

An aerial photograph of a dry, cracked landscape. The foreground is dominated by a network of dark, irregular cracks in brownish soil. In the middle ground, a small, irregularly shaped pond of blue water is surrounded by a ring of yellowish-green vegetation. The background shows a lighter, more uniform landscape under a pale sky.

Catastrophes  
in Context  
*Volume 1*

# CONTEXTUALIZING DISASTER

Edited by  
Gregory V. Button  
& Mark Schuller

## Contextualizing Disaster

## **Catastrophes in Context**

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### **Volume 1**

*Contextualizing Disaster*

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**GREGORY V. BUTTON and MARK SCHULLER**



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# Introduction

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**GREGORY V. BUTTON and MARK SCHULLER**

Given their graphic and often horrific natures, events traditionally labeled as disasters capture everyone's imagination including journalists, politicians, humanitarians, policy-makers, academicians, and the public. How these events are perceived and contextualized plays a decisive role in not only how we respond to calamity, but also how we envision calamity prevention. The goal of this book is to gain a greater understanding of disasters by contextualizing them in hopefully new and different ways by paying close attention to two decisive factors: narration and globalization, which on various levels are two reoccurring themes throughout the volume. Deeply embedded in both themes is the notion of vulnerability, which as Hilhorst and Bankoff (2004, 2) trenchantly observe, is "critical to discerning the nature of disasters."

We usually perceive of disasters as isolated and abnormal events. What is missing from this perspective is that disasters are grounded in a larger social, political, historical, and spatial context that very often reflects the historical processes that surround the economic and political processes of both the nation-state and the global economy. The phenomena that we label disasters often belong to a larger series of spiraling events that are often translocal (Button 2016). Scholars (e.g., Button 2016; Wisner et al. 2004) note the difference between more common, everyday disasters and the less common but more spectacular catastrophes. This volume discusses both.

We need to view disasters more as routine, normal, and connected to one another along various social fault lines and as a direct product of culture and not something to be imagined as simply exceptional events (Button 2010). Conceiving of disasters in this manner allows us to move beyond the bounded unit of analysis that has too often typified traditional disaster studies and popular media narratives.



Disaster researchers and media outlets devote considerable attention to iconic *catastrophes* like Hurricane Katrina or the earthquakes in Haiti or Nepal but fail to recognize everyday disasters, which, upon examination, disclose the larger processual contexts in which many disasters evolve in both space and time. To see disasters in this manner is a very different approach than the one that has traditionally dominated disaster studies. Doing so challenges us, among other things, to think about where disasters begin and where they end and even how they are sometimes imbricated in one another (Button 2016). One goal of disaster studies and anthropology in particular should be to challenge the traditional axiomatic and unproblematic concepts, which are employed to analyze disasters. In short, analysis often requires seeing beyond the specific details of any particular disaster in order to uncover wider patterns found in adjacent or similar cases (Button 2016).

## Disaster Narratives

One crucial way in which we can gain a greater understanding of disasters in a broader, processual context is the interrogation of disaster narratives. Competing disaster narratives have no doubt accompanied disasters from time immemorial, however the debate over disaster narratives on a global level first emerged in the wake of the Lisbon earthquake of 1755. According to Russell R. Dynes (2000), this massive earthquake, which affected the fourth largest city in Europe, generated a heated series of debates resulting in newspaper discussions, books, essays, and fictional works. While these debates occurred during the Enlightenment, there are parallels to today: both epochs are characterized by vigorous intellectual debate about the roles of science and religion. Then, as now, issues of progress and modernity are being debated among clergy, common folk, and intellectuals. Most notable among these Enlightenment debates was the discussion that ensued between two major figures, Voltaire and Rousseau (Dynes 2000; Molesky 2015). As Dynes observes, it was Rousseau who unwittingly set the stage for a modern day social science approach to disasters by arguing, contrary to Voltaire's more moral/religious perspective, that rather than God or nature, "man" (we would now say humankind or society) was to blame for the ravages of the earthquake by arguing that if the tens of thousands of houses in Lisbon were less densely occupied and dispersed throughout the city there would have been fewer fatalities. Immanuel Kant was ahead of his time on this issue—even though he could not see beyond the contemporary attachment to slavery—arguing that

there would have been much less harm inflicted if the city was better prepared for an earthquake (Molesky 2015).

This historical debate, unearthed at the dawn of the new millennium by Dynes and others, highlights the contested nature of narratives about disaster, that they are products of society and also shape our understanding of responses. It also underscores who gets to tell, to narrate, the story of disaster. In contemporary society, competing narratives continue to emerge in the wake of disasters large and small not only because of how small the world seems to have become as a result of recent technological advances, but also because disasters have become globally imbricated in the broader context of late capitalism, neoliberal policies and of course climate change.

Thus, narratives continue to play a vital role in our perception of disasters and, on multiple levels, shape how we respond to them. Traditional media narratives commonly portray disasters as isolated events rendering invisible the global/transnational forces that produce them. Too often inaccurate framing can constrain our notion of what is both possible and desirable given the realities of prevailing ideologies.

News stories are, for the most part, anecdotal accounts and not systemic analyses of disasters and the larger historical circumstances that shape and determine them. In other words, such accounts ignore the disaster continuum by focusing almost exclusively on the middle of the continuum or the triggering event, without attention to the historical sequence of the events leading up to the disaster and the long-term recovery process. This process collapses media accounts into a very narrow frame and ignores fuller, more complete explanatory approaches—thereby reinforcing the notion that disasters are exceptional events, which are not reflective of everyday life and the material world that shapes them. This decontextualized scenario deters us from studying the nature of the social and cultural construction of reality. The neglect of the longitudinal evolution of disaster serves to reinforce the neglect of systemic forces, asymmetrical power relations, and the long-term impact of disasters on human communities. As one evacuee in the Houston Astrodome stated, “The news don’t tell you everything.” Yet another evacuee said, “The media tells you what it wants to tell” (Button 2006).

As illustrated in the chapters that follow, survivors and their families struggle in the wake of disaster not only to regain control of their lives, but also to refute the supposedly objective frames of the disaster offered by the media and official government accounts. As Donald Brenneis (1996) reminds us, the world does not come to us already narratized. Whose disaster narratives are heard and whose are ignored is a vital part of the

contestation of meaning about disasters and the ongoing debate about who is to blame for either the disaster or the failure to adequately respond to the calamity (e.g., Brenneis 1996; Button 2002, 2010; Steinberg 2006; White 1981). McGee and Nelson (1985) observe that moral narratives are too often obliterated by privileged or hegemonic narratives. Often authorities' frustrating failure to prevent disasters and their ineptitude in responding to them causes people to question the social order. Disaster victims ask, "Why me?" "Why here?" "Why didn't the government prevent this from happening?" "Why aren't people being held accountable?" The assignment of blame and responsibility often becomes an integral part of this struggle to find meaning (e.g., Barton 1970; Baum, Fleming, and Davidson 1983; Button 1990; Drabek and Quarantelli 1967). In most instances, these accounts can take the form of counter-narratives that challenge the official accounts offered by officials and the media. These narratives can provide valuable insights into the disaster survivors' perception of class, race, and power. Narratives are also important because they play a formative role in the creation of the subjectivity of those affected by calamitous events. Focusing on the subjectivities that are revealed in these narratives offers us additional, rich, theoretical insights about the nature of disasters.

### **Disasters as Global or Translocal Processes**

Another crucial way in which we can gain a greater understanding of disasters, their translocality, and their inherently processual nature (Hewitt 1983; Oliver-Smith 2009; Wisner et al. 2004) is to examine them in the context of the ever-increasing international economic and social forces that shape our contemporary world. Arguably, disasters since the advent of capitalism can be seen as deeply interconnected with global forces, whether they be in the form of colonialism or late state capitalism, or neo-liberal forces. In other words, the ever-changing political economy of capitalism has mediated the social forces that have influenced the production of hazards and disasters in extremely complex ways—ways that shape how we understand, investigate, and talk about catastrophes. Today, many social scientists and practitioners researching disaster risk reduction view disasters in a processual light, not only in an effort to uncover the origins of disaster but also to sharpen our focus on the processes that produce vulnerability, as well as the successes, failures, and social changes that disaster response inspire.

One of the major contributions of disaster scholarship in changing policy and practice is the concept of vulnerability. As David Alexander (1997) noted in a twentieth anniversary issue of *Disasters*, the word "vulnerabil-

ity” successfully entered the conversation in policy and aid circles regarding disasters in the last two decades of the Twentieth Century. However, as Frerks and Bender (2004) point out in the conclusion to *Mapping Vulnerability*, vulnerability reduction had not been included in development institutions’ stated goals and agendas. That said, in recent times some development institutions have modified this stance, at least on paper.

Greg Bankoff (2004) offers a critical discussion about the historical and cultural geography of disaster, in which most of the world was depicted by early European explorers as being dangerous places requiring intervention. Drawing on David Arnold’s (1996) account of the emergence of tropical medicine in warmer climates, Bankoff utilizes Arnold’s notion of how Western medicine defined equatorial parts of the world as ridden with disease and contagion, thereby perceiving tropical regions as vulnerable and underdeveloped and thus justifying the colonial intervention of Western medicine. Thereafter, the discourse moved from a geographical discourse to a cultural one about inferiority and otherness.

In the same volume, Oliver-Smith (2004) challenges scholars and practitioners to address the issue of uneven experiences of risk and vulnerability, and particularly the geographical distance between producers of risk—those who reap benefits from exploitation of natural resources—and those who are subjected to increased hazards. In an increasingly global economy, this distance increases, as the headquarters of multinational corporations that emit toxic waste are often thousands of miles away from populations—the workers and residents near production sites or factories—who are exposed to waste, and often across national borders from them.

As Oliver-Smith (2004) rightly acknowledges, one of the more balanced approaches to globalization has been offered by Ankie Hoogvelt (1997). Hoogvelt notes that, the contemporary globalized world is distinctly different from the world in the beginning of the twentieth century in that multinationals have geographically dispersed production systems that exert new forces on domestic supplies of capital, labor, and companies. This, in turn, means that national boundaries can no longer protect workers, companies, or the environment, thus making it increasingly difficult to cope with vulnerabilities imposed by both natural and technological hazards (see also Oliver-Smith 2004). In 2005, at the UN’s World Conference on Disaster Reduction in Kobe, Japan, the resulting Hyogo Framework for Action noted that official development programs can lead to greater vulnerability (Wisner and Walker 2005); thus, reducing vulnerability became an explicit goal.

The current geopolitical and economic world order, often characterized by the terms “globalization” or “neoliberalism,” or some connection

of the two such as “neoliberal globalization,” has produced both wealth and inequality at an unprecedented scale. Following the demise of the Soviet Union and Eastern Bloc, capitalism has emerged as the dominant economic paradigm, expressed as triumphalism, as found in Fukuyama’s phrase “End of History” (1992) or in Margaret Thatcher’s declaration, “There is no alternative.” Social science research has debated the contours of the transformation of state authority, responsibility, and ability engendered by globalization. Activists, particularly those from the global South such as Walden Bello, Arundhati Roy, and Vandana Shiva, denounce what they see as neoliberal globalization’s erosion or undermining of state authority (e.g., Bello 1996; Danaher 1996; Danaher and Burbach 2000; Mander and Goldsmith 1996; Sassen 1998; Starr 2000).

Ethnographic research has qualified some of these claims, pointing out that global governance regimes, even policies referred to as neoliberal, can entail the strengthening of some, which could be defined as “masculinized,” facets of the state such as border patrols, customs regimes, and militaries (e.g., Chalfin 2006). That said, states’ roles as protector (of workers’ rights, environmental standards, or building codes) or provider (of services deemed basic including drinking water and sanitation, and others deemed social including education and health care) steadily eroded as a result of debt deals, austerity, and structural adjustment (Harrison 1997; McMichael 1996; Sassen 1998; Stiglitz 2002; Tsing 2003). Called the New Policy Agenda, the Washington Consensus, or simply neoliberalism, these policies and financial flows also favored the nongovernmental organization (NGO) sector, deemed the magic bullet (Edwards and Hulme 1996).

Given this global political and economic restructuring, it makes increasingly less sense to think about the disaster continuum—from vulnerability production to disaster responses—only in relation to nation-states and borders. Put more simply, disasters, and the processes that give rise to and shape them, are increasingly global, as the chapters in this book document. Neoliberal globalization increases the distance and speed with which both benefits and harms can travel, thus exacerbating the uneven development of risk and vulnerability.

Union Carbide, now Dow Chemical, acted within the logic of maximizing profits for shareholders, accumulating wealth and profit in its U.S. headquarters, while externalizing risk, minimizing payments to workers, and undercutting safety. On December 2, 1984, an explosion in a plant in Bhopal, India, released toxic gas, killing at least six thousand and injuring even more. Thirty years later the local community is still experiencing elevated health risk. Bhopal is a clear case of the globalization of the production of risk and vulnerability, and increasing distance between differential direction of environmental benefits like clean air and water, spaces for

recreation, and so on, along with environmental risks—pollution, hazardous waste, radiation, susceptibility to infectious diseases, and so on. As Button and Eldridge’s chapter documents, these risks constitute potential environmental hazards, disasters waiting to happen.

While large industrial disasters like Bhopal, Chernobyl, or Fukushima, are easier to conceptualize within this frame, the globalization of risk and vulnerability shapes natural events like earthquakes as well. For example, Oliver-Smith (1999) discusses how Spanish colonial policy set into motion practices, relationships, exploitation of resources, and processes that exacerbated the destructiveness of a 1970 earthquake in Peru, calling it a 500-year earthquake. The January 12, 2010, earthquake that devastated Haiti offers another clear example of socially produced vulnerability as a result of neoliberal policy and practice. Although most donors claim that 230,000 people perished, the Haitian government estimates that 316,000 died as a result of the quake. A debate was triggered when an unpublished report commissioned by United States Agency for International Development (USAID) (Schwartz, Pierre, and Calpas 2011) declared the death toll was only 64,000 people, thus providing us with a perfect example of how disasters often engender conflicting narrative accounts (Button 2002).

There is, however, no question the event in Haiti on January 12 was far deadlier than the Chilean earthquake that occurred six and a half weeks later, which was five hundred times more powerful and killed 525 people, according to official sources (see Parson chapter, this volume). One of the reasons for the dramatic difference in death is the proximity of the quakes to urban centers (Oliver-Smith 2010). For an even clearer example of the importance of this difference, in September 2010 an earthquake of similar magnitude to the one in Haiti, as well as similarly proximate to an urban center, occurred near Canterbury, New Zealand; in this instance, only one person died (Crowley and Elliott 2012).

The heightened vulnerability to disaster in Haiti was foretold in 2004 when tropical storm Jeanne killed 3,006 people. In 2008 Haiti was slammed with four hurricanes: Fay, Gustav, Hanna, and Ike. While the Haitian government’s preparedness did result in relatively fewer deaths in 2008 than in 2004, the comparison to Cuba’s response is nonetheless stark. Cuba was also hit by some of the same hurricanes, but in terms of vulnerability, only seven Cuban as opposed to eight hundred Haitian people died. Hurricanes have long played a key role in the history of Cuba and were, even prior to the Castro government, a key factor for centuries in the development of modern Cuba and the nation’s sophisticated methods of preventing and responding to hurricanes (Perez 2001).

In 2004, Oxfam published a report (Thompson and Gavia 2004) distilling Cuba’s formula that explains the difference. Between 1996 and 2002,

six major hurricanes struck the island. In that period, only sixteen people died in Cuba, compared to 649 for its island neighbors. The Oxfam report outlined twelve major themes, among which are communication, government priorities, social cohesion, and community-based institutional reinforcement in the civil defense and community-based disaster management approach as the keys to Cuba's success at reducing vulnerability.

Haiti's vulnerability is largely due to neoliberal policies that destroyed rural livelihoods and swelled cities like Gonaïves, the site of the deaths in 2004 and most of the deaths in 2008, and in the capital city of Port-au-Prince. Policies championed by USAID and the World Bank triggered the massive urbanization that contributed to the high number of fatalities (Deshommes 2006; DeWind and Kinley 1988). Alex Dupuy (2010) demonstrated that Port-au-Prince's population quadrupled in the two decades since neoliberalism: from 732,000 in 1986 to 3 million in 2007. Coupled with the erosion of public services and public oversight, as a result of neoliberal policies households were forced to stretch what little resources they had and to build housing as cheaply as possible. As a result, as Yvette Etienne (2012) cited, 86 percent of the homes destroyed had been built since 1990. While Haitian citizens certainly hold their own government to account, they also understand clearly the transnational forces, and particularly neoliberal globalization—what they call the “American Plan” or simply the “death plan.” Haiti's earthquake was, as a result of international financial policies, a disaster of global proportions.

A starting point for this volume is the increasing focus within disaster scholarship on the importance of examining the global and processual aspects of disaster that for too long were ignored. Building on the increasing ethnographic emphasis on the importance of globalization in understanding the origins of disaster, this book suggests that understanding disasters in a translocal light is indispensable for understanding the translocal construction of vulnerability and disaster.

Ethnographic insights about globalization require that processes labeled global, such as the global economy, are at the same time viewed as local (Appadurai 2001; Kearney 1995; Marcus 1995): for example, sweatshops and the workers who operate the machines are in a particular location, as is a CEO. Scholars have adopted the term “glocal” to refer to this chain of localities linked together through specific nodes of capital. Disasters are expressed in much the same way. The Pressure and Release Model (Wisner et al. 2004), perhaps the most recognized equation of disasters = hazards x vulnerability can be understood in this way as well while vulnerability, or pressure, might be built up over years and across borders, disasters require local agents as triggering events. The book also outlines three levels of vulnerability, what the authors call “root causes,”

“dynamic pressures,” and “hazardous conditions.” This model explains how local and global processes are often imbricated in one another.

A classic example of such global/translocal disasters are outbreaks of Ebola in West Africa. Especially devastating was the outbreak in Liberia, Sierra Leone, and Guinea in 2014 that has been confirmed in almost 15,000 cases and resulted in over 11,000 deaths as of May 2015, only fifteen months after the first case was officially registered. Emerging infections like Ebola exemplify not only diseases’ indifference to borders (Markel 2005), but the forces of political economies’ indifference as well. Like more traditionally defined disasters, narratives of emerging infection outbreak narratives (Wald 2008) closely resemble disaster narratives in their attempt to explore the legitimization and reproduction of power.

