: Disappearing Islands, Climate Refugees, and Cosmopolitan Experimentation." *Asia Pacific Viewpoint* 51, no. 1: 47–60.
- . 2012. Review of *Climate Change and Displacement: Multidisciplinary Perspectives*, edited by Jane McAdam. *Progress in Human Geography* 36, no. 6: 833–36.
- Farbotko, Carol, and Heather Lazrus. 2012. "The First Climate Refugees? Contesting Global Narratives of Climate Change in Tuvalu." *Global Environmental Change* 22, no. 2: 382–90.
- Felli, Romain. 2013. "Managing Climate Insecurity by Ensuring Continuous Capital Accumulation: 'Climate Refugees' and 'Climate Migrants.'" *New Political Economy* 18, no. 3: 337–63.
- FEMA (Federal Emergency Management Agency). 2003. "The 1993 Great Midwest Flood: Voices Ten Years Later." Washington, DC: FEMA. [www.fema.gov/media-library/assets/documents/3799](http://www.fema.gov/media-library/assets/documents/3799).
- Ferris, Elizabeth. 2014. "Planned Relocations, Disasters, and Climate Change:

## Public Culture

- Consolidating Good Practices and Preparing for the Future.” Background paper, Sanremo Consultation, Sanremo, Italy, March 12–14. Washington, DC: Brookings Institution. [www.brookings.edu/~media/research/files/papers/2014/03/14-planned-relocations-climate-change/planned-relocations-background-paper-march-2014.pdf](http://www.brookings.edu/~media/research/files/papers/2014/03/14-planned-relocations-climate-change/planned-relocations-background-paper-march-2014.pdf).
- Fields, Billy. 2009. “From Green Dots to Greenways: Planning in the Age of Climate Change in Post-Katrina New Orleans.” *Journal of Urban Design* 14, no. 3: 325–44.
- Fullilove, Mindy. 2004. *Root Shock: How Tearing Up City Neighborhoods Hurts America, and What We Can Do about It*. New York: One World / Ballantine Books.
- Gerken, James. 2015. “Sea Levels along the Northeast Rose Almost Four Inches in Just Two Years: Study.” *Huffington Post*, February 25. [www.huffingtonpost.com/2015/02/25/sea-level-rise-northeast\\_n\\_6751570.html](http://www.huffingtonpost.com/2015/02/25/sea-level-rise-northeast_n_6751570.html).
- Gregory, Kia. 2013. “Deciding Whether It’s Lights Out.” *New York Times*, October 25. [www.nytimes.com/2013/10/27/nyregion/deciding-whether-its-lights-out.html](http://www.nytimes.com/2013/10/27/nyregion/deciding-whether-its-lights-out.html).
- Hanley, Robert. 2000. “Not Waiting for the Next Floyd: A Year Later, Flooded New Jerseyans Take U.S. Buyout.” *New York Times*, September 15. [www.nytimes.com/2000/09/15/nyregion/not-waiting-for-the-next-floyd-a-year-later-flooded-new-jerseyans-take-us-buyout.html](http://www.nytimes.com/2000/09/15/nyregion/not-waiting-for-the-next-floyd-a-year-later-flooded-new-jerseyans-take-us-buyout.html).
- Harvey, David. 2012. *Rebel Cities: From the Right to the City to the Urban Revolution*. New York: Verso.
- Hunter, Lori M., Jessie K. Luna, and Rachel M. Norton. 2015. “Environmental Dimensions of Migration.” *Annual Review of Sociology* 41: 377–97.
- IPCC (Intergovernmental Panel on Climate Change). 2014. “Climate Change 2014: Synthesis Report; Contribution of Working Groups I, II, and III to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change.” Edited by the Core Writing Team, Rajendra K. Pachauri, and Leo A. Meyer. Geneva: IPCC. [www.ipcc.ch/pdf/assessment-report/ar5/syr/SYR\\_AR5\\_FINAL\\_full.pdf](http://www.ipcc.ch/pdf/assessment-report/ar5/syr/SYR_AR5_FINAL_full.pdf).
- Jacob, Klaus H. 2015. “Sea Level Rise, Storm Risk, Denial, and the Future of Coastal Cities.” *Bulletin of the Atomic Scientists* 71, no. 5: 40–50.
- Kamb, Lewis, and Jim Brunner. 2015. “Year after Oso Disaster, Land-Use Rules Slow to Change.” *Seattle Times*, March 21. [www.seattletimes.com/seattle-news/even-after-osso-disaster-land-use-rules-slow-to-change](http://www.seattletimes.com/seattle-news/even-after-osso-disaster-land-use-rules-slow-to-change).
- Kaplan, Thomas. 2013. “Homeowners in Flood Zones Opt to Rebuild, Not Move.”