Contemporary accounts by Western (more appropriately Northern since these trends are also visible in Japan) governments, the media, and the public represent continuities in Arnold’s (1996) thesis cited above: commonly-circulated tropes include “contagion,” Africa as a “disease-ridden region,” the pathologization of poverty seeing affected populations as “weak” and “passive”—all of which are terms that Hewitt (1997) defines as central concepts of vulnerability (Bankoff 2004). Thus, one could say that history not only prefigures disaster, but also prefigures our response to disaster.

The Ebola outbreak triggered a massive public health response, particularly in countries in the global North. Responses were mapped onto existing geopolitical, national, and racial inequalities, as increasingly severe quarantines reinscribed the isolation and marginalization of West African individuals (and aid workers, who were portrayed as innocent victims). While the rapid spread of the virus highlights the connectivity of people across borders, particularly via travel, the response highlights the processes of localization.

Disasters profiled and analyzed in this volume are also experienced as particular, localized expressions of global vulnerabilities, such as Hurricane Sandy (also referred to as Superstorm Sandy) that Melissa Checker discusses in her chapter in this volume. Sandy is a perfect example of a single event having particular ramifications in local contexts: in Haiti the storm destroyed a season’s harvest in the south of the country, killing hundreds. In the New York metropolitan region, it flooded the subway system, knocked out power, and displaced thousands of people, further isolating individuals and communities that were already marginalized. Moreover, the fact that a hurricane could track so far north, and so late in the hurricane season, has been cited as a harbinger of global climate change, similar to the typhoon almost exactly a year later in the Philippines, thereby suggesting that disasters of global proportion seem to be increasing.



As Bankoff and Borrinaga remind us, and Checker, Parson, and Marino and Lazrus aptly demonstrate, storms also have local meanings as well that are often expressed in the narrative accounts of local residents. Because of these multiple and varied meanings, always rooted in local cosmologies, histories, political structures, gender ideologies, economies, and lived experiences, we use the term “translocal” instead of “global” or “glocal.” This book offers case material from ten recent disasters—including six events since 2010 and two unfolding disasters resulting from global climate change—that to varying degrees are all translocal. Each of the case studies is unique in the contours of causality, risk, and vulnerability, and certainly in the ways in which they were perceived, experienced, and responded to on the ground. Beyond these discrete events, this book offers a range of theoretical tools that, as the title suggests, aid us in contextualizing disasters.

## **Outline of Chapters**

We begin this volume with a contribution by Gregory V. Button and Erin R. Eldridge on the chemical spill in West Virginia’s Elk River (2014). Their chapter is a “thick description” (in the broadest and best sense of the notion in a post-post-modernist world) of a disaster that examines how disasters are sometimes imbricated in one another in uncanny ways (Button 2010, 194) and are often part of a larger sedimented cluster of disasters (Button 2016). Moreover, their approach embraces the notion that disasters are best viewed as processes (Wisner et al. 2004). Their in-depth approach harkens back to Hewitt’s idea (1983) of the necessity to recognize the “ongoing societal and environment relations that prefigure disaster” (24). Thus they take a historical/processual approach to the socioeconomic and environmental conditions in West Virginia, which serve to uncover not only the uneven development of capital in the region (Smith 1984), but also the translocal influences of conditions that range from nearby states to locations halfway around the world, as far away as India and Europe, thereby underscoring the influence of the global forces of late state capitalism. In this manner, the authors tell a small story that uncovers and interprets larger historical and economic structures that enlarges our understanding of the evolution of disasters through space and time.

Continuing this idea of the disaster narrative, the chapter by Greg Bankoff and George Emmanuel Borrinaga discusses the Category 5 storm that hit the Visayan Islands of the Philippines on November 7, 2013. This event has two names: internationally it is referred to as Typhoon Haiyan, and on the archipelago it is known as Yolanda. The article discusses the two

ways in which the disaster is understood; according to the chapter these two different nomenclatures have come to represent two quite different discursive narratives about the typhoon and its aftermath. Bankoff and Borrinaga argue that Typhoon Haiyan made international headline news and engendered analysis of climate change, freak storms (numerical calculation of risk), and poverty. Typhoon Yolanda, on the other hand, has a storyline to do with history, accusations of incompetence (national versus local), and stubborn people at fault. These very different discourses about blame and responsibility lie at the heart of the fundamental difference in the way disasters are viewed from the standpoint of the developed and developing worlds. Importantly, how the storm is understood shapes the response to it.

Assembling historical evidence and interviewing two local journalists, the provocative chapter stretches the concept of disaster narrative to its limit; perhaps, indeed, the single weather event might be better understood as two disasters. Invoking Quarantelli's three phases of understanding disasters, Bankoff and Borrinaga conclude with a series of critical questions that help to sharpen the focus on disaster scholarship. Whereas in the global North (or the developed world) disaster policy and practice has focused on resilience, the authors contend that in the global South (or the developing world) the conversation has remained focused on large-scale vulnerability, and what renders them more vulnerable. This blame game is typically focused on outsiders, specifically advanced industrial nations and transnational institutions, which according to the authors can also serve developing nations as ideological cover to continue high-carbon economic development strategies.

As the chapter by Mark Schuller demonstrates, Haiti's earthquake became a global event that hailed global citizens to act. The multinational response broke new ground; it truly became the model for a global disaster. To paraphrase Ralph Waldo Emerson in his writings about the battles of Lexington and Concord that triggered the Age of Revolution, on January 12, 2010, the tremors were felt round the world. The times are very different, but Benedict Anderson's (1987) insights in the role media play in forging "imagined communities" are useful to understand the contemporary era. The response to Haiti's earthquake was one of the most generous in recent memory. This is in no small part because of the event's high media profile. As several analysts have noted, disaster aid feeds off media coverage.

However, the high media profile—and the generosity it inspired—came at a price. The stories of devastation, appearing to many foreign observers as hell on earth, with phrases like "state failure" often repeated, foreign media coverage also naturalized foreign control of the response. Schull-

er's chapter explores this phenomenon, looking at how what might be called "disaster narratives" shape responses. The transnational nation building, the global imagined community, thus triggered a chain of events that empowered foreign agencies and actors. Foreign agencies assumed de facto control over Haiti's governance apparatus. Framed by the continued media coverage, this foreign control was naturalized through a series of discourses about Haiti being a "failed state," requiring a "republic of NGOs" to step in and take over. Schuller's chapter contrasts foreign media coverage with Haitian understandings, following this discussion with an exploration of the connection between foreign media coverage with aid delivery, particularly four tropes: a weak state, dehumanization, the photo op, and the blame game. Schuller's chapter ends with a series of reflections on the disaster narrative.

Nia Parson's chapter discusses powerful, competing discourses, linked to material, political, and economic actions and allocation of resources that have emerged in Chile following the 2010 earthquake. The chapter centers on the contests over the official story or disaster narrative. The Chilean state has claimed that recovery has been moving along well, that Chile is a technologically sophisticated, democratic, and modern state. Parallel to this narrative and in response to the inaction of the government to address chronic disaster, social movements critique disaster capitalism in particular and neoliberal inequalities in general. In addition, the state seized on the creation of what Noam Chomsky called a pseudo-event, in the rescue of the thirty-three miners trapped months after, and also on the obvious differences from the response in Haiti, in effect directing attention away from systemic inequalities, also expressed in official reconstruction. Playing to the global stage, the Chilean state portrayed itself as modern and advanced, and technology as the solution.

Parson's chapter draws from insights from other scholars that different groups create conflicting narratives of disasters and their aftermaths, as they negotiate old and new stakes of what matters, materially and morally, in post-disaster social and environmental contexts. States, private enterprises, and local, national, and global actors have different stakes in the construction, maintenance, appropriation and contestation of official narratives in the aftermath of a disaster. Drawing lessons from the social movements organized in opposition to the newly elected neoliberal government, Parson's analysis chapter builds upon the unresolved questions of citizenship and what it means to be human, specifically Agamben's notion of the *homo sacer*—literally the "sacred man" or often translated as "bare life," and the dilemmas of a supposedly universal humanity identified by anthropologists such as Michel Agier (2010) and Didier Fassin

(2010). This chapter offers a compelling ethnographic case to move the conversation forward.

Bridget Love's analysis of the problem of reconstruction in coastal municipalities in northeast Japan in the wake of 3/11 provides a finely textured analysis of the influence of the global economy on reconstruction efforts. Japan's postwar recovery policies that promoted accelerated economic growth gradually faced increasing criticism for what many termed "Tokyo-centric development," which made remote regions economically more vulnerable. Criticism of these economic policies, heightened by decades of recession, and major shifts in the global economy eventually promoted neoliberal approaches and a decentralized economy that would purportedly make rural regions more autonomous while simultaneously creating a more robust national economy by promoting resilience and innovation in outlying regions.

Unfortunately, as Love trenchantly demonstrates, these optimistic claims failed to produce more-robust regional economies and fell far short of developing regional self-sufficiency and innovation. In fact, the neoliberal policies did just the opposite and made rural communities more vulnerable in struggling to meet the needs of increasingly aging populations in an era of increasingly less government support. In the aftermath of the triple disasters of 3/11, diminishing state support and massive devastation increased the rural communities' vulnerability rather than making them more resilient. Love's account calls into question not only Japan's logistics of reconstruction, but also the negative effects of late state capitalism's promotion of neoliberalism. On a subtler level, Love's account also forces us to examine more critically global and nonlocal factors that adversely affect issues of vulnerability and resilience.

The chapter by Roberto E. Barrios reviews a number of anthropological insights concerning the application and production of expert knowledge in disaster reconstruction, based on two ethnographic studies conducted in Honduras after Hurricane Mitch and in New Orleans following Hurricane Katrina. The evidence included in these case studies problematizes two representations of expert knowledge. The first is how technoscientific knowledge-making is often represented by its practitioners as an optimal and culturally unbiased way of knowing and representing the social and material worlds, like the Chilean state discussed in Parson's chapter. Second, technoscientific knowledge is often represented as a universally relevant basis for making prescriptions as to how people should live (or recover from disasters) across human societies.

Barrios leverages two compelling ethnographic case examples, each highlighting the shortcomings of this technoscientific knowledge. Both

case examples offer powerful evidence of the importance of local knowledge and priority setting. In New Orleans, following Hurricane Katrina, planners made people invisible in their redevelopment plans that Barrios argue were directed at the unobstructed flow of capital, not rebuilding residents' social ties and the local economies that emerged to meet their needs. Accessing local knowledge is also the key factor in the difference in relocation settlements in Honduras following Mitch: the textbook top-down NGO settlement quickly degenerated into disrepair and even violence, whereas residents of a settlement that from its outset played an oppositional role were able to leverage what scholars call social capital. While the importance of local knowledge is almost too obvious a point to mention, Barrios's chapter offers both compelling case evidence and a rich discussion of the epistemological frames themselves, elements of what Button (2010) called disaster culture. To disaster scholarship, this chapter offers disaster knowledge.

Like Barrios, in the next chapter Elizabeth Marino and Heather Lazrus call into question the privileging of technoscientific knowledge over that of local knowledge in their respective ethnographic accounts of two particularly vulnerable communities already experiencing what used to be termed slow-moving disasters, one aspect of what Rob Nixon (2011) termed slow violence. Marino and Lazrus base their analysis on their long-term research in Tuvalu (an island nation-state in the Pacific) and Shishmaref, Alaska. Shishmaref is situated on an ice shelf; because of melting glaciers and ice caps, planning authorities deem it necessary to relocate the entire town. Tuvalu, an island that never is more than a few meters above sea level, also faces the slow but devastating onset of climate change and the prospect of their community relocating thousands of miles away from home. The authors argue that in these very different settings culturally held notions of time, flexibility, and uncertainty do not necessarily conform to bureaucratically held notions of preparedness and response. For instance, flexibility in the face of uncertainty about how and when global climate change will manifest locally is critically linked to personal and community interactions with time that do not necessarily resemble the one-size-fits-all notions of the bureaucratic response to disaster. The conclusion of the chapter underscores Button's (2010) observation of the importance of contextualizing uncertainty in the domain of culture in order to arrive at a comprehensive idea of the role uncertainty plays in a given society.

In the final chapter, Melissa Checker undertakes an in-depth investigation of the political ecology of Superstorm Sandy and the long history of Staten Island's ecological degradation. Like Button and Eldridge's chapter, she trenchantly demonstrates in her own way how "disasters are deeply

entangled in extensive political and economic webs that stretch across time and space.” Her highly nuanced, complex account uncovers several deep-seated webs of significance that converge to make the island and its inhabitants vulnerable to not only the wrath of Superstorm Sandy, but also centuries of ecological degradation and gradual dense urban development situated in and around numerous toxic waste sites. The historical roots of these sites date from colonial times to the Manhattan Project, to the creation of a massive toxic waste site (that was for a long time the largest site of its kind in the world), to the dumping of toxic waste from the ravages of 9/11 and numerous other environmental follies. She somehow also manages to recount how the development of the Panama Canal, rising sea levels, and late state global capitalism compounded the harm inflicted on Manhattan’s fifth borough, often referred to by its inhabitants as the city’s forgotten borough. As if that is not enough, she convincingly argues that Staten Islanders’ complex, in-depth understanding of Superstorm Sandy and the “ways in which it connects to other disasters, suggest potential new trends in post-storm activism.”

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# A Poison Runs Through It

## *The Elk River Chemical Spill in West Virginia*

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GREGORY V. BUTTON and ERIN R. ELDRIDGE

In our culture we tend to view disasters as isolated, exceptional events. We need to instead view them as connected to one another along various social fault lines and as a direct product of socioeconomic processes that transcend traditional boundaries of time and space. By placing disasters back into the dynamic field of social processes and translocal boundaries, we gain a greater understanding of their origins.

Like the accounts of chemical contamination in other chemical corridors around the nation, such as the notorious Cancer Alley in Louisiana, the strip along the Gulf Coast of Texas, the chemical corridor in New England (a legacy of the Industrial Revolution), the chemical corridor in western New York and Ontario, Canada (stretching originally from the Niagara Falls area to the Great Lakes on both sides of the international border), as well as in other areas of the country including Silicon Valley, the 2014 Elk River chemical spill was not an isolated event bound by space and time. Rather, it was the manifestation of historical processes shaped by economic and political forces from as far away as India, France, Germany, Washington, DC, Tennessee, Michigan, and Atlanta, Georgia (Button 2015). Thus, the spill in the Elk River serves as a classic example of how disasters are unfolding processes contextualized deep into the past and richly configured in the present.

### The Spill

The year 2014 got off to an ill-fated start in West Virginia with what would become the state's fifth major industrial disaster in eight years (Gabriel and Davenport 2014). In the early morning hours of January 9, residents

in Charleston, West Virginia, awoke to the smell of black licorice in their tap water. The West Virginia Department of Environmental Protection (DEP) soon began receiving complaints about the disturbing odor. Before long, 300,000 people were without potable water. By midmorning, state investigators would discover that thousands of gallons of MCHM (4-methylcyclohexanemethanol), an organic solvent, had accidentally leaked into the Elk River.

Neither the state health department nor the Centers for Disease Control and Prevention (CDC) were familiar with MCHM, which was causing headaches, eye and skin irritation, and difficulty breathing. In their attempt to discern the potentially hazardous nature of the chemical, it became a case of the blind leading the blind. Before long, 168 people had been rushed to the emergency ward, with some twenty people ending up hospitalized. By the time the crisis was officially over, four hundred people sought medical help in emergency rooms alone. Within twenty-two hours, the chemical plume appeared six hundred miles away in Cincinnati via the Ohio River. The Cincinnati water department, serving well over a million people, closed its intake valves and switched over to its emergency water supplies. Unlike Cincinnati and Louisville, Kentucky (which were later affected by the spill), Charleston had no backup emergency water supplies to provide the public with a safe alternative (Peterson 2014).

At 10:30 A.M., state employees discovered the leak in a Freedom Industries' 48,000-gallon chemical storage tank along the Elk River, only 1.6 miles upriver from the intake pipe of the company that owned and operated Charleston's water supply, West Virginia American Water Company. In violation of Homeland Security regulations that require reporting of accidents within thirty minutes of their discovery, Freedom delayed reporting the leak of MCHM until 12:05 P.M.

When a Freedom Industries representative, Bob Reynolds, finally called the West Virginia Office of Homeland Security to report the spill, he was asked if the material was either hazardous or harmful, to which he replied, "No." When asked again about the nature of the chemical spilled, he replied, "It is not a hazardous substance," which later proved to be false (Youngren 2015). Reynolds also misled the operator by flatly stating that the leak was confined by a containment wall and was not entering the Elk River. In sharp contradiction, a report by the state DEP later stated that the inspectors discovered, around the time Reynolds called the hotline, a four-foot-wide crack in the containment wall leaking MCHM into the Elk River. The audio recording of Reynolds' misleading statements and other denials of wrongdoing by Freedom officials led to a U.S. Attorney's Office probe of the spill (Barrett 2014).

Governor Earle Ray Tomlin waited an unthinkable six hours before issuing a “Do Not Use” order for tap water used for drinking, cooking, washing, or bathing (Molenda 2014). Schools, restaurants, hotels, and other businesses were forced to close. Residents of the Kanawha Valley rushed to purchase bottled water, and supplies were quickly depleted. People were shocked and amazed that Charleston, the state capital, was paralyzed by the crisis. Perhaps even more surprising, at no time did an emergency broadcast system warn inhabitants of the unfolding disaster (Johnson 2014).

Hours later, the governor declared a state of emergency and deployed the West Virginia National Guard. As the national media, commentators, policy-makers, and public health officials broadcast news of the event, citizens across the nation were stunned that such a disaster could occur in one of the world’s richest nations. Near midnight, President Obama declared the spill a national emergency and directed the Federal Emergency Management Agency (FEMA) to provide assistance (Resnikoff 2014).

According to Freedom’s initial reports, only 2,500 gallons of MCHM had been released. Several days later, when evidence to the contrary surfaced, Freedom admitted that the leak was considerably larger. Almost a day after the leak was identified, approximately ten thousand gallons of the toxic chemical had entered the Elk and Kanawha Rivers, tributaries of the Ohio River. Two weeks after the initial spill event, Freedom informed government officials that a second toxic chemical, propylene glycol phenyl ether (PPH), had also been released into the Elk River. The delay in reporting thus raised further suspicions since, by Freedom’s own admission, they had immediately informed employees of the second chemical in an e-mail on the day of the spill (Associated Press [AP] 2014).

## **The History of Kanawha Valley**

As has been argued elsewhere, disasters are not isolated events bound by space and time, or even concept, but are set in motion by a set of preconditioned series of events and are followed by a series of cascading events that continue to unfold over time (Button 2010; Oliver-Smith 2009). In order to comprehend why the Elk River spill is not merely a discrete event, we need to first examine the historical circumstances in which it is contextualized.

Historically referred to as the Great Kanawha River Valley and later called simply Chemical Valley, this narrow gorge extends ninety-seven miles northwest from the Kanawha River origins at Gauley Bridge to the river’s confluence with the Ohio River at Point Pleasant, West Virginia

(Cantrell 2004; Davis 1946, 255). The Kanawha Valley surrounds Charleston, the state capital, where the Elk River joins the Kanawha River, and runs through the counties of Fayette, Kanawha, Putnam, and Mason, which are inhabited by over 300,000 people collectively, according to 2010 census data. The valley residents are predominately white, with percentages below the poverty line ranging from a little over 11 percent in Putnam County to over 21 percent in Fayette County. Kanawha County, which houses Charleston, is the most populated, with about 14 percent of the population living below the poverty line (Davis 1946; U.S. Census Bureau [USCB] 2010; Vincent 1984).

According to the 2010 census (USCB 2010), the city of Charleston is populated by 51,400 people and 23,453 households, with a population density of over 1,600 people per square mile. The inhabitants are predominantly white, comprising 78.4 percent of the population. African Americans make up 15.5 percent, Asians 2.3 percent, Latinos 1.4 percent, and Native Americans 0.2 percent. Slightly over half the population is female (52.4 percent) and about 16 percent of the populace is sixty-five years of age or older. Using data from the Gallup-Healthways Well-Being index, Health.com named West Virginia the most depressed state in the United States and proclaimed Charleston the “most miserable city in the nation” in 2013 (Ghabra 2014). More recently, the Well-Being Index ranked West Virginia last in their index (Witters 2015).

This geographic area has long been known for its raw materials and mineral resources, including timber, bituminous coal, oil pools, gas pockets, limestone, and brines. Comparing the region to one of the earliest industrial sites of England in an 1876 geological report (Carpenter 1968/69, 538), a doctor and entrepreneur of Kanawha wrote, “With cheap salt, cheap coal, sulpherets, timber, labor and transportation there is nothing lacking ... to make the Kanawha Valley the Tyne of America.” Markets and trade networks throughout the region preceded industrialization, but industrial development in the valley primarily occurred along streams and rivers and later along roads and railways. Raw materials extracted from the area passed through commercial hubs, such as Charleston, which were initially established at major transportation centers connected to broader regional and national markets (Davis 1946; Lewis 1998, 51).

Access to the Ohio River Valley, which has been a major artery for commerce since the early nineteenth century, facilitated resource development. Indeed, the Ohio River Valley’s 981-mile course ranging from Pittsburgh, Pennsylvania, to Cairo, Illinois, is itself a chemical corridor, which in 1965 alone carried 6.7 million tons of chemicals (Wrathall 1969, 426). Currently, in addition to the numerous industrial plants along its shores, there is considerable controversy surrounding the fracking indus-

try's proposal to move waste down the Ohio River, which, according to the U.S. Environmental Protection Agency (EPA), is the most polluted river in the United States (Schack 2015) with heightened risk levels to the river system and its inhabitants (Koff 2013).

Even though West Virginia is a rural state, much of the state has long been intensely industrialized (High and Lewis 2007). Like other areas of the Appalachian South, the abundance of resources in West Virginia has not always translated into improvements in the well-being of the citizenry (Lewis 1998, 50–51). West Virginia has long suffered from what author Michael Harrington famously described as “grinding poverty” in his path-breaking 1962 book, *The Other America: Poverty in the United States* (Harrington 2012, 42). From the floods resulting from early timber extraction, to the fires, explosions, and contamination brought about by the coal and chemical industries, residents have long dealt with the externalized costs of industrial production. The state has suffered from some of the nation's worse disasters, such as the 1907 coal mine explosion in Monongah that killed 362 men (Mine Safety and Health Administration [MSHA] 2015) and the 1972 Logan County Buffalo Creek disaster, resulting from the collapse of the Pittston Coal Company's coal slurry dam, which killed 125 people, injured 1,124 residents, and destroyed more than four thousand homes (Erikson 1976; Stern 1976). More recently, in 2010 the Massey Coal Company's Upper Branch mine explosion killed twenty-nine miners working in the mine.

In Kanawha Valley in particular, the risks and hazards imposed by the chemical industry have differential impacts. Studies show that African Americans and people living below the poverty line are especially vulnerable to the risks and hazards of the chemical industry (Perlin, Sexton, and Wong 1999; Perlin, Wong, and Sexton 2001). Additionally, a report by the Center for Effective Government asserts that over 90 percent of school-age children in Putnam and Kanawha Counties attend schools in zones near high-risk chemical facilities (Frank and Moulton 2014).

Settlement, trade, and land surveying began in the valley in the eighteenth century and the town of Charleston was founded by the early nineteenth century. The birth of the chemical industry in the valley is often attributed to early brine pumping and salt brine production (an essential component in the production of many chemicals), which was initially done by indigenous inhabitants in the area (Cantrell 2004). The first salt furnaces of the valley date back to the late eighteenth century, but the Ruffner brothers are often credited with launching the commercial salt economy along the Kanawha River. In an area near Charleston referred to as Kanawha Salines, the brothers drilled their first brine well in 1808, reaching nearly sixty feet below the surface. Tremendous growth in the

industry followed, and the valley became a top supplier of salt throughout the country (Cantrell 2004, 2; Crawford 1935, 111). By 1828 sixty-five salt wells existed along ten miles of the Kanawha River. Almost three thousand laborers, including over a thousand slaves brought in from the Deep South and Virginia, were working in salt production by 1835 (Dunaway 1996, 177; Stealey 1974, 108). Production peaked between the mid-1840s and mid-1850s, followed by decline due to increased competition as well as the Civil War (Compton and Crawford 1938, 306).

While the salt industry, as well as the production of bromides and potassium salts, during the 1800s contributed to the growth of chemical facilities, the chemical industry in the valley did not take off until the early twentieth century. At the turn of the century, the alloy manufacturing Wilson Aluminum Company was bought by the Electro Metallurgical Company (later referred to as Electromet), which not only became a dominant force in the global market for alloys, but also was the predecessor of the Union Carbide and Carbon Corporation, later known just as Union Carbide. Prior to World War I, Germany had been the world's leading chemical manufacturer, but the emerging demands of war paved the way for the production of chlorine and caustic soda from the salt brines of Kanawha, as well as the manufacturing of power for explosives (Cantrell 2004).

By the 1930s the chemical industry had become the fastest-growing industry in the nation, and the Kanawha Valley was one the major centers of this growth industry (Whitehead 1968, 146). Federal investment in the region during World War I and World War II led to the development of an industrial infrastructure that enabled the birth of numerous chemical companies during postwar eras. By the end of World War II, Union Carbide's sales alone totaled \$522 million, second only in the chemical industry to DuPont's sales of \$783 million (Ross and Amter 2010, 25).

Before U.S. involvement in World War I, the major powder producer was DuPont, but as demands increased, an explosives plant was constructed just outside of Charleston in an area that would eventually become known as Nitro; plans were made for a mustard gas plant in Belle, although it was repurposed before completion for the production of chlorine and other chemicals. The growth was spurred again during World War II. With the Japanese occupation of much of Southeast Asia, access to raw materials for the manufacture of rubber, which was essential to the war effort, became impossible to procure. The U.S. government's response was to create artificial rubber, the ingredients for which were already available in West Virginia. To meet growing demands for rubber, the federal government built a rubber factory in Institute, West Virginia, and later sold the plant to Union Carbide (Cantrell 2004, 2–6). After World War II a number of the chemicals produced in the valley became in great

demand and required production quotas higher than could be produced within the valley, so the major corporations constructed larger facilities along the Gulf Coast of Texas to meet the demand. The Kanawha Valley chemical plants began to concentrate more on producing plastics and agricultural chemicals (Denham 2013).

Over the decades the buying and selling of companies placed some of the largest chemical companies in the world throughout the valley at various points in time, including DuPont, Union Carbide, Monsanto, BF Goodrich, Bayer, and Dow. By 1985 there were twenty chemical plants along a twenty-mile stretch of the valley (Bukro 1985). While the concentration of chemical facilities placed the valley at the center of research and development in the state for much of the twentieth century, it has also produced a number of industrial disasters and threats to public health and the environment.

The manufacturing of war-related products did not end with World War II. In the town of Nitro, the production of the herbicide commonly referred to as Agent Orange at the town's Monsanto plant not only connects the valley to the poisoning of millions of people during the Vietnam War, but also led to a class action suit over local contamination in the valley (Brady 2012). The suit was filed on behalf of thousands of residents who were adversely affected by Monsanto operations and was settled in 2012 (Kaskey 2012).

One of the valley's first major industrial disasters in the twentieth century, known as the Hawk's Nest Tunnel Disaster, has been regarded by many as "America's worst industrial disaster." That term was the subtitle of a seminal book, *The Hawk's Nest Incident*, by Yale University epidemiologist Martin Cherniack (1986). Because many deaths went unreported, it is conservatively estimated that at least 764 men died in the short term. In the long term, no doubt many more died of prolonged illness (Cherniack 1986). Despite the enormity of the tragedy, the disaster has been relegated to almost obscurity in the minds of the nation.

On the brink of the Great Depression, Union Carbide's subsidiary, Electromet, began work on a three-mile tunnel through the Gauley Mountain. The purpose of the tunnel was to construct an aqueduct that would provide power to a Union Carbide chemical plant in Alloy. The tunnel was dug through a vein in the mountain that was almost pure silica; aside from the few men who died from the typical tunnel digging accidents, the majority died of acute silicosis. The disaster has long been surrounded by controversy, including cover-ups and the exploitation of migrant southern black workers who composed 75 percent of the work force. It has been alleged by Spangler (2008, ix) and others that the tunnel's diameter was greatly expanded—not to facilitate the aqueduct, but rather to enrich Union Car-



bide's metal alloying processing activities, since silica was an essential chemical element in the manufacturing of the alloy. The workers were never informed of the dangers of silica dust nor provided with the proper respirators to guard against silicosis (Markowitz and Rosner 2003, 160).

Both Union Carbide and the community of Institute, West Virginia, loomed even larger in the public's eye in 1984 when they were directly connected to one of the worst disasters of the twentieth century and arguably one the worst industrial disasters of all time. In December of that year, there was an accidental release of forty tons of methyl isocyanate (MIC) at a Union Carbide plant in Bhopal, India. MIC is a chemical used to produce carbamate pesticides, and, according to the EPA (2015a), it "is extremely toxic to humans from acute (short-term) exposure."

The toxic cloud left thousands of people dead. The poisonous gases that spread over the city of 800,000 people created an unprecedented tragedy unlike any that the world has previously experienced. While the Indian government claimed that approximately 3,900 people perished and another 3,900 were severely injured, others have alleged that perhaps as many as 8,000 people were killed and another 300,000 were affected by exposure to the chemical (Mukerjee 2010, 61; Shrivastav 1987). The U.S. EPA estimates that the chemical accident had "adverse health effects in greater than 170,000 survivors." Deleterious effects include decreased lung function, blindness, and disorders of the reproductive system (EPA 2015a).

Union Carbide has long maintained that the disaster was an act of sabotage, while community activists and the Indian government have argued that the tragedy was the result of poor management and shoddy equipment maintenance. In an attempt to avoid liability for the accident, Union Carbide became a wholly owned subsidiary of Dow Chemical Company located in Midland, Michigan. Despite denials of liability, the Union Carbide/Dow merger made Dow the object of civil and criminal liability in ongoing litigation surrounding the Bhopal disaster (Amnesty International 2013).

Among other things, the tragedy turned the world's attention to Union Carbide's plant in the valley community of Institute, West Virginia, where MIC was manufactured. It was not the first time, nor the last, that critical attention was focused on the West Virginia facility. Several times in the past, Union Carbide had been fined for its unlawful release of toxic chemicals into the Kanawha River. These releases generated a considerable amount of concern among the local residents, many of whom knew friends and neighbors who had died of cancer (Cantrell 2004). As early as the 1970s, epidemiological studies demonstrated that Kanawha Valley residents had a 20 percent higher rate of diagnosed cancers than the national average. Moreover, a study conducted by the state's department of health that res-

idents living downwind of Institute had twice as many cancerous tumors as the national average (Lapierre and Moro 2002, 49–50).

In the immediate wake of the Bhopal disaster, a Union Carbide official assured concerned Institute residents that an accidental release of toxic gas could not occur at the Institute plant. Later they went so far as to state unequivocally that their detection system would guarantee that any accidental release of gas would never drift beyond the plant campus. The horrific tragedy in Bhopal generated considerable public debate in Institute. While many residents felt threatened and wanted to rid their community of the chemical plant, a number of Union Carbide employees and supporters demonstrated in defense of the corporation (Cantrell 2004, 9).

In August of 1985, less than a year after Bhopal, Union Carbide was responsible for the release of a gas cloud of aldicarb oxime in Institute, which led to the hospitalization of over 130 people who experienced burning sensations in their eyes, nose, throat, and lungs. Echoes of Bhopal haunted the community as \$5 million worth of newly installed safety equipment failed and plant operators waited twenty minutes to alert authorities after the release. The chemical release manifested after a series of mechanical and human errors occurring over several days. Following the discharge, the six employees on duty were confined by the vapors in a control room where they shared an oxygen hose until they were rescued. East and northeastern winds carried the toxic plume through communities and over a mountain ridge (Baron, Etzel, and Sanderson 1988; Cantrell 2004, 9).

Residents' concerns increased when they were warned that food grown in the nearby area should not be eaten. The U.S. Occupational Health Administration (OSHA) later cited the company for "willful neglect" and the violation of a number of safety procedures at the plant (Weir 1987, 120–121). Ironically, even though Union Carbide had gone to great expense to install a warning system, albeit faulty, they had failed to develop an evacuation plan. Ed Hoffman, a local resident and activist briefly described the community's vulnerability in an interview recorded in Appalshop's video documentary, *Chemical Valley* (Pickering and Johnson 1991). As he stood overlooking the community, he stated the challenges that the residents faced in evacuating the area in a timely manner (Pickering and Johnson 1991): "Right in front of us here is the campus of West Virginia State College. Over there is the West Virginia rehabilitation center and that is a place where most of the residents are physically handicapped and would have great difficulty in moving out. The inter-state [seen in the distance] runs along over there but you cannot get on the inter-state without going by the Carbide plant." Shortly after the incident, Union Carbide sold the plant facility to Rhone-Poulenc, a French chemical manufacturer.

Later, in 1999, the plant merged with the German firm of Hoeschst AG (part of a large conglomerate with which Bayer Chemical is also affiliated) and changed the facility's name to Aventis CropScience and later to Bayer CropScience (Cantrell 2004, 6; GMWatch 2015).

While the disaster at Bhopal and the chemical release in Institute pushed Congress to pass the Emergency Planning and Community Right to Know Act (or EPCRA; EPA 2015b), which included a provision for industries to complete a toxic release inventory, the calamities continue. In 2008 an explosion at the same plant, then owned by Bayer CropScience, left two dead and several injured. Bayer bought the plant to manufacture pesticides, and, according to the Chemical Safety Board (CSB), the disaster could have been prevented with adequate training and proper start-up protocols. Had the exploding tank launched in a different direction, the Board also noted, debris could have pierced a holding tank of MIC, the same chemical responsible for the Bhopal atrocities (CSB 2011b).

Public concern was amplified just two years later as the legacy of Bhopal once again rippled through the valley. In a 33-hour period beginning on January 22, 2010, three serious leaks occurred at DuPont's 700-acre facility in Belle, just eight miles east of Charleston. A leak of two thousand pounds of methyl chloride was discovered when an alarm sounded. Investigators eventually learned that the leak had begun three days prior to alarm going off. An additional leak unfolded the following day when a pipe leaked a cloud of sulfur trioxide. Later the same day a phosgene leak also occurred. Two workers died as a result of exposure to the chemicals. The CSB attributed all three leaks to "preventable safety shortcomings" (CSB 2011a).

This historical backdrop not only reveals that the Elk River spill represents one of many preventable catastrophes in the valley, but it also suggests that the production of vulnerability and hazards in the valley has systemic underpinnings. Like the catastrophes preceding it, numerous uncertainties and questions over health and safety emerged in the wake of the spill, as the next section will illustrate.

## Health Concerns Amidst Scientific Uncertainty

As in the wake of many disasters, conclusive scientific evidence is often lacking, especially in the initial stages of a crisis. Scientists and public officials struggle to obtain reliable information on which to base decisions and the public often feels confused and uncertain about the difference between real and perceived risks (Button 2010). After state officials discovered the Elk River spill, emergency responders and the public struggled to obtain credible information about MCHM. Troubling questions persisted

for months after the spill and the slow and ponderous response of Freedom, the state, and the CDC raised both concern and questions in the public's mind. Uncertainties persisted when, three months after the spill, the CDC still had not released a report analyzing the medical records of people who had sought hospital treatment (Ward 2014b). Among the many questions that lingered in the public's mind was, How long did the leak exist before it was detected? Some residents claimed they had smelled the licorice odor as long as two to four years before the spill was discovered. A statement by Karen Bowling, West Virginia's secretary of Health and Human Resources, was less than reassuring when she declared, "There are unknowns" (Shogren 2014). During the first two weeks of the crisis, the West Virginia Poison Center received 2,302 calls concerning the chemical (Kersey 2014).

Because there was limited information about the chemical, the most prominent questions in the minds of scientists and the public were, What exactly is MCHM? and What potential harm, if any, does it pose to the public? Making matters far more complicated, there was only one relevant study on the chemical: a non-peer-reviewed study conducted by the Tennessee-based Eastman Chemical Company. Based on their laboratory tests, Eastman gave the chemical an OSHA rating of "hazardous" on their materials data sheet (Osnos 2014). Jeff McIntyre, the president of West Virginia American Water, made a startling statement that added to the level of confusion and uncertainty, "We don't know that the water is not safe. But I can't say it is safe" (Ward 2014k).