- New York Times*, April 26. [www.nytimes.com/2013/04/27/nyregion/new-yorks-storm-recovery-plan-gets-federal-approval.html](http://www.nytimes.com/2013/04/27/nyregion/new-yorks-storm-recovery-plan-gets-federal-approval.html).
- Knobloch, Dennis M. 2005. "Moving a Community in the Aftermath of the Great 1993 Midwest Flood." *Journal of Contemporary Water Research and Education* 130, no. 1: 41–45.
- Kothari, Uma. 2014. "Political Discourses of Climate Change and Migration: Resettlement Policies in the Maldives." *Geographical Journal* 180, no. 2: 130–40.
- Kuh, Katrina Fischer. 2015. "Agnostic Adaptation." In "A Response to the IPCC Fifth Assessment," by Sarah Adams-Schoen et al. *Environmental Law Reporter* 45, no. 1: 10027–48.
- Le, Phuong. 2014. "Washington Mudslide Death Toll Rises to Thirty as Officials Piece Together Lives of Those Lost." *Huffington Post*, April 3. [www.huffingtonpost.com/2014/04/03/washington-mudslide-death-toll\\_n\\_5084294.html](http://www.huffingtonpost.com/2014/04/03/washington-mudslide-death-toll_n_5084294.html).
- Lerner, Steve. 2006. *Diamond: A Struggle for Environmental Justice in Louisiana's Chemical Corridor*. Cambridge, MA: MIT Press.
- Luo, Tianyi, et al. 2015. "World's Fifteen Countries with the Most People Exposed to River Floods." World Resources Institute (blog), March 5. [www.wri.org/blog/2015/03/world%E2%80%99s-15-countries-most-people-exposed-river-floods](http://www.wri.org/blog/2015/03/world%E2%80%99s-15-countries-most-people-exposed-river-floods).
- Maldonado, Julie Koppel. 2014. "A Multiple Knowledge Approach for Adaptation to Environmental Change: Lessons Learned from Coastal Louisiana's Tribal Communities." *Journal of Political Ecology* 21: 61–82.
- Marino, Elizabeth. 2015. *Fierce Climate Sacred Ground: An Ethnography of Climate Change in Shishmaref, Alaska*. Fairbanks: University of Alaska Press.
- McAdam, Jane. 2015. "Relocation and Resettlement from Colonisation to Climate Change: The Perennial Solution to 'Danger Zones.'" *London Review of International Law* 3, no. 1: 93–130.
- Merriam-Webster*. 2015. "Retreat." [www.merriam-webster.com/dictionary/retreat](http://www.merriam-webster.com/dictionary/retreat) (accessed June 14, 2015).
- Mortreux, Colette, and Jon Barnett. 2009. "Climate Change, Migration, and Adaptation in Funafuti, Tuvalu." *Global Environmental Change* 19, no. 1: 105–12.
- New York City Special Initiative for Rebuilding and Resiliency. 2013. "A Stronger, More Resilient New York." June 11. New York: Office of the Mayor. [www.nyc.gov/html/sirr/html/report/report.shtml](http://www.nyc.gov/html/sirr/html/report/report.shtml).
- New York State Homes and Community Renewal. 2013. "State of New York