Officials later learned that the MCHM that spilled into the river was referred to as "crude" MCHM, which contains six other ingredients, including 4-methoxymethyl, water, methyl cyclohexanecarboxylate, dimethyl 1,4-cyclohexanedicarboxylate, and 1,4-cyclohexanedimethanol (Ward 2014a). This revelation made the assessment of the chemical even more problematic since the West Virginia American Water system originally tested only for MCHM, leaving the toxicity of the other components in question. The CDC had also based its level of safety only on the assessment of MCHM, not on the six additional chemicals, thereby raising considerably more uncertainty about the potential deleterious effects of the spill on humans and the environment.

Equally disturbing, within the first three days of the disaster Freedom Industries had no contact with McIntyre's association. Since the CDC did not have a previously prepared safety standard for MCHM, it could only rely on the manufacturer's material data sheet. Based on what little was known from the Eastman study, the CDC and the West Virginia Department of Health and Human Resources set a safety limit of one part per million. Many were perplexed because neither agency offered an expla-

nation for the basis of the standard (Ward 2014k). By January 10, water testing had detected 1.7 parts per million. Concern increased when almost two weeks later Freedom informed health officials that another chemical, PPH, was also released in the spill (Mattise 2014).

Almost a week after the spill was detected, the water restrictions were gradually lifted for most residents. Many people affected by the ban were suspicious and reluctant to use the tap water again. Controversy arose around several issues, including how long residents should flush their water systems before resuming their consumption. Estimates ranged from ten minutes to twenty-four hours. Uncertainty was further elevated when Scott Simonton, a Marshall University professor and member of the state Environmental Quality Board, announced that he discovered traces of the carcinogen formaldehyde in the water he tested. Menthol is one of the main components of MCHM and breaks down into formaldehyde. Simonton warned that residents taking a hot shower were probably inhaling the carcinogen (McCauley 2014).

While it is difficult to know how many people began drinking the water after the lifting of the ban, one interesting fact emerged when Dr. Rahul Gupta, the executive director of the Kanawha-Charleston Health Department, revealed that a month after the spill, he conducted a survey (Savoia 2014) at a community meeting of approximately two hundred people and discovered that only two people were once again drinking the tap water (Cogan 2014). A number of residents reported that even after they flushed their water system, the smell of licorice lingered. Gupta reported that there was deep distrust, even among public health officials, about the limited data the CDC had used to establish safety standards for MCHM (Zucchino 2014). Dr. Richard Dennison, a scientist with the Environmental Defense Fund echoed similar skepticism about the federal government's reliance on Eastman Chemical's single study saying that the methodology employed to set the standard was flawed. He criticized the government for relying on the lethal dose in rats as the basis of their calculations for the potential harmful effect on humans (Gabriel 2014).

Criticism emerged when the CDC failed to advise pregnant women to hold off drinking the water. Eventually, they issued a statement that an abundance of caution should apply to pregnant women. Many believed that the agency had waited too long to issue this warning. Furthermore, others believed that until MCHM could no longer be detected in the water, infants and children should also continue to use bottled water. A senior scientist with the Natural Resource Defense Council, Jennifer Sass, recommended infants and children be included in the warning (Ward 2014e).

In late January, the CDC, the EPA, and the West Virginia American Water Company, as well as other federal and state agencies, fell under further

scrutiny and criticism for their lack of transparency throughout the early days of the crisis. The Society of Environmental Journalists (SEJ; 2014) wrote a letter to the EPA accusing both federal and state officials for “stonewalling” and a “lack of openness” and for “feeding people’s fear and distrust of government credibility.” In the letter to Gina McCarthy (the EPA administrator), the executive director of the society criticized the EPA (the federal agency primarily responsible for safe drinking water) for failing to comment about the spill “for almost a week” after the emergency was declared. The letter also condemned the CDC for failing to respond to requests from the media to discuss the basis on which they made their advisory recommendation. While the letter focused on the EPA and the CDC “for being AWOL during the emergency,” it also criticized West Virginia American Water for refusing to take questions directly from reporters during the crisis (Davidson 2014; SEJ 2014).

Things came to a head at the CDC in March when Dr. Tanja Popovic resigned from her post as director the CDC’s Disease Control National Center for Environmental Health. Popovic was the center of controversy for what many people perceived as her failure to respond properly to the call for investigation into the cancers surrounding the ongoing water contamination controversy at the Marine Corp’s Camp LeJeune. She has additionally been criticized for her role in assuring Kanawha Valley residents that the Elk River water supply was safe for consumption and for the agency’s delay in providing information to the public in a timely manner (Ward 2014c).

The unfolding fiasco in the immediate aftermath of the spill highlights failures of both government agencies and Freedom Industries to effectively respond in the face of crisis. In fact, the disaster has been characterized as “a case study in what not to do in terms of risk communication,” by health director Rahul Gupta (Manuel 2014). Although the CSB recommended that the state establish a Hazardous Chemical Release Prevention Program in Kanawha Valley following the 2008 Bayer incident and the 2010 explosion in Belle, the spill demonstrates persistent problems in emergency planning and crisis communication in the valley.

Gupta stated that the recommendations have been on the books for years and that, back in 2011, he noted that development of the program would not be difficult. “The real question is,” he commented, “are people going to play” (Ward 2014j). He was referring to the obstacles that frequently emerge alongside new regulatory proposals. In years past, industry groups openly opposed the CSB recommendations, arguing that they imposed unnecessary economic burdens on businesses and the state (Ward 2014j). But what industry groups and their political allies fail to mention is how companies like Freedom operate without consideration of the

socioeconomic and ecological burdens that they shift onto communities by externalizing costs, as a look at Freedom Industries illuminates.

## Freedom Industries

The events described above and the broader history of chemical valley illustrate that West Virginia is no stranger to chemical calamities and breakdowns in emergency planning and response. Considering the state's failure to heed repeated recommendations from the CSB, it is not surprising to learn that Freedom was knowingly storing corroded and improperly inspected tanks of MCHM in the valley (CSB 2014).

According to a Federal Bureau of Investigation (FBI) document released in federal court, Freedom knew about problems in the tank prior to the spill. The document stated that Freedom was aware of state and federal permit protocols to protect ground, surface, and storm water from pollution, which require a spill analysis for stored substances, pollution prevention training, inspections, and preventive maintenance, and an impervious dike or wall for protection in the advent of a leak. In 2008 a company hired by Freedom to inspect the storage tanks documented damage to the dike wall near tank 396 (the culprit of the spill), yet Freedom did not repair the dike. Additionally, the FBI report said Freedom not only failed to properly inspect tank 396, but also intentionally excluded tank 396 and a few other tanks from the 2008 tank inspection because they had been tagged to be taken out of service. Freedom, however, never retired the old tanks. The company, as the document stated, also did not appreciate the warnings about MCHM provided by the manufacturer (Ward 2015c).

Freedom Industries, which owes millions of dollars to creditors and in taxes, filed for bankruptcy soon after the disaster. The filing not only placed numerous lawsuits against the company on hold, but also stifled investigations into whether the company has any recoverable money that could be used for debt repayment or possibly for clean-up efforts (Ward 2014f). Freedom has since been negotiating with the West Virginia DEP to allow the company to apply for a voluntary remediation program, which would make clean-up standards less rigorous (Ward 2014g).

The federal investigation launched in the aftermath of the spill eventually led to charges against Freedom Industries and six individuals affiliated with the company for Clean Water Act violations. Three company officials were indicted in December of 2014. Former president of Freedom, Gary Southern, was also charged with over a dozen other crimes, including bankruptcy fraud and lying under oath, and was indicted in late January of 2015 (Ward 2015d). While these charges, as well as the recent rejection

of Freedom’s bankruptcy plan by a West Virginia judge (AP 2015) are steps toward holding the company accountable, the underlying political and economic arrangements that allowed the disaster to unfold have not been addressed.

## Water, Politics, and the Coal Connection

When it comes to water contamination, numerous industries share culpability throughout West Virginia. In many areas of the state, catastrophes and contamination are so commonplace that inadequate access to clean and safe drinking water has become a normalized part of everyday life. Citizens from both coal and chemical communities interviewed by various media outlets in response to the spill made statements such as “We’ve never been able to drink our water” (Fassinger 2014), or “I don’t drink anybody’s water. Not in this state” (Parker 2014).

Although a diversity of industries, including timber, chemical, and petroleum, have a history in the state, West Virginia is more commonly known for its coal economy; studies show that Appalachian coal communities have elevated health problems, including increased mortality, birth defects, cardiovascular disease, and cancer (Ahern et al. 2011; Epstein et al. 2011; Esch and Hendryx 2011; Hendryx 2013; Hendryx and Ahern 2009; Hitt and Hendryx 2010; Luanpitpong et al. 2014; Zullig and Hendryx 2011). As the Elk River debacle unfolded, so did a criminal case involving a field technician from Appalachian Laboratories, Inc., who—under pressure from coal companies in West Virginia—knowingly falsified coal discharge water quality test results. In October 2014 this technician pleaded guilty to diluting water samples in an effort to “maintain the business with the coal companies” (Ward 2014h). He was charged with Clean Water Act violations and sentenced to twenty-one months in federal prison and three years of probation (Ward 2015a).

Because it is a coal-washing agent, the MCHM held by Freedom Industries highlights the juxtaposition between two hazard-prone industrial forces operating in West Virginia. Once coal is extracted, it is washed to remove impurities, often with chemicals such as MCHM, and prepared for transport. The leftover waste, referred to as slurry, is typically stored in large impoundments; sometimes, though, it is injected into abandoned underground mines, posing risks for abrupt disasters like the impoundment failure at Buffalo Creek or threatening water supplies through slow-moving seepage and contamination (Burns 2007, 39–42).

Kanawha Valley communities also have a history with coal slurry. A 2009 *New York Times* exposé on toxic water showcased a West Virginia



community near Charleston, highlighting the water that was “sometimes gray, cloudy, and oily” that emerged in homes around the same time coal companies began injecting and dumping millions of gallons of slurry in the surrounding area. According to the report, residents also began experiencing a variety of health problems, yet state officials explained that no action was taken because regulators did not examine pollution records submitted by companies until after the statute of limitations expired (Duhigg 2009).

Although Freedom is a company that deals with specialty chemicals, investigations following the spill revealed that J. Clifford Forrest, owner of Rosebud Mining Company, is also owner of Chemstreams Holdings, Inc., the parent company of Freedom Industries (Aupperlee 2014). Soon after the disaster, a western Pennsylvania news source reported that the MCHM from the Elk River site had been transported to a Rosebud Coal facility in Pennsylvania (Erdley and Aupperlee 2014), raising concerns not only in Rosebud Mining’s home in Pennsylvania, but also in Carroll County, Ohio, where the company has plans to set up operations. A group called Carroll Concerned Citizens has requested that West Virginia’s Department of Natural Resources put a hold on permits with the company until a number of measures are in place to protect the community (Baker 2014).

Despite the company’s connection to the coal industry, the West Virginia governor was quick to state, “This was not a coal-company incident. This was a chemical-company incident” (Biggers 2014). Perhaps Governor Tomblin attempted to downplay the spill’s link to coal because of his own relationship with the coal industry. The governor’s political campaign has benefited from the generous donations from the coal industry and energy sector (National Institute on Money in State Politics [NIMSP] 2015). Such corporate-state relationships are familiar throughout Appalachian states, especially in areas heavily dependent on extractive economies. Like many other public officials throughout the region, Tomblin openly expresses his allegiance to coal and disdain for the EPA’s regulatory structure as illustrated by his statement, on January 8, 2014, just a day before the Elk River spill, in which he stated, “I will never back down from the EPA’s misguided policies on coal” (Youngren 2015).

It is thus unsurprising that several citizens and media sources called attention to the state’s slack environmental policies as not only a factor in the chemical spill, but also as a key factor connecting pollution across industrial sectors. Speaking with reporter Omar Ghabra, a former employee of the coal industry in West Virginia aptly stated, “The same loose regulatory environment that produced Upper Big Branch, that poisoned my well water growing up, that poisons the air surrounding these surface mines everyday also gave us the Elk River spill” (Ghabra 2015).

A survey taken soon after the chemical spill revealed that seven out of ten people in the affected area believed that government regulations of the environment were inadequate (Savoia 2014). Because the state has been historically dependent on the coal economy, much of the discourse and policy processes concerning the environment are bound up with coal. With the decline of the coal economy in core mining areas of Appalachia, the governor, DEP officials, and other bureaucrats frequently point to federal environmental regulators as the culprit in the “war on coal jobs,” ignoring several key factors that contribute to the loss of coal jobs, including decades of mechanization, competition with other coal regions and other sources of energy, depletion of reserves, and increased production costs (McIlmoil and Hansen 2010).

By reducing the narrative to a “jobs versus the environment” framework, industry-friendly legislators attempt to legitimize the state’s relaxed stance on environmental protections in the context of economic uncertainty. In late February of 2015, to illustrate, a number of House delegates in the state voted to pass the industry-backed Coal Jobs and Safety Act of 2015 (Senate Bill [SB] 357) that reevaluates a list of mining regulations. Supporters of the bill claim it will improve technology, cut red tape, and save money that can be used to create jobs. Opponents state that despite the bill’s misleading title, it actually rolls back existing mine safety laws and environmental protections, specifically by altering current protocols for water quality standards in the pollution permit process (Johnson 2015; Ward 2015b).

Although much of the discourse on over-reaching regulations in the state centers on the coal economy, the sentiment has also shaped legislative processes since the chemical spill. Under tremendous pressure from citizens and activists, state legislators approved Senate Bill 373, which contains the Aboveground Storage Tanks (AST) Act and the Public Water Supply Protection (PWSP) Act. Governor Tomblin signed the bill on April 1, 2014; his signature was perceived as at least a step in the right direction by citizens and activists (West Virginia River Coalition [WVRC] 2014).

Prior to SB 373, regulators were uncertain about the number of aboveground storage tanks in the state; thus, the AST Act required an inventory and registration of tanks. By mid-December of 2014, more than 40,000 tanks had been registered. Additionally, the Act requires tank owners to conduct inspections and develop spill prevention response plans and leak detection systems, as well as to provide financial assurance that they can effectively respond in the event of a spill. The PWSP Act is an effort to locate potential contamination sources within zones of critical concern, which are areas near streams and upstream from drinking water intakes (Hansen et al. 2015a).

Alongside the new bill, state DEP regulars began working on a proposal to reclassify a 72-mile stretch of the Kanawha River. For decades, this stretch has been exempt from water protections associated with drinking water sources. Extension of the more stringent Category A standards for drinking water sources would provide opportunities to develop new water intakes and back-up water supplies, which would have proven useful during the Elk River catastrophe (Ward 2014d). The coal and manufacturing associations of West Virginia expressed opposition to the proposal, and in December one delegate sought to attach an amendment to the proposal that would remove Category A applications statewide (Ward 2014i).

In late February of 2015, in the midst of debacle over a derailed oil-train disaster in the area, the DEP rule to extend Category A protections along the Kanawha River advanced through the House Judiciary Committee without counter-amendments (Ward 2015e). Considering the affected population's concerns about regulations expressed in the aforementioned survey, these protections may be welcomed throughout the valley. But the struggle over water protections and other environmental policies in West Virginia is ongoing. Industry-friendly lawmakers have also introduced bills (House Bill 2574 and Senate Bill 423) designed to gut major protections established in SB 373, which they say are burdensome. If successful, the bills would eliminate regulations on thousands of tanks (Hansen et al. 2015b; Ward 2015b).

## Conclusion

The events surrounding the chemical spill into the Elk River highlight Freedom Industries' callous disregard for safety and the ongoing legacy of government's failure to protect the citizenry and the environment. Moreover, both the private and the public sectors were responsible for producing an informational vacuum, which thwarted an immediate and effective response and had a confounding effect on the public's ability to assess the threat. As much of the history of the broader Appalachian South reveals, such failures repeatedly occur in a political economic landscape where public officials are beholden to industry and industries are operating in an economic system characterized by destructive human-environmental relationships.

In the contemporary political climate, efforts to regulate polluting companies face tremendous obstacles. At best, regulatory mechanisms tend to minimize damage rather than address deeper systemic problems that produce vulnerability and hazards. In Kanawha Valley, some of these problems are intimately connected to the broader historical path of develop-

ment in the region, characterized by a heavy reliance on industries that have fueled the nation at large with Appalachian resources made profitable and “cheap” through the processes of externalization.

In Appalachia, this too often means that communities, already disempowered by historically uneven political-economic processes, are frequently left to deal with the unwanted burdens of contamination and catastrophe. The events surrounding the Elk River disaster, as well as the decades of other disastrous events in the state of West Virginia, provide a classic example of how disasters are the outcome of translocal, sociopolitical, and economic processes that are deeply embedded in the past and broadly entangled in the present.

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# Whethering the Storm

## *The Twin Natures of Typhoons Haiyan and Yolanda*

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**GREG BANKOFF and GEORGE EMMANUEL BORRINAGA**

Super Typhoon Haiyan, known in the Philippines as Typhoon Yolanda, started life as a tropical depression in the western North Pacific (WNP) somewhere southeast of Pohnpei on November 3, 2013. As it tracked in a west-northwesterly direction, it intensified into a tropical storm, then passed over the small island nation of Palau before developing into one of the strongest cyclones in world history as it struck the central Philippines. Making landfall near Guiuan on eastern Samar in the early morning of November 8 with maximum wind speeds around 300 kilometers per hour, the typhoon was accompanied by a storm surge with wave heights of between six and seven meters and rain that caused extensive flooding, even if it was “not very heavy in comparison to many other tropical cyclones making landfall in the Philippines in the past” (Neussner 2014, 17). The islands of Samar and Leyte were particularly hard hit with Tacloban City, the capital and seat of government of Region VIII, virtually wiped off the map: 60 percent of structures were destroyed and another 30 percent severely damaged. More than 6,000 people died, over 2 million people were left homeless, and perhaps as many as 14 million people were affected in some way. Damages amounted to as much as \$13.6 billion (PHP 590 billion) with near-total losses to agricultural production in the eastern Visayas, particularly sugarcane, rice, and copra. The regional GDP is estimated to have been cut by at least 40 percent (Daniell et al. 2013, 1–3).

About twenty-five tropical depressions reach storm intensity or higher each year over the warm waters of the WNP, mainly between April and December. In fact, the WNP accounts for about one-third of all such storms in the world (Elsner and Liu 2003; Japan Meteorological Agency n.d.). Tropical cyclones whose maximum wind speeds exceed 119 kilometers per hour are known as typhoons and are mainly referred to in the Philippines

as *bagyos* (Hirth 1880). Early-season storms mainly form south of latitude 10° North and generally move on a linear track parallel to the Intertropical Convergence Zone. While the wind speeds of early season typhoons tend to be less intense, they carry greater amounts of rain and often cause serious flooding on landfall. Late-season typhoons, on the other hand, are generally much larger, develop at higher latitudes, and originate farther out in the WNP. Their paths often take them thousands of kilometers over open sun-drenched ocean, allowing them to grow into “heat-driven machines of enormous destructive potential” (Longshore 1998, 317).

Super Typhoon Haiyan or Yolanda, however, was a whopper even by the standards of late-season typhoons. The average wind speed (a one-minute average) of 315 kilometers per hour is the fourth-highest ever documented, and the individual gust maximum of 379 kilometers per hour is close to the world record set by Cyclone Olivia in 1996. Since 1958 only three typhoons have recorded average wind speeds higher: Typhoons Nancy and Violet in 1961 and Typhoon Ida in 1958. Most tropical cyclones reach their peak and begin to weaken before they make landfall, rapidly losing energy as their heat reservoirs run down. A noticeable feature of Haiyan or Yolanda, however, was that the cyclone struck the central Philippines at near peak strength, lashing the islands of Samar, Leyte, Cebu, and Panay with the full force of wind and water (Walsh et al. 2013). While certainly not unprecedented in historical terms, the rapid rise in coastal population during the twentieth century means that the impact of such cyclones is now devastating.

Most typhoons that regularly strike the Philippines receive only local reportage and pass uncommented upon by the international media. As a Category 5 cyclone, however, this one received world attention. A notable feature of this coverage was the different name by which people referred to it depending on where they were. To the world at large, the event is known as Typhoon Haiyan; to those who live in the archipelago, it is called Typhoon Yolanda. Typhoons are identified each year for international aviation and navigation purposes with both a number and a name.<sup>1</sup> Numbers are simply sequential but names are drawn from a list that includes people, animals, plants, astrology, places, mythological figures, and even jewelry. The World Meteorology Organization’s regional office in Tokyo is responsible for choosing the name according to an arranged set of procedures: “Haiyan” was drawn from the Chinese list.

Each nation (and district), however, retains the discretion to decide whether to use this international name for internal typhoon reporting. Since 1963 any tropical cyclone entering the Philippine Area of Responsibility is identified by assigning it a Filipino name (until quite recently only a woman’s nickname ending in “ng”) from one of four sets arranged al-

phabetically by the Philippine Atmospheric, Geophysical and Astronomical Services Administration. One set of names is used each year so that particular names repeat themselves every four years, and each set is accompanied by an auxiliary list from A to G in case the number of typhoons in any one season exceeds the nineteen-letter Filipino alphabet. The names used internationally to identify tropical cyclones are only used in the Philippines as advisories to airlines and for navigation purposes as ones in the vernacular prove to be better heeded by Filipinos. A typhoon that causes damages in excess of PHP 1 billion (\$21,626,300) and/or claims more than three hundred lives is classified as destructive and the name decommissioned and removed from the list (Bankoff 2004, 96). Being a late-season storm, internationally designated Typhoon Haiyan was accorded a Filipino name beginning in Y: Typhoon Yolanda.

However, these two different nomenclatures signify much more than a system of international and national meteorological classifications of wind intensities: they have come to represent two quite different discursive narratives about the typhoon and its aftermath. Typhoon Haiyan is headline news that explains the storm in terms of climate change, freak storms (numerical calculation of risk), and poverty. Typhoon Yolanda, on the other hand, has a storyline to do with national politics, accusations of incompetence (national versus local), identity, and self-worth. These very different narratives about blame and responsibility also lie at the heart of a fundamental difference in the way disasters are viewed from the standpoint of the developed and developing worlds: to the former, the emphasis is now much more on resilience and people's capacity; to the latter, disasters are still very much about vulnerability and disenfranchisement.

## **Typhoons in the Philippines**

Reconstructing the histories of typhoons in the WNP is patchy prior to the late nineteenth century. Only with the establishment of meteorological observatories were statistics on wind velocities and precipitation published on a regular basis. Many of these observatories, like the one at Manila founded in 1865, were established by Jesuits. They issued timely warnings to shipping and coastal authorities. These daily observations on barometric pressures, thermometer readings, wind force and direction, and rainfall were usually disseminated in the form of monthly bulletins (Udías 2003, 269–281). The staffs of such observatories, however, were more than simply collators of data: they were also scientists and pioneers in instrument improvement and design for tropical locations. A striking feature of the Jesuits working at the Manila Observatory, for example,

was the novel ways in which they adapted imported precision instrumentation to local conditions. This innovation began with the simple modification of an aneroid barometer in 1885, led to combining a barometer and a cyclometer into one instrument in 1897, and culminated in the invention of a refraction nephoscope to determine cloud direction and velocity in 1900 (Solá 1903, 19–23, 27–28).

Prior to the second half of the nineteenth century, the record of tropical cyclones in the WNP is based on archival material. While systematic records for some counties in China exist from the Northern Song Dynasty (960–1126 CE), this is unusual (Liu, Shen, and Louie 2001). Sources for the Philippines are based on a chronicle of typhoons striking the archipelago between 1566 and 1934 compiled by Miguel Selga, the Jesuit director of the Manila Observatory from 1926 to 1946. Unlike the Chinese record that is exclusively about typhoons that made landfall, much of the early Spanish material concerns losses at sea. Typhoons have played a significant role in the maritime history of the islands not only posing a threat to trans-Pacific communications, but also sometimes devastating entire fleets. During the Napoleonic Wars, for instance, a Spanish fleet on its way to intercept an English convoy was wrecked by a typhoon on the night of April 22, 1797 (Selga 1936). Even during World War II, naval vessels were still vulnerable: U.S. Navy Task Force 34 that was engaged in the “liberation” or re-conquest of the archipelago from the Japanese was badly damaged by Typhoon Cobra on December 18, 1944.<sup>2</sup>

Though Selga’s data are undoubtedly incomplete, the record does provide accurate information on the historical path of typhoons that match present-day variability and monthly distribution (García-Herrera et al. 2007, 10). On average, eight or nine typhoons make landfall over the Philippines each year (Brown 2013). The most common track described by Selga is for typhoons to form near Guam, move in an extended arc westward to Luzon, and from there split into two branches, one curving farther northward toward Japan and Korea and the other continuing westward across the South China Sea (Ribera et al. 2005, 89). The northern part of Luzon and the Batanes Islands were (and are) the most frequently exposed region of the archipelago. Selga’s chronicle depicts a colonial society beset by typhoons like that of July 1717 that was described as “the fiercest typhoon ever experienced in these islands” (Selga 1936, 22). In particular, the chronicle also provides mortality figures proving the extent of the damage wrought. Thus the typhoon that devastated Manila and the Ilocos region in September 1867 caused conservatively 1,800 deaths (Ribera, García-Herrera, and Gimeno 2008, 196–197).

The intensity of typhoons may be categorized by wind velocity but tropical cyclones and storms are also responsible for much of the precipitation

that falls in the Philippines. Historically, it is difficult to determine how much rainfall and associated flooding was due to the passage of typhoons. A list drawn up from the minutes of local town chronicles held by the Manila Observatory, however, give some indication of the level of precipitation as well as constituting a record of major floods that occurred in those parts of the islands occupied by the Spanish between 1691 and 1900. While again almost certainly incomplete, the list does provide an indication of the primary causes, geographical predisposition, and even the frequency of notable floods in specific areas.<sup>3</sup> In particular, the chronicles frequently refer to flooding in connection to the passage of tropical cyclones: over 56 percent of all recorded floods might be directly attributable to typhoons over this period (Archives of the Manila Observatory, Box-10, 37; Bankoff 2007). Modern estimates bear out such statistics with tropical cyclones held responsible for 47 percent of the average annual rainfall in the archipelago (Rantucci 1994, 28). The close correlation between flooding and typhoons also suggests seasonality in their occurrence that corresponds to the greater frequency of tropical cyclones between July and November, the *tag-ulan* (rainy season).

Selga's chronology also allows a historical reconstruction of significant typhoons in the Samar-Leyte area that demonstrates that, while the wind intensity and storm surge associated with Typhoon Haiyan/Yolanda were exceptional, they were by no means unique. While there are scattered references to tropical cyclones striking these islands prior to 1800, it is really only from the mid-nineteenth century that a more detailed chronology can be reconstructed. What this record reveals is the frequency with which people living in Samar and Leyte were exposed to the full force of tropical cyclones—on average several times in a lifetime. In particular, these cyclones took a heavy toll on agriculture, as when a “heavy typhoon” in November 1865 caused the total loss of the harvest in western Samar, or when “the violence of the winds” and “the excessiveness of the rain” damaged *palay* (rice), abaca, sugarcane, and *camote* (sweet potato) fields in southern Samar in November 1874 (Selga 1936, 49). Flooding was also frequently associated with the passing of such typhoons. A “terrible storm” that lashed Leyte in mid-December 1879 caused the Abuyog River to swell, forcing people to take refuge on their roofs and destroying about a thousand houses in the province (Selga 1936, 50).

On some occasions the track of these typhoons was virtually identical to that followed by Haiyan or Yolanda. The typhoon that passed over Leyte and Samar in October 1897 is the best recorded example, as it also generated a tremendous storm surge that destroyed completely several towns and claimed about 1500 human victims (Algue 1898). However, a cyclone on 26 November 1912 reputedly “wrought enormous damage” to Capiz

and also partially destroyed Tacloban (“15,000 die in Philippine storm” 1912).<sup>4</sup> Yet another late-season typhoon on November 24, 1934, struck the same eastern Samar town of Guiuan before passing south of Tacloban and “giving rise to an unprecedented flood,” presumably a storm surge, that caused considerable damage to Leyte (Selga 1936, 47). Sometimes the storm did not even need to be classified as a typhoon to cause extensive destruction and death. Typhoon Uring (international code named Thelma) was technically a tropical storm by the time it reached Tacloban on November 4–5, 1991, just five months after the eruption of Mount Pinatubo. Nonetheless, as the storm passed over high terrain, it unleashed torrential downfalls up to 580 millimeters that fell within a three-hour period. In particular, the Anilao-Malbasag watershed above Ormoc City was overwhelmed. Flash flooding devastated most of the city in a matter of minutes, killing 4,922 people in the urban area (Dañguilan-Vitug 1993, 1–7). Perhaps, more than any other hazard, tropical cyclones have influenced the lives and livelihoods of Filipinos, past and present, creating a complex web of relationships that oscillates between disaster on the one hand and the timely need for rainfall and agricultural productivity on the other.

### **It’s All in the Name**

A mature typhoon is a formidable thermodynamic engine consisting of an array of intense line squalls spiraling inward to a common circle or eye. Surface winds blow inward along the squall lines with ever-increasing velocity being diverted first upward and then outward, with the resulting cloud crown spreading for hundreds of kilometers. Typhoons depend for energy on these inwardly spiraling winds that extract surface moisture and heat from millions of square miles of surrounding ocean. In the WNP typhoons move slowly westward with the prevailing easterlies. Their exact paths, however, depend on the prevailing mean pressure gradients that push them northward and eastward according to the seasonal oceanic high-pressure centers they encounter (Dorn 1974, 80–83). Statistically, the densest concentration of typhoon tracks in the world lies between Manila and southern Japan, a distance of about 1,600 kilometers and colloquially known as Typhoon Alley.

To the outside world, a typhoon is either a white, whirling mass that appears as a satellite picture enfolding land and sea within its mantle and obscuring the nation over which it passes, or it is an intensely multicolored computer projection where the depth of shade signifies the level of precipitation. It is given an international codename like Typhoon Haiyan and its history is chartered, recorded, and soon forgotten by the world’s media



and public alike. To those for whom the typhoon is not simply a media headline or a nightly weather anecdote, who live through the storm and experience its property-damaging winds and life-threatening waters, a typhoon is personal, part of the narrative of life. For many who live in countries like the Philippines, it is a frequent life experience, one that, even if they have not completely learned how to cope with it, they have come to expect (Bankoff 2003). The late Fr. Miguel Selga concluded that the frequency of such storms induced a condition of mass fear among Filipinos for which he coined the word “tifonitis.” He defined this condition as “a pathological state owing to nervous over-stimulation produced by the frequency or extraordinary intensity of typhoons,” and then proceeded to describe in great detail the events of mass-induced hysteria that followed the passing of five strong typhoons in quick succession between October 15 and December 10, 1934 (Selga 1935, 54–58). In the Philippines, such storms are also given names, local names like Yolanda that reflect the reality of the lived-through experience. In many respects, these two names, the international and the national, even though they refer to the same typhoon, represent different events. The differently named typhoons are described in different ways, they are attributed to different agencies, and they leave different legacies.

## Typhoon Haiyan

Apart from narratives about the human tragedy and cost, the international reportage of Typhoon Haiyan was principally about climate change in which the storm’s unprecedented winds and rains were depicted as “a sign of what’s to come in a warmer world” (Walsh 2013, 20). This conflation of weather and climate was dramatically moved to center stage due to the typhoon coinciding with the opening of the annual United Nations Climate Change Conference in Poland on November 11. In particular, extensive publicity was given to the remarks of the Philippines representative and head of his country’s national climate commission, Naderev “Yeb” Saño. In a passionate speech, he linked Haiyan to the reality of climate change. “What my country is going through as a result of this extreme climate event is madness,” he said to 190 delegates. “We can fix this. We can stop this madness. Right now, right here.” He challenged climate sceptics, urging them to “get off their ivory towers” and see the impact of climate change firsthand (Vidal and Vaughan 2013). In particular, he reminded delegates that typhoons such as Haiyan represented “a sobering reminder to the international community that we cannot afford to procrastinate on climate change” and he vowed to stop eating until ne-

gotiators at the conference made “meaningful” progress (Withnall 2013). He also revealed that his family came from Tacloban and that, as he spoke, his brother was “gathering bodies of the dead with his own two hands” (“Typhoon Haiyan: Is Climate Change to Blame?” 2014). He sat down, sobbing, to a standing ovation.

This was not the first occasion at which Yeb Saño had broken down during such an address. At the previous year’s conference held in Doha, he had made a similarly impassioned plea to the assembled delegates just as Typhoon Bopha (aka Pablo), the strongest tropical cyclone to ever hit the southern Philippines, cut a swathe of destruction across Mindanao, leaving thousands homeless and causing more than 600 fatalities. “I appeal to all, please, no more delays, no more excuses” he said. “Please, let Doha be remembered as the place where we found the political will to turn things around. Please, let 2012 be remembered as the year the world found the courage to find the will to take responsibility for the future we want. I ask of all of us here, if not us, then who? If not now, then when? If not here, then where?” (Vidal 2012). Both the typhoon’s southerly trajectory and its intensity, he continued, comparing it to Hurricane Sandy that had hit New York, Haiti, and Cuba the month before, were clear signs of climate change. Again, the hall rose and applauded. Such international dramatics help convey the notion that countries like the Philippines are on the front-line of climate change, a condition caused by the carbon-intensive economies of the developed world who have failed to curb their greenhouse emissions. The implication, of course, is that such governments should acknowledge their responsibilities and provide large-scale compensation to those countries and people most affected by climate change (Bello 2013, 4).

There is some scientific evidence that appears to support Yeb Saño and the Philippine government’s claims. As has already been stated, Typhoon Haiyan was reputedly the strongest storm ever to make landfall and two of the other top five storms with the highest wind speeds, Typhoon Zeb (1998) and Typhoon Megi (2010), also struck the Philippines (Alexander 2013). It was the third time, too, in less than a year that a powerful typhoon had struck the archipelago: the previous August, Typhoon Trami had caused massive flooding on the island of Luzon, and flash floods had led to hundreds of deaths when Typhoon Bopha cut across a sleeping Mindanao in December 2012 (Schiermeier 2013). Future projections based on high resolution models indicate that such scenarios are likely to become more commonplace as greenhouse warming causes the average intensity of tropical cyclones to rise 2–11 percent by 2100 (Knutson et al. 2010). The Pacific Ocean, too, is warming—possibly faster than at any time in the past ten thousand years. Logic would suggest a clear relationship between the

intensity of storms and a warming world: a warmer world will probably feature more-extreme weather. As regards the Philippines, government statistics also suggest that typhoons are getting stronger: from 1947–1960, the recorded highest wind speed of a typhoon was 240 kilometers per hour; between 1961 and 1980, it was 275 kilometers per hour; and in the past thirteen years the highest wind speed was 320 kilometers per hour, recorded with Typhoon Reming in November 2006 (Vidal and Carington 2013). Sea levels are also rising. Since 1900, sea levels around the world have risen on average by eight inches and the rate of increase has nearly doubled in the past two decades. Changes in wind patterns have meant that rises in the Philippines have been the highest anywhere in the world, three times more than the global average (Lean 2013). All this taken together with Tacloban’s location at the end of a long funnel-like bay undoubtedly contributed to the height of the storm surge that November morning.

The problem, however, is that science is never quite so definitive or clear-cut. In fact, there is little real evidence to support the contention that global warming is making for a higher number of storms. For a start, the average surface temperature of the planet seems to have increased far more slowly in the past decade than it did over previous ones: just  $0.04^{\circ}$  Centigrade between 1998 and 2012 compared to the  $0.11^{\circ}$  Centigrade decadal rise since 1951. The planet is still warming, but natural climate variability and the effect of the oceans that absorb 94 percent of heat energy may account for what climatologists expect to be only a temporary respite (Lepage 2013). Moreover, figures vary greatly according to how and where they are calculated.