## Public Culture

- Action Plan for Community Development Block Grant Program Disaster Recovery.” April 25. New York: New York State Homes and Community Renewal. [www.nyshcr.org/Publications/CDBGActionPlan.pdf](http://www.nyshcr.org/Publications/CDBGActionPlan.pdf).
- Newman, Kathe, and Elvin Wyly. 2006. “The Right to Stay Put, Revisited: Gentrification and Resistance to Displacement in New York City.” *Urban Studies* 43, no. 1: 23–57.
- Online Etymology Dictionary*. 2015. “Retreat.” [www.etymonline.com/index.php?term=retreat](http://www.etymonline.com/index.php?term=retreat) (accessed June 14, 2015).
- Orlove, Ben. 2005. “Human Adaptation to Climate Change: A Review of Three Historical Cases and Some General Perspectives.” *Environmental Science and Policy* 8, no. 6: 589–600.
- Podesta, John, and Peter Ogden. 2007. “The Security Implications of Climate Change.” *Washington Quarterly* 31, no. 1: 115–38.
- Polefka, Shiva. 2013. “Moving out of Harm’s Way.” Washington, DC: Center for American Progress. [cdn.americanprogress.org/wp-content/uploads/2013/12/FloodBuyouts-2.pdf](http://cdn.americanprogress.org/wp-content/uploads/2013/12/FloodBuyouts-2.pdf).
- Rosenberg, Eli. 2014. “How NYC’s Decade of Rezoning Changed the City of Industry.” *Curbed*, January 16. [ny.curbed.com/archives/2014/01/16/how\\_nycs\\_decade\\_of\\_rezoning\\_changed\\_the\\_city\\_of\\_industry.php](http://ny.curbed.com/archives/2014/01/16/how_nycs_decade_of_rezoning_changed_the_city_of_industry.php).
- Rudiak-Gould, Peter. 2013. *Climate Change and Tradition in a Small Island State: The Rising Tide*. New York: Routledge.
- Shearer, Christine. 2012. “The Political Ecology of Climate Adaptation Assistance: Alaska Natives, Displacement, and Relocation.” *Journal of Political Ecology* 19: 174–83.
- Siders, Anne. 2012. “Ninth Circuit Affirms Dismissal in Kivalina v Exxon-Mobil.” *Climate Law Blog*, September 26. [blogs.law.columbia.edu/climate-change/2012/09/26/9th-circuit-affirms-dismissal-in-kivalina-v-exxonmobil](http://blogs.law.columbia.edu/climate-change/2012/09/26/9th-circuit-affirms-dismissal-in-kivalina-v-exxonmobil).
- . 2013. “Managed Coastal Retreat: A Legal Handbook on Shifting Development away from Vulnerable Areas.” New York: Columbia Law School Center for Climate Change Law. [web.law.columbia.edu/sites/default/files/microsites/climate-change/files/Publications/Fellows/ManagedCoastalRetreat\\_FINAL\\_Oct%2030.pdf](http://web.law.columbia.edu/sites/default/files/microsites/climate-change/files/Publications/Fellows/ManagedCoastalRetreat_FINAL_Oct%2030.pdf).
- Tacoli, Cecilia. 2009. “Crisis or Adaptation? Migration and Climate Change in a Context of High Mobility.” *Environment and Urbanization* 21, no. 2: 513–25.
- Tobin, Graham A. 1995. “The Levee Love Affair: A Stormy Relationship?” *Water Resources Bulletin* 31, no. 3: 359–67.
- Twain, Mark. (1883) 2015. *Life on the Mississippi*. Reprint of the edition pub-

- lished by James R. Osgood and Company of Boston, Project Gutenberg. [www.gutenberg.org/files/245/245-h/245-h.htm](http://www.gutenberg.org/files/245/245-h/245-h.htm) (accessed June 5, 2015).
- Tyrrell, Joe. 2012. "Conflicting Priorities Slow Efforts to Save NJ Towns from Floods." *NJ Spotlight*, June 28. [www.njspotlight.com/stories/12/0627/2027](http://www.njspotlight.com/stories/12/0627/2027).
- USGS (United States Geological Survey). 2015. "Post-Wildfire Landslide Hazards." [landslides.usgs.gov/research/wildfire](http://landslides.usgs.gov/research/wildfire) (accessed June 15, 2015).
- Warne, Kennedy. 2015. "Will Pacific Island Nations Disappear as Seas Rise? Maybe Not: Reef Islands Can Grow and Change Shape as Sediments Shift, Studies Show." *National Geographic*, February 13. [news.nationalgeographic.com/2015/02/150213-tuvalu-sopoaga-kench-kiribati-maldives-cyclone-marshall-islands](http://news.nationalgeographic.com/2015/02/150213-tuvalu-sopoaga-kench-kiribati-maldives-cyclone-marshall-islands).
- Watson, Bruce. 1996. "A Town Makes History by Rising to New Heights." *Smithsonian*, June. [www.smartcommunities.ncat.org/articles/smithsonian](http://www.smartcommunities.ncat.org/articles/smithsonian).
- Weerasinghe, Sanjula, et al. 2014. "Planned Relocations, Disasters, and Climate Change: Consolidating Good Practices and Preparing for the Future." Report, Sanremo Consultation, Sanremo, Italy, March 12–14. Geneva: United Nations High Commissioner for Refugees. [www.unhcr.org/54082cc69.pdf](http://www.unhcr.org/54082cc69.pdf).
- Wilkerson, Isabel. 1993. "350 Feet above Flood Ruins, a River Town Plots Rebirth." *New York Times*, October 31. [www.nytimes.com/1993/10/31/us/350-feet-above-flood-ruins-a-river-town-plots-rebirth.html](http://www.nytimes.com/1993/10/31/us/350-feet-above-flood-ruins-a-river-town-plots-rebirth.html).
- Wilkins, Lee. 1996. "Living with the Flood: Human and Governmental Responses to Real and Symbolic Risk." In Chagnon, *The Great Flood of 1993*, 218–44.

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