Perhaps, more importantly, the number of tropical cyclones around the world over the past forty years has remained fairly stable at around ninety a year. These figures are reliable since they are based on satellite technology. Although global warming may increase the thermodynamic potential for tropical cyclones, their frequency depends on several other factors like shear winds (winds blowing in opposite directions and different intensities at different altitudes) that often decrease the likelihood of storms as the climate warms. In fact, models actually project a decrease of between 6 and 34 percent in the global average annual frequency of tropical cyclones even if their intensity in the North Atlantic is set to increase over the next century (Emanuel 2013; Knutson et al. 2010; Schiermeier 2013). The most recent report from the Intergovernmental Panel on Climate Change (IPCC) suggests that the global frequency of tropical cyclones will either decrease or remain essentially unchanged in the twenty-first century. Though there is lower confidence in region-specific projections, there is general agreement that the physical and social impact of such storms is

likely to substantially increase in some ocean basins (IPCC 2014, 14–46). All these projections, however, have an underlying flaw in that they are based on a historical record that is unreliable and patchy. Even so, certain trends are discernible and suggest a pronounced poleward migration over the past thirty years in the average latitudes at which tropical cyclones achieve their lifetime-maximum intensity. This shift in cyclogenesis away from tropical regions is plausibly linked to the expansion of the tropical zone as the result of anthropogenic factors (Kossin, Emmanuel, and Vecchi 2014).

Typhoon Haiyan, however, was not solely attributed to climate change. Another, much more familiar trope also surfaced as a causal agent or culprit. Some international news reports blamed the actions or inactions of humans, or, to put it another way, on Filipinos, for the tropical cyclone and held that their poverty, mismanagement, and corruption was responsible for the extent of the destruction that ensued. Brian McNoldy, a senior research associate at the University of Miami is reported to have attributed 75–80 percent of the devastation to human causes (Borenstein 2013). People are vulnerable, the meteorologists argue, because they have moved in large numbers to exposed coastal areas where they live in poorly constructed houses. Four out of ten Filipinos now reside in storm-prone cities of more than 100,000, according to a recent UN HABITAT study (2012). Tacloban is no exception: the population has tripled in the past forty years from 76,000 to 221,000 inhabitants. About a third of these people live in houses with wooden exteriors, and one in seven has a grass roof. The mangrove forest, too, that used to protect the city from storms has largely been felled (Lean 2013). Such cities, according to Richard Olson, the director of the Extreme Events Institute of Florida University, are “urban time bombs” (Borenstein 2013).

But just as human factors can make a disaster worse, so, it is implied, do people have it in their power to make themselves more resilient by reducing the risk “through stronger buildings, better warnings and a quicker government response” (“Humans to Blame for Scale of Devastation Caused by Typhoon Haiyan Say Experts!” 2013). An alliance of developing nations like the Philippines, the Group of 77 plus China, are now demanding compensation from the worst polluting countries for the damage done to the climate and the plight they find themselves in. Advocates hope to see \$100 billion a year pledged to a Green Climate Fund established in 2010 with the intention of helping poorer countries reduce their emissions and prepare for climate change. While these fund-raising goals remain little more than aspirational at present (Myers and Kulish 2013), the sheer destructive power of Typhoon Haiyan “all but assures that the super typhoon will become a symbol of climate change for years to come, just as Hurricane Katrina and Super Storm Sandy have” (Walsh 2013, 20).

## Typhoon Yolanda

If, at an international level, Typhoon Haiyan remains very much a narrative of climate change underlain with a sense that the fault, at least partly, was self-inflicted, Typhoon Yolanda, on the other hand, has a storyline that is rooted in the past and is played out in the arena of national and local politics where accusations of incompetence are used to castigate electoral rivals and gain the advantage for one's faction or clan (often one and the same thing). It is not that climate change is completely absent from the debate—it is just that it is not really applicable in the local context. At a more popular level, the tale is about a people once confident in their capacity to manage whatever the storm had to throw at them, as they had done so many times before, but subsequently humbled by a divine reminder of their vulnerability in the face of natural forces.

Like Typhoon Haiyan, too, Yolanda had its media moment that, even though aired in an international setting, had its principal impact on a national audience. President Aquino's controversial interview with CNN's Christiane Amanpour on November 13, 2013, painted a much rosier picture of what was taking place in Tacloban than was being reported in both the national and international press. In particular, Aquino was attacked (especially in the social media) for his downplaying of police projections of the number of deaths from Yolanda and for casting blame for the slow response on local government. John Nery, a respected local columnist and author, argued, however, that it was not only Aquino who made mistakes in the interview. Amanpour, by attempting to define the Aquino presidency through his actions, was framing him in largely Western historical terms comparable to President George W. Bush and Hurricane Katrina in 2005 (Nery 2014). Nery also argued that the negative social media feedback to Aquino's answers was a manifestation of a lingering colonial mentality, a narrative that views Filipinos as still ensnared by the influence of centuries of foreign, and especially American, culture (Constantino 1970). Nery concluded, "Those of us who agreed with [Amanpour's] premise [of how Aquino's response to Yolanda could be legacy defining] had the wrong history in mind" since, in his view, no Philippine president had ever been "defined by his or her response to a national catastrophe" (Nery 2014).

Although the legacy of Typhoon Yolanda on Aquino's presidency remains uncertain, the narratives surrounding post-Yolanda politics must be seen in the context of the promise held by his landslide electoral victory in 2010. President Aquino ran under a platform of "Matuwid na Daan" (straight path or honest governance), to implement reforms and prosecute corrupt officials from the previous Gloria Macapagal-Arroyo (GMA)

administration (Quimpo 2014). Yet the discourse about the typhoon has become mired in political rivalries and claims and counterclaims that have much in common with the sleaze of former presidencies about them.

In particular, the physical storm became a political storm when Interior Secretary Mar Roxas reportedly warned Mayor Alfred Romualdez of Tacloban City, a day or two after the typhoon, to be “very careful because you are a Romualdez and our president is an Aquino” (“Transcript: Romualdez, Roxas Meet Post-Yolanda” 2013). Such incidents bring to the fore the issue of the role of family dynasties in what has been described as the “personalistic” and “dynastic” political culture in the Philippines (Aceron 2009, 9; Casiple 2012). Mayor Romualdez is the nephew of former first lady Imelda Romualdez-Marcos, widow of President Ferdinand Marcos (1965–1986). President Benigno Aquino III, on the other hand, is the son of martyred Marcos archcritic Benigno “Ninoy” Aquino Jr. and Corazon “Cory” Aquino, Ninoy’s widow who was catapulted into the presidency in the wake of the 1986 EDSA or People Power Revolution. In the Amanpour interview and on several other occasions, President Aquino has stressed that local governments are the first responders during disasters. In his defense, Romualdez retorted that his ability to respond had been impaired both by the magnitude of the calamity and by a reduction in municipal capabilities: many emergency service personnel and police officers either went missing or abandoned their posts to look after their own families. Under these circumstances, he continued, local government needs national intervention (*Tindog Tacloban* 2014; “Aquino, Romualdez Trade Barbs over Haiyan” 2013). Despite the serious issues of governance at stake here, the episode mainly evoked the long-standing political rivalry between the Cojuangco-Aquino and Romualdez-Marcos dynasties and how paternalistic narratives continue to shape national and provincial politics in the Philippines.

The politicization of Yolanda, however, was also very much a local affair as disputes between national and provincial officials were mirrored in *barangay* (district)-level problems to do with relief distribution. There were claims that *barangay* officials from opposition parties were denied relief goods and other forms of aid because of their rival political affiliation. One such case occurred in the *barangay* of Guindapanan in the municipality of Palo (situated directly south of Tacloban City), where more than a thousand people had been killed on November 8. The mayor of Palo, Remedios Petilla, and mother of both the provincial governor and a minister in Aquino’s cabinet, decided not to distribute aid through the *barangay* captain of Guindapanan, who happened to be an ally of former first lady Imelda Marcos. While the scale and veracity of these kinds of allegations are difficult to confirm, a Reuters report based on more than fifty

interviews across the province concluded, “A picture emerges of an aid campaign riven with rivalries and vulnerable to abuse” (Layne and Mogato 2013). This funneling of resources has been termed locally “color-coding” or “the selective distribution of aid along political lines, or by the colors associated with different parties,” effectively the selective distribution of relief items to friends and supporters of local officials (Layne and Mogato 2013; Cruz 2013, 13). Perceived critics of *barangay* officials were simply not provided with relief items or were referred to adjacent *barangays* for aid (Abrematea, interview, 2014; Cayanong, interview, 2014).

Bickering by government officials is seen as one of the principal reasons for the lack of leadership on the ground in the critical days after Yolanda made landfall. Preexisting factional and personal rivalries were compounded by problems of logistics and communications, leading international aid workers to observe, “Officials did not have a full grasp of the magnitude of the devastation and could provide no guidance on when basic emergency needs could be met” (Esguerra and Ubac 2013). Such impressions were only confirmed by the presence in devastated areas of politicians with known presidential ambitions (e.g., Secretary Mar Roxas of the Department of Interior and Local Government, Vice President Jejomar Binay, and Senator Bongbong Marcos, among others). Rather than overseeing the relief efforts, their actions were interpreted as early politicking for the 2016 presidential election as relief goods were allegedly repacked into bags featuring the names of the various contenders for high office (Cruz 2013).

In its 2014 report, *Assessment of Disaster Risk Reduction and Management at the Local Level*, the Commission on Audit blamed patronage politics for the government’s failure to protect and aid poor Filipinos in the country’s high-risk zones despite the enactment of the new Philippine Disaster Risk Reduction and Management Act 2010. “As a result of patronage,” the report affirmed, “decisions are based on electoral considerations rather than on evidence of technical assessments” (Commission on Audit 2014, 20). Meantime, most Filipinos were glued to their TV screens watching the Senate testimony of the detained Janet “Jenny” Lim-Napoles. Napoles is accused of being the mastermind behind the Priority Development Assistance Fund scam that allegedly allowed members of Congress to channel discretionary spending through fake nongovernmental organizations (NGOs) on nonexistent projects and pocket the money for themselves (Carvajal 2013). Some survivors even cited the Senate hearing, aired the day before the typhoon struck, as a factor that distracted them from making proper preparations for the storm.

Apart from the mutual recriminations and finger-pointing among politicians, blame was also leveled at the most vulnerable: the many informal

settlers who live in the most exposed coastal slums. These communities often have very tenuous relations with local government administrators, and are seen as either sources of votes or as obstacles to development. Their inhabitants are often characterized as overly stubborn, people who generally resist government advice and ignore official warnings, and who, in the case of Yolanda, failed to evacuate when repeatedly told about the dangers (*Tindog Tacloban* 2014).

Rather surprisingly, this is a view largely shared by many of the survivors. A common reason residents cite for the high number of deaths among such settlements is their *kumpyansa*, or overconfidence, in their capacity to withstand what turned out to be the strongest typhoon the region had faced in living memory. The people of the eastern Visayas are accustomed to typhoons but the collective memory of the storm surges that sometimes accompany such events and what they should do has largely disappeared from local narratives (Lotilla 2013; Montalvan 2013). Thus, although people were prepared for flooding and expected damage to their homes and property, they did not expect the six-meter storm surge. It was this wave of water, subsequent reports have confirmed, that caused the greatest number of casualties. It is estimated that “94% of the casualties along the coast died from the storm surge” (Neussner 2014, 45). Many residents also evidently failed to understand exactly what a storm surge was and the dangers posed to them and their families. One survivor later told an interviewer, “I don’t understand ‘storm surge.’ If they said tsunami or tidal wave we should have evacuated” (Neussner 2014, 44). The aftermath of the storm, too, led others to doubt themselves and their worthiness. For many, Yolanda was God’s punishment for their shortcomings. “Guin kastigo kita” (we were punished), said one elderly woman to a friend. Teenagers sang or played through their cell phones a popular Filipino rap song called “Lord, Patawad” (Lord, forgive us), and spray-painted the song’s title on the walls of destroyed homes, buildings, and ships washed inland. The spread of a scientific paradigm that explains typhoons in terms of rising sea surface temperatures and climate change has not greatly diminished alternative views that explain calamities as the work of divine agency or as manifestations of a capricious nature (Bankoff 2004).

## Whethering the Storm

Whether one calls it Typhoon Haiyan or Typhoon Yolanda matters because how societies make sense of disasters contributes to their impact. People’s behavior is shaped not only by their past experience of disaster, but



also by “a cultural narrative that creates a set of expectations and sensitizes people to some problems more than others” (Furedi 2007, 485). These narratives also change over time to reflect shifts in cultural norms and perceptions; what constitutes a disaster and how it is explained also has a history. Understanding the changing nature of how disasters are visualized is significant because it is related to how people react to such phenomena. According to E. L. Quarantelli, how societies think about disasters passes through three phases that are chronological in principle if often overlapping in practice.

First, a culture may exhibit a fatalistic acceptance of disasters, historically ascribing what happens to acts of God, an attribution that is often enshrined in a society’s legal system. The implication is that such acts are random and that no one can do anything practical to avoid them: disasters are simply to be endured. Such fatalistic attitudes to disasters, Quarantelli (2000) argues, did not encourage the development of innovative social arrangements to better prepare for such events. These beliefs gave way after the destruction of Lisbon in 1755 to a second perception—at least in Western societies: societies are able to adjust and modify the impact of disasters to some degree. Russell Dynes points to the development of earthquake-resistant architecture around the mid-eighteenth century as symptomatic of such a development (Dynes 1999). The materials used and the construction techniques employed reduce the impact on structures: while the hazard may be uncontrollable, measures can nevertheless be taken to decrease the risk and reduce their consequences.<sup>5</sup> By the second half of the twentieth century, disasters were seen as neither the signs of divine retribution nor as random acts of nature, but rather as the inevitable outcome of inappropriate human decisions that put people at risk. As such, they can be mitigated if not altogether prevented by forethought and planning. Disasters are perceived more as acts of society than as acts of God, and can be averted or, at least, moderated by changes to the structure of the social systems that gave rise to them (Quarantelli 2000). Increasingly, too, there is a search for a scapegoat on whom the disaster can be blamed. Responsibility is alternately attributed to the neglect of government officials, the corporate greed of big business, or the carelessness of operatives who are held morally as well as legally responsible for the consequences (Furedi 2007, 483).

Frank Furedi argues that the perceptions of what causes a disaster has a cultural script that seeks to endow extreme events with meaning. “For most people,” he continues, “the really important question is not how but why a disaster occurred” (Furedi 2007, 484). To a certain extent, we can see evidence of this cultural script in both the international and the domestic discourses surrounding Typhoon Haiyan and Typhoon Yolanda.

In the case of Typhoon Haiyan, the disaster in the Philippines is embedded into a wider debate about global warming as a foretaste of what is likely to come. Blame is diffused across all of humanity, even if this is contested and there is a vigorous effort to shift responsibility onto the energy-hungry, carbon-emitting economies of the developed world. This is more a contest in political power than an engagement with the real issues inherent in climate change and is an attempt to secure compensation on behalf of aggrieved parties. The cultural narrative that surrounds Typhoon Haiyan also partly fits into a familiar trope that renders large parts of the world as vulnerable by blaming the poverty and inequitable distribution of material goods of the people living in these regions squarely on nature. That this nature might be the product of their own lack of resilience becomes diffused amidst declarations to do with the common plight of humanity. The opprobrium that might otherwise attach to an economic system created by and largely benefiting the West is largely lost amidst scientific and technical discussions about purely climatic and scientific phenomena (Bankoff 2001).

Typhoon Yolanda, on the other hand, is another matter. It, too, has a political as well as a social dimension. As might be expected, however, both these discourses are on a different level of scale, one in which the local and national feature prominently and international debates remain in the background. In the public arena, debates are personalistic and dynastic, reflecting the political culture of the Philippines and the rivalry that exists between elite families from the president down to the local mayor. The dominant political clans, particularly the Aquinos and Romualdez, have made Typhoon Yolanda a scapegoat for their ambitions, each accusing the other of manipulating aid for their own benefits, and blaming their opponents for inadequate preparations, bungled relief distribution, and favoring their own supporters.<sup>6</sup> This political finger-pointing, however, is underscored by a strong sense of self-blame and unworthiness that views the typhoon and its aftermath as God's punishment for people's *kumpayansa*, or overconfidence, and their lack of belief. The cultural narrative to do with Typhoon Yolanda does not really engage with Western discourses of risk but is more to do with identity, citizenship, power, and divine providence. Nature has surprisingly little to do with what's happening and is reduced to more of a background context.

Why these different perceptions matter is more than of just academic interest because how disasters are framed influences the way people respond to them. Typhoon Haiyan, as symptomatic of climate change, is linked to variability in climate that no one can halt but whose worst effects may be minimized through concerted actions by the international community. In the short to medium term though, it is generally accepted

that little can be done to avert the incidence of extreme weather where higher-intensity cyclones and storm surges are likely to become more frequent. At best, improvements to the forecasting services and evacuation procedures, and retreat from the most exposed coastal areas are all the immediate remedies on offer and these are largely within the competence of national not international agencies. The international community can debate, commiserate, and, perhaps, provide a certain amount of aid but that is where its responsibility ends. Typhoon Yolanda, on the other hand, is very much a national affair and is part of an ongoing political struggle at the national, provincial, and local levels for power: disasters are viewed more as tests of governance that can be used as so much ammunition to strike at one's political rivals. The typhoon is perceived not so much as an environmental phenomenon or even a social construction, but rather as a political tool. Accusations of incompetence and corruption mean that aid and reconstruction become matters of political expediency providing powerful motivation when the spotlight is firmly fixed on them, but losing momentum and dissipating as soon as public interest lapses. There is, therefore, little motivation to reduce vulnerability over the long term. Nor is this political discourse confined to only the electoral process but expands to include questions of self-identity and citizenship at the local, ethnic, and national levels. Filipino life and culture is ineluctably entwined with the experience of hazard, as Miguel Selga so poignantly pointed out some eighty years ago.

On a theoretical level, the discourses about Typhoons Haiyan and Yolanda are focused less on vulnerability and more on resilience. In an age ever more alarmed by the prospect of climate change, the issue of vulnerability, it is suggested, should be turned around and approached from a more positive viewpoint. Societies are no longer simply viewed as vulnerable with all its associated negative connotations but people are seen as primarily resilient; they have the capacities to organize, resist, learn, change and adapt (Handmer 2003). The stress in the developed world is increasingly on the need for adaptation and necessary adjustment as the only really practical measures: what will make societies more resilient. For those in the developing world, however, the issue is still much more about what renders them vulnerable, more especially as that condition is seen as largely imposed by the West on the rest. Moreover, this status all but absolves them of any responsibility for climate change and allows countries, more especially the BRICs, to continue polluting at a reckless pace all in the name of social justice and economic parity. Just as there are two discourses about the typhoon, an international and a national, so, too, the paradigms evoked to explain global disasters reflect a theoretical

distinction that emphasizes capacity on the one hand and disenfranchisement on the other. Typhoon Haiyan and Typhoon Yolanda might be one and the same tropical cyclone, but the storm has a dual nature that represents fundamental differences in the way disasters are viewed and acted on from the standpoint of the developed and the developing worlds. In this sense, tropical cyclones are as much political forces as they are forces of nature.

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## Notes

1. Names are drawn from a list of 140 nominations submitted by the fourteen Western North Pacific and South China Sea region states that compose the World Meteorology Organization's Typhoon Committee.
2. In all, three destroyers capsized and sank, nine other warships required repair, and 146 aircraft were either wrecked or washed overboard. A total of 790 sailors lost their lives (Morison 2012, 65–81).
3. The list is simply entitled "Floods in the Philippines 1691–1911." It does not seem to have been composed by Miguel Selga but makes frequent reference to his works and so presumably postdates him.
4. There is some controversy as to the extent of the damage caused on this occasion.
5. Seismic architecture, however, has a longer pedigree than the *pombalino* or *casa baraccata* architecture of Portugal or southern Italy referred to by Dynes and dates back, at least, to Ottoman and perhaps even Byzantine structural forms (Bankoff 2015; Duggan 1999).
6. The present president of the Philippines is an Aquino, President Benigno "Noynoy" Aquino III. He is the son of former president Corazon Aquino (1986–1992), incidentally a Cojuangco, and the wife of former opposition leader and martyr Benigno Aquino Jr. who was gunned down at Manila's international airport in 1983. The present mayor of Tacloban is Alfred Romualdez, scion of a family that has dominated Leyte's politics for decades. He is the son of a former mayor of the city who is the younger brother of First Lady Imelda Marcos who, in turn, was the wife of former president Ferdinand Marcos (1965–1986).

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## “The Tremors Felt Round the World”

### *Haiti’s Earthquake as Global Imagined Community*

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MARK SCHULLER

Benedict Anderson (1987) argued that capitalist print media created for the first time a national identity, first, by standardizing language and encouraging standard time zones, but most importantly by shaping the consciousness of citizens around so-called national events. His historical analysis was focused on the same time period as Jürgen Habermas’s (1989) analysis of the rise of the bourgeois public sphere in the Enlightenment, the so-called age of revolution. Haiti’s earthquake became a global event that hailed global citizens to act. The multinational response broke new ground; it truly became the model for a global disaster. To use the phrase of Ralph Waldo Emerson, writing about the battles of Lexington and Concord that triggered the Age of Revolution, the January 12, 2010 tremors were felt “round the world.”

The times are very different, but Anderson’s insights help us understand the contemporary era. CNN—which cut its teeth on the 1991 U.S. invasion of Iraq—also successfully hailed citizens from around the world in its dramatic coverage of an event in a country that has often served as a foil to imperialist, white supremacist, capital interests. In total, according to the United Nations Office of the Special Envoy for Haiti (2012), private individuals gave \$3.06 billion. At a March 2010 UN conference, official donors pledged \$10 billion for reconstruction, \$5.6 for the following year and a half. The Special Envoy’s office reported that official donors allocated \$13.34 billion to Haiti, having disbursed just under a half of that amount—\$6.43 billion—as of December 2012.

The response to Haiti’s earthquake was thus one of the most generous in recent memory. This is in no small part because of the event’s high media profile. As several analysts have noted (e.g., Benthall 1993; Brauman 1993), disaster aid feeds off media coverage. Olsen, Carstensen, and Høyen (2003) demonstrated a correlation in the amount of seconds allo-

cated on prime time news to a particular disaster and the generosity of the response (see, e.g., Brown and Minty 2008). The Olsen et. article was published in 2003, before the mega-disasters of the past decade, including the 2004 Indian Ocean tsunami and Hurricane Katrina, in 2005, not to mention the massive earthquake in Haiti. While the article did not lay out a formula for a precise prediction of private and public donations to a humanitarian effort, the hypothesis seems validated by the differences in donations to the Haiti earthquake, the 2010 floods in Pakistan, and the results of the earthquake and tsunami (aka 3/11) in Fukushima, Japan. The Pakistan flood that displaced 20 million was almost entirely ignored in U.S. media, and worldwide donations were only \$687 million, with pledges totaling just over a billion. Even though Japan is one of the world’s wealthiest countries, the earthquake, tsunami, and nuclear threat attracted almost \$5 billion (530 billion yen) during the first year.

However, the Haiti earthquake’s high media profile—and the generosity it inspired—came at a price. With stories of devastation, appearing to many foreign observers as hell on earth with phrases like “state failure” often repeated, foreign media coverage also naturalized foreign control of the response. The Haitian Creole word *istwa* means story in the way that people share with one another as well as official histories (see also Bell 2001). In fact, they are often the same, since political actors are also often the ones writing history (Trouillot 1995, 22). This chapter explores this phenomenon, how what might be called disaster narratives shape responses. The transnational nation building, the global imagined community, thus triggered a chain of events that empowered foreign agencies and actors. Foreign agencies assumed de facto control over Haiti’s governance apparatus, through the Interim Haiti Reconstruction Commission (CIRH, in the French acronym, or IHRC in the English) and a system of UN clusters. Framed by the continued media coverage, this foreign control was naturalized through a series of discourses about Haiti being a “failed state,” requiring a “republic of NGOs” to step in and take over. This chapter begins with contrasting foreign media coverage and Haitian understandings. Following that discussion is an exploration of the connection between foreign media coverage and aid delivery, particularly four tropes: a weak state, dehumanization, the photo op, and the blame game. The chapter ends with a series of reflections on the disaster narrative.

## Haiti’s Earthquake as Media Event

At 4:53 P.M. on January 12, 2010, an earthquake of 7.0 magnitude struck outside the capital of Port-au-Prince, Haiti. The damage was unimaginable:

an estimated 230,000 people dead and an equal number injured. An evaluation (Schwartz, Pierre, and Calpas 2011) declared over half of the housing in the capital was seriously damaged; 105,000 houses were completely destroyed and 188,383 houses badly damaged, requiring repair (United Nations Office of the Special Envoy for Haiti 2012). At its peak, the International Organization for Migration (IOM) counted 1.5 million people in makeshift internally displaced persons (IDP) camps. Certainly the facts alone should merit worldwide attention. However, Haiti's earthquake became an international event because of foreign media coverage. As a transnational event, global citizens were hailed to act, and international agencies responded.

News from within Haiti first trickled out of the country through Twitter, because the earthquake damaged other satellite-based Internet and cell phone towers. Soon thereafter, CNN reported the earthquake nonstop for over a week, capturing the most horrific scenes and broadcasting them throughout the world. Anchor Anderson Cooper—who had made a name for himself after his coverage of Hurricane Katrina sharing some emotional moments with millions of viewers—immediately went to Haiti and stayed for over two weeks. He returned at the six-month point, July 12, 2010, to receive an award from President René Préval of Haiti; Bill Clinton and Sean Penn accompanied him. Progressive news site Common Dreams had for the first time a special banner on the top left related to Haiti's earthquake, which it has since repeated for the BP oil spill, the antigovernment mobilization in Egypt, the Japan earthquake, and the bombing of Libya (neither the floods in Pakistan nor the earthquakes in Chile or New Zealand received a special banner). The banner on Haiti outlasted all the others, and finally was taken down in mid-March 2010.

World citizens responded to the collective hailing. In the first week, private U.S. citizens contributed \$275 million, mostly to large NGOs like the Red Cross. By contrast, the donations the first week following Japan's earthquake that triggered a nuclear crisis and killed around 20,000 totaled \$87 million. In their generosity to the Haiti effort, U.S. citizens reacted more like they did following Hurricane Katrina, with \$522 million. This contribution was sustained, reaching \$1 billion as of March 1, the deadline for claiming donations on citizens' 2009 taxes following a special incentive from the Obama administration, peaking at \$1.4 billion for the year. Sixty percent of U.S. households and over 80 percent of African American families contributed to the Haiti earthquake response, despite feeling the pinch from the global financial crisis. Another technological innovation that was to later serve as a blueprint for global citizens' action was the use of text messages to donate. Made popular by international hip-hop star and disqualified presidential candidate Wyclef Jean for his *Yéle Haiti* char-

ity, texting to the relief effort was particularly aimed at younger people. The Red Cross adopted this technology, which it continued in the Japan earthquake effort.

Individual citizens poured into Haiti after it was deemed safe by the U.S. military, which had shut down the airport to rebuild the airstrip. The number of flights and destinations to and from Haiti increased. Before 2009, when Delta added a nonstop to Haiti several times a week, the only U.S. air carriers to Haiti were American Airlines and Spirit. There were five American flights from Miami, Fort Lauderdale, and New York, and one with Spirit, from Miami. Following the earthquake, to keep up with and capitalize on the increased demand, American added a flight from its worldwide hub Dallas and one from San Juan, Puerto Rico. Delta added one from its worldwide hub of Atlanta. Continental, which merged with United soon thereafter, added a flight from Newark. Before the quake it was not uncommon to see packs of missionaries with matching t-shirts on the flights. Throughout 2010 foreigners were a majority of people on flights. The average age also decreased: following the earthquake, missionary groups included large numbers of high school and even some junior high students, and the professional development or nongovernmental organization (NGO) staff increased their numbers, with a plurality if not a majority of twenty-somethings to staff these agencies. When asked, a group of two dozen junior high school students wearing "map ede Ayiti" (I am helping Haiti) t-shirts reported that they were volunteering at an orphanage. Media stories abound of reports back from first-time mission trips, almost invariably to celebrate the hometown heroes. Narratives about Haiti include what Hefferan (2007) called the reverse mission, that Haitian people were more spiritual and resilient (Panchang 2012; Ulysse 2011). Captured and mirrored by news coverage, these newly minted experts (Renda 2001) also opined about the virtues of Christianity, of capitalist development, public health and hygiene, and limited representative democracy, all markers of assumed cultural and racial superiority. As Haitian American anthropologist Gina Ulysse (2010:421) has hammered home, these racist depictions are a contemporary reflection of Haiti's "image problem" that stretches far into its past because of its role in ending slavery with the Haitian Revolution. The collective residue of these stories justify, and naturalize, foreign control of the country, an element of what Inderpal Grewal (2014) termed "humanitarian citizenship" being the "soft" power of empire.

In the wake of the temblor, televangelist Pat Robertson claimed it was God's punishment for Haiti's "pact to [sic] the devil." While this was not his first such statement following a disaster—he made similar comments following Hurricane Katrina—this discourse gained wide currency. The "pact" Robertson referred to was the ceremony at Bois Caiman, on Au-

gust 14, 1791, which ignited the Haitian Revolution. This discourse gained momentum following the earthquake, including among Haitian evangelicals, many of whom traced their conversion from Catholicism to a missionary group in the United States (McAlister 2013). Mainstream coverage eschewed this brazen attempt to invoke the almighty, but the terms of the discussion placed the onus on Haiti for the evident lack of progress. *New York Times* columnist David Brooks argued that Haitian culture was resistant to progress. Ulysse (2010) deconstructed the representations of Haiti coming out of the mainstream press at the time. She demonstrated racialized continuities in discourses stemming from the Haitian Revolution—from a slave revolt—based on the fear of black self-determination and as a warning to other slaves against rising up, which Michel-Rolph Trouillot (1995) called unthinkable, given Enlightenment ideas of who counted as a person. Familiar language of Haiti being a fragile or failed state, and being the poorest country in the hemisphere, served to justify the need for foreign intervention and offered a convenient explanation for the limited progress of this intervention. By focusing on “deficient” local cultural practices, social systems, or institutions, the foreign media gaze deflected attention away from the impact of foreign policies toward Haiti in amplifying the earthquake’s destructiveness.

### Haitian Understandings

As a country with an estimated 10 million inhabitants, and one deeply divided along a variety of social cleavages, including socioeconomic status, religion, and urban/rural, it should not come as a surprise that there are many often competing narratives from within Haiti: there is far more than one Haitian perspective, just as there is more than one Filipino or American perspective. That said, clusters of Haitian understandings offer important counterpoints to those promoted in foreign media and policy-making agencies. Many commentators in Haiti do not use the word *katastwòf* (catastrophe) or *dezaz* (disaster) to discuss the earthquake. For a long while, many did not use the Creole word *tranblemanntè* (earthquake) to discuss the seismic event, out of respect for the dead and also to not relive the memories: it was known as various names, including *Douz* (12), *bagay la* (the thing), *evenman nan* (the event), or *goudougoudou* (an onomatopoeia mimicking the rumbling sound of the earth moving). Haitian scholar Myrtha Gilbert is succinct: the title of her 2010 book is “*La catastrophe n’était pas naturelle*” (the catastrophe wasn’t natural; Gilbert 2010). Many commentators, activists, scholars, or people living in the camps (with many identifying with more than one category) pointedly drew the distinc-

tion between “the catastrophe” and “the event.” This language mirrors social science scholarship, which discusses triggering “events” as only one part of the disaster. Haitian intellectuals, including what Antonio Gramsci (1971) termed organic intellectuals, as well as activists, community leaders, and aid recipients who lived in the camps, whose experience and reflection represent marginalized people’s interests, distinguish the *kriz estriktirèl* (structural crisis) from the *kriz konjonktirèl* (conjunctural crisis, of the intersection of contemporary issues with the structural).

This *kriz estriktirèl* is local language reflecting the concept of vulnerability. To many in Haiti, the disaster was not the event itself but the factors that increased Haiti’s vulnerability. As scholars have argued elsewhere (e.g., Beauvoir-Dominique 2005; Gilbert 2010; Oliver-Smith 2012), this vulnerability was produced by a collusion of foreign and local elite populations. Having lost their “pearl of the Antilles” in 1804, France nonetheless demanded a 150 million francs indemnity in 1825, plunging the country into a 125-year debt. In 2003, President Jean-Bertrand Aristide estimated the contemporary value of this debt to be \$22 billion. The United States, which did not recognize Haiti until its Civil War, invaded the country twenty-six times until 1915, when Marines landed and occupied the island for nineteen years. This U.S. occupation centralized political and economic power in Port-au-Prince (Elie 2006; Jean-Baptiste 2012; Lucien 2013), and neoliberal policies imposed on the country since the mid-1980s triggered a massive urbanization and slumification (Deshommes 2005; DeWind and Kinley 1988). Alex Dupuy (2010) pointed out that the population quadrupled in the two decades since the implantation of neoliberalism. With nowhere to go, individually bearing costs of austerity, paying for education, health care, water, and sanitation, and with a weakened government with limited oversight capacity, people built housing as cheaply as possible in shantytowns. These neoliberal policies had a direct impact on the disaster: 86 percent of the homes destroyed in the earthquake had been built since 1990 (Etienne 2012).

Haitian people have told other sets of narratives about the earthquake, their own shared survival, and everyday heroism. Throughout the earthquake-affected region—not only Port-au-Prince but also the area to the south, including Léogâne, Jacmel, Petit-Goâve, and Grand-Goâve—the first emergency response came from people themselves: Complete strangers pulling out children or the elderly, half-buried, from under slabs of concrete. Neighbors pooling together what scraps of food, utensils, charcoal, and water they could find, sleeping next to one another on the ground, in the street. Community brigades pulling out material goods along with the living and dead bodies from the remains of houses. Makeshift clinics being set up under borrowed tarps or bedsheets. Store owners giving out

stocks of candles, water, batteries, and medicines to passers-by. Huddled meetings assessing the damage, the loss of life, needs, and community assets. Homeowners opening their *lakou*—the family compound—to family members, fellow churchgoers, neighbors, coworkers, and friends. Teams of able-bodied young men and women clearing debris from roads and corridors. Stories like these were not the exception: this was the story of how the Haitian people put away their economic and political differences and worked together, in dignity and solidarity, to collectively survive.

As Rebecca Solnit (2009) reminds us, following a tradition within disaster sociology, disasters can also be stages for extraordinary human growth and solidarity. Haiti's earthquake was not by any means an exception, even though stories of solidarity and Haitian people's everyday acts of survival went largely unnoticed by international press and humanitarian agencies. A range of Haitian writers detailed acts of solidarity following the earthquake (e.g., Jean-Baptiste 2012; Lahens 2010; Montas-Dominique 2011; Trouillot 2012; Victor 2010). Unfortunately, there is a serious gap in research on local communities acting as first responders to disasters. The political divisions that six years prior ripped the country apart were at least temporarily suspended. Glimpses of another Haiti that fulfilled its revolutionary slogan emblazoned on its flag, *l'union fait la force* (unity creates strength) were visible, as the spirit of *youn ede lòt* (one helping the other) was so poignantly expressed.

### Connection between Media Coverage and Aid

It may seem too obvious to mention, but most media outlets are for-profit, generating revenue based on advertising. Even so-called new or social media rely on the amount of hits a particular story generates: increased traffic means greater ad revenue. Reporters are disciplined into covering stories that have maximum impact, written in such a way to highlight drama (Pedelty 1995). Editors—often far away from the “beat”—are responsible for writing headlines, and even more important for online media searches, which often obscure nuance and at times can even argue against the main ideas. If the story has particularly dramatic photos, so much the better. Haiti's earthquake provided all these elements, inspiring a maelstrom of literally tens of thousands of stories. Once put on a Web site, images went viral. Haitian photojournalist Daniel Morel successfully sued transnational media conglomerates Agence France-Presse and Getty Images for \$1.2 million in royalties denied from using his images, an indicator of just how profitable covering the earthquake was. Outlets like CNN

had direct financial interests in seeking out the most macabre, desperate, and devastating.

Haiti was also the first mega-disaster in an era dominated by new or social media. From 2005 (the year of Hurricane Katrina) to 2010, new platforms like Twitter came on the scene, Facebook grew from 1 million regular users at the beginning of 2005 to 350 million five years later, and entirely online *Huffington Post* outpaced even the *New York Times*. True, so-called traditional media still had the resources and infrastructure to maintain dominance within online platforms. But the proliferation of media forms as well as outlets led to a blurring of distinctions between journalists and aid workers. For example, the vast majority of people covering Haiti for *Huffington Post* worked for aid agencies. Reflecting the low mean age of foreign aid workers (Seitenfus 2015) and armies of volunteers, tens of thousands of stories were written by amateurs, coming to Haiti for the first time as part of an aid mission. These individuals became instant experts. These voices also had a direct interest in dramatizing the devastation of the earthquake. In addition, they had interests in highlighting their heroic efforts. Even if unintended, a direct outcome of both tendencies was to frame Haitian people out of the story, or relegate them to silent victims, props for foreigners’ heroism. The following section of the chapter explores the material impacts of these media framings.

## Impacts of the Foreign Coverage

Given the many circuits connecting media coverage and disaster response, there are many potential outcomes of what might be called the media-disasters-industrial complex, or the disaster narrative. The following discussion focuses on four: First, the discourse of a “weak state” served to justify foreign control of the process and almost total exclusion of Haitian people in the process. Second, this exclusion, also having roots in framing Haitian people out of the story and tropes of dehumanization, led to practices and relationships wherein aid recipients felt they were treated like animals. Third, the disaster response was greatly influenced by the photo op. Finally, a blame game led to increasingly severe responses.

### **Weak State**

The destruction of government buildings was often cited as justification for foreign agencies—donors, intergovernmental organizations like the Red Cross and IOM, and NGOs—taking charge of the effort. This did not



sit well with Haitian government employees. A member of the Haitian government retorted, “So we didn’t have a space to meet. That doesn’t mean you exclude us from the conversation.” By and large, government agencies made do with what they had. According to a foreign NGO worker, he was given the choice to either meet “in the small conference room” or “in the large conference room,” indicating two different tables under trees on the ministry grounds. While not universally true, and notwithstanding the populations’ belief in government capacity, the government itself continued to function even with buildings collapsed. Many donors, including the U.N. (United Nations Office of the Special Envoy for Haiti 2012), had outlined the need for improved coordination in Haiti. In order to support this, only the Spanish government gave direct support to two government agencies playing central roles in coordination. Venezuela, a country that out-pledged even the United States, gave direct cash support—much in the form of loans—to the Haitian government, through the Petro Caribé program. However, Spain and Venezuela were exceptions; nearly all other donors continued to support NGOs headquartered in their country, or gave to a new international body.

Solidifying this tendency, following the March 2010 UN donor conference, donors asked the Haitian parliament to vote to dissolve itself and endorse the creation of the IHRC. The IHRC comprised twenty-six members, half of them non-Haitian, and was cochaired by Bill Clinton and Jean-Max Bellerive, who was then prime minister. In theory, this was a symbol of shared governance. The IHRC’s mandate was to review and approve projects for reconstruction. Upon IHRC approval, the Haiti Reconstruction Fund, managed by the World Bank, had the authority to release the funds. In the words of a World Bank official, “It was the way we could convince donors to let go of the money. In effect we were holding onto it.” The IHRC was structured in such a way that the major donors—the United States, Canada, France, and the European Union—had individual seats while the entirety of Caribbean Community and Common Market (CARICOM), Haiti’s Caribbean neighbors, shared a seat. Commentators across the political spectrum in Haiti saw the IHRC as a symbol of Haiti’s sovereignty being violated (Bélizaire 2010; Willems 2012). One international aid worker reported that a senior government official characterized it as *comment est-ce qu’on va foutre la gueule du peuple haïtien*, which can be translated as “How can we fuck the snout of the Haitian people?” Prime Minister Bellerive, who was to be IHRC cochair, responded to senators, “I hope you sense the dependency in this document. If you don’t sense it, you should tear it up” (Dupuy 2010, 15). Several Haitian members of the IHRC denounced the fact that they were shut out of the process of meaningful participation, publishing a scathing open letter on December 14, 2010, before a meeting

in the Dominican Republic, when borders were closed to Haitian people because of the cholera epidemic caused by the UN (Hendriksen, Price, and Shupp 2011; Piarroux et al. 2011).<sup>1</sup> At least it was more open, to some, reflecting the reality of an occupation: UN troops on the ground since 2004 and an even longer foreign control of finances and aid.

Parallel to the IHRC that assumed control of reconstruction, international agencies created a foreign-led system of coordinating the humanitarian response. Taking a cue from one of what agencies referred to as “lessons learned” from the Aceh experience, the UN organized what they call “clusters” bringing together different agencies that they term “actors”—the UN system, other donors, international NGOs, and at least in theory the Haitian government—from the various sectors of the humanitarian response: water and sanitation, health, protection, agriculture, food aid, and so on. Agriculture was a separate cluster from emergency food aid. At least for the first two years, housing was split between three clusters, for emergency shelter (Camp Coordination and Management); temporary shelters, or T-shelters (Shelter), and longer-term housing outside the camps (Housing Reconstruction). Gender-Based Violence was a subcluster of Protection. There were twelve clusters overall. All but the Water and Sanitation and Gender-Based Violence clusters met inside the UN Logistics Base, a military base tucked inside the international airport, called LogBase for short. LogBase contained large tents and later shipping containers wherein various UN agencies set up temporary offices, a grocery store, and a couple of restaurants, serving international fare and using the U.S. dollar as the official currency (Klarreich and Polman 2012). The area was patrolled and secured by UN troops, with a solid wall painted with the UN colors (white and baby blue) towering over six meters high, topped with barbed wire, keeping Haitian people out. Armed guards granted access, checking passports. Once cleared, visitors would be sent through X-ray, metal detection, and closed-circuit television. Exiting this, a person would find one another guard tower trained down on them. Several Haitian nationals reported that they felt excluded from the space. For example, a high-ranking government official was denied access by the UN guards. Suspecting a racial and national origin bias, I twice attempted to enter without my U.S. passport. Both times I was granted access.

The Haitian government already had coordination structures in place, called *tables sectorielles* (sector tables). Some people expressed the concern that the cluster meetings were on top of their jobs, and so some NGO staff, with experience before the earthquake, chose to opt out. Almost every foreign agency staff member I talked to used the word “clusterfuck” to describe the chaotic, overwhelming, and ineffectual nature of the meetings. Several participants noted that cluster meetings were about mes-

saging or sharing information about a particular service contracted by an NGO. They were, in other words, ritual or performative spaces rather than deliberative spaces. In all but the two clusters noted above, the language was English, not even French, one of the two national languages accessible to Haiti's NGO class (Miles 2012). Haitian NGO employee Geralda noted, "For a long time, the dominant language of the country was English. In a context where English was the dominant language in the decision-making process, in a context where all planning was done in English, and considering cultural aspects were ignored, it was crystal clear that Haitians were outside of everything." Like *kach-fò-wòk* (cash for work) and *chèltè* (shelter), the word "*klòstè*," a Kreyòl pronunciation of "cluster," was used among the NGO class, but fewer than 1 percent of IDP camp residents knew what that meant or had even heard of it. International agency staff Antonio said candidly, "We don't include IDPs in our discussions" (see also Panchang 2012).

### **"Like Animals"**

Given the dehumanizing tendencies within media coverage, it is unfortunately not surprising that many aid recipients reported feeling dehumanized. A discourse that agencies were treating them like animals was quite common; at the State University of Haiti students and faculty invoked Giorgio Agamben's (1998) concept of "bare life" to describe how human beings were reduced to bare, biological, survival. Living conditions were often inhuman: the heat, lack of sanitation, mud, complete lack of privacy, the smell, and limited opportunities. Skin rashes were a common occurrence, as people's bodies attempted to fend off pathogens in the environment. Yves, who lived in an IDP camp, explained that "We're here, in tents, because of what happened on January 12. Some people look at us like we're dogs. Actually, dogs in foreign countries are valued more than us. The amount of money that's spent on them in one week would be our income for four or five months." Allande, who lived in another camp, decried the situation: "Just because we're living in a camp, the way people see us, people liken us to delinquents." Frisline, who lived in the same camp, revealed, "Sometimes you get on a bus and you hear people speaking badly about people living in the camps. You can't speak because you are one of them." These statements and many more like them outline a powerful stigma attached to being a *deplase* (person removed to a camp), the identity of being an IDP (Brun 2003; Duncan 2005).

Why is this? In no small part, camps remain visual reminders of failures within the international aid response, eyesores that get in the way of selling Haiti as being "now open for business," as President Michel Martelly

boasted in May 2011. This slogan just happened to coincide with Bill Clinton's.<sup>2</sup> More fundamentally, the people struggling to survive under the heat of the tarps or T-shelters were committing the ultimate indignity: they existed. IDPs' mere existence brought visibility to profound social problems, such as extreme poverty and deep class hostility that has always beset Haiti but had been swept under the rug; they were what Hardt and Negri (2000, 294) called disposable people, or Michel Agier (2011) called undesirables. The hypocrisy, misery, and inequality could no longer be ignored, now that it was in plain view, especially in the Champs de Mars, the national plaza surrounding the crumbled remains of the Palais National (National Palace): a visible demand to be seen.

### **The Photo Op**

This demand to be seen is a central trait to humanitarian aid. Humanitarian staff, particularly those engaged in public relations or fundraising, are acutely aware that their organizations live from media coverage. Therefore, decisions about particular courses of action on the ground are guided at least in part for the opportunity to stage a photo op. Some staff grumbled about their roles as "PR tools," even when they knew better. "Remember how your salaries are being paid," one person sardonically retold when I asked why she did things she knew to be ineffective, inefficient, or inappropriate. She left that agency a month after our interview.

This mantra, directive, or logic of visibility was evident in many sectors of the humanitarian response. One such example was the T-shelters. Cluster staff demonstrated that they were inappropriate, creating pressures that swelled the shantytowns in dangerous mountainsides. In addition, the Haitian government and the Shelter cluster issued a moratorium in 2011. However, in the parlance of humanitarian agencies, they were still the "solution" of choice for several NGOs. Explaining why, international aid worker Siobhan argued, "It's also the most visible, providing the photo opportunity, to show off what our structures are." This logic of visibility was also behind the choice of which camps were to be closed during the controversial 16/6 relocation program, announced by newly elected president Martelly in June 2011, closing six highly visible camps and supposedly reconstructing sixteen neighborhoods where the residents of the six camps had lived before the earthquake. Andrea, who came to Haiti working for an NGO and later joined the IOM, said, "They might not be the most vulnerable sites, but they are sites with the most visibility." Aside from the Champs de Mars, the epicenter of the photo op across from the crumbled Palais National, which was not part of the program, these locations were the most highly visible to journalists, including the area around

the airport and the main two plazas in the suburb of Pétiion-Ville. For his part, Andrea's colleague William, who worked more directly on relocation, was unmoved by this critique: "There are humanitarian actors and donors who are very upset that the six camps have been chosen quite clearly on political grounds. My view on that is you were never going to get them to start on any other grounds other than political."

The need for visibility also encouraged private water trucks instead of reinforcing public taps that existed before the earthquake. Geralda, a Haitian director of an international NGO, denounced this practice: "Water distribution began with the international community bringing their own water. Then, they started buying local water trucks, making a few people rich, instead of building water systems that could still be useful to us today. When you distribute water with trucks only, you are spending millions, but you have to provide water on a daily basis. When the millions are gone, the people don't have drinking water and are exposed once again to water-related diseases."

One reason why humanitarian agencies chose this decidedly unsustainable practice was that people could be seen—and photographed—standing in long lines in the camps. Beneficiaries' performances become cred for the humanitarian agency filming it; it becomes capital they can leverage, in effect to sell to donors for more aid, or to justify its receipt. Associated Press (AP) journalist Jonathan Katz (2013) came close to suggesting that this tendency to play to the international media led many NGOs to force people into the camps in order to receive aid.

International aid worker Siobhan noted the tendency for humanitarian agencies to look for visible signs of distress and send aid there, so it would be expected that NGOs would not even look for the strategic points, local providers, or local leaders. This is one reason why the international response missed a golden opportunity to decrease the vulnerability that neoliberalism engendered when 630,000 people fled the city (Bengtsson et al. 2011).<sup>3</sup> Agencies have to be seen actually giving aid. This need for visibility also explained why camps in peripheral municipalities had fewer services than those near the urban core (Schuller and Levey 2014). Those of us in the solidarity movement might have contributed to these tendencies by the lack of clarity of our rhetoric. If the only question (that was heard, at least) was, "Where did the money go?" then, understandably, NGOs needing to justify their receipt of \$3.06 billion in private donations and \$6.43 billion in official sources went for the "quick wins" in the words of one: the photo op. Said another, "If I can see it, I can sell it." This simple statement says a lot: in the first several months of the recovery it was enough to show pictures of usually young, usually white, aid workers carrying boxes of aid to demonstrate effort.<sup>4</sup> But when the image of the

country did not change as a result of foreigners’ good intentions, journalists began questioning the overall effort and its effectiveness; in fact, some had questioned it all along, a strange mix of Fox News and leftist non-mainstream sites. This questioning reached a high point in June 2015, when NPR published a scathing exposé of the Red Cross (Elliot and Sullivan 2015).

### **A Blame Game**

In response, some humanitarian actors went on the offensive, playing a blame game. On top of Haiti’s deep-seated social divisions temporarily suspended after the earthquake, foreign aid agencies added to this denigration of IDPs. In most of my interviews and in informal conversations, foreign aid workers were quick to point to a case of an individual trying to take advantage of the situation. Usually this was a single individual, and always this was the prelude to a general assessment of IDPs. This assessment either justified the agency’s disciplinary, even punitive, approach to management of IDPs or explained the failures in the aid system overall. These were not just conversations with me: humanitarian agencies attempted to shape the conversation, shifting the blame for the obvious lack of progress onto the IDPs themselves. Echoing former first lady Barbara Bush’s comments about Katrina-displaced persons living better in the Astrodome than they had before the storm, on May 10, 2010, Assistant Secretary of State Cheryl Mills said, “People seek to remain in the temporary communities because, as surprising as that might seem outside of Haiti, life is better for many of them now.”

Mills’ comment highlights a persistent discourse that people were only living under tents in order to get free services: How else would living “worse than dogs” be possibly considered better? Foreign aid workers expended quite a bit of energy to expose this. For example, anthropologist Tim Schwartz declared there only to be 42,608 “legitimate” IDPs in a report commissioned (and later rejected) by United States Agency for International Development (USAID), but leaked to the press and finally published on May 27, 2011, by Agence France-Presse (Troutman 2011). Dozens of news stories, including in large-circulation *Washington Post*, *New York Times*, *Newsweek*, and *Time*, repeated this finger-wagging, more editorializing than news reporting. Schwartz’s critique of the Haitian government was based primarily on its lack of transparency in its research methods, however the leaked report was similarly opaque. For its part, USAID distanced itself from the most controversial claims, citing inconsistencies and irregularities within Schwartz’s research methods (Daniel 2011). Only two stories that made it to Google’s daily news alerts reported this critique,

despite the dozens that used the leaked report to lodge a critique against the Haitian government, many drawing on familiar narratives of Haitian incompetence, adding to Haiti's unending bad press (Lawless 1992; Ulysse 2010; Trouillot 1990). The debate was primarily focused on the death toll, leaving the other unsubstantiated claims about the "legitimate" IDPs and incendiary statements such as people living in the camps only for the free access to services unaddressed. The total silence, the attention deflected away from this discussion of the "illegitimate" IDPs, was an insidious outcome. The inflammatory and controversial allegations about living IDPs, whose rights were actively being challenged by a range of actors, became tacitly accepted by the lack of scrutiny. This debate about the numbers of dead, mapping onto a discussion of who is a "real" victim, dramatizes the material consequences of contests over the disaster narrative.

### Theorizing the Disaster Narrative

Haiti's earthquake broke the charts in terms of media coverage. Consequently, the scale of the foreign response has few parallels. Disaster scholars have long pointed out the interrelation between media coverage and generosity (e.g., Brauman 1993; Olsen, Carstensen, and Høyen 2003). However, this chapter has also demonstrated that the disaster narrative shapes the imagination, articulation, and implementation of responses, a point powerfully argued by Ulysse (2015). Having framed Haitian people outside of a person who is deemed an actor, reducing them to objects of aid, most stories justified a top-down, militarized, foreign-led response. Disaster response institutions such as the IHRC and the clusters excluded Haitian authorities and communities from decision-making. In addition, short-term, costly, unsustainable interventions that neither matched local communities' priorities nor reinforced public institutions or services were consistently chosen by foreign humanitarian agencies. Explaining why, several agency representatives pointed to the need to stage a photo op to justify their receipt of one of the largest humanitarian responses ever given, and to prove that funds had been spent. In addition to begging the question, "Where did the money go?" increasingly raised by journalists (and solidarity activists), the need for visibility is a general operating logic within contemporary disaster responses. While funding for international development has declined, certainly after the global recession since 2008, funding for humanitarian aid has held steady and even grown. In 2013 the industry was worth \$22 billion, up from \$17.3 the previous year (Development Initiatives 2014). Noted above, media coverage is widely credited for maintaining these levels of generosity.

Focusing disproportionate attention on the event and not on vulnerability, most media accounts of the earthquake took for granted that Haiti was a “failed state” without exploring the foreign policy roots of this condition. Some commentators like *New York Times*’ David Brooks and others argued that Haiti’s fatalistic, present-oriented culture (in the singular) was to blame. Many other accounts had the language of corruption or failed state framed within the story, while slavery, colonialism, the U.S. occupation, and neoliberalism were usually framed outside, and not discussed. Aid agencies’ good intentions, Bill Clinton’s cheerful “Build Back Better” and “Haiti is open for business” slogans were reported, erasing the role played by Clinton and USAID in creating the conditions for Port-au-Prince’s hyperurbanization and slumification in the first place. With a historical analysis thus cut off, a new industrial park outside of the capital area wherein the USAID and the Inter-American Development Bank spent \$482.9 million could even make sense as a solution in the first place. The industrial park in the capital, with its low wages and limited public investment, played a heavy role in producing the country’s largest shantytown, Cité Soleil, and associated negative consequences that include violence and extreme vulnerability to disasters.

Given the singularity of the media attention and therefore generosity, it is tempting to once again exceptionalize Haiti. The post-earthquake case is more visible and therefore the contradictions within the humanitarian system are easier to notice. But the need for visibility, photo op, project mentality, market logic, and turning people’s suffering into capital are unfortunately realities of a humanitarian system that relies on generosity of individual donors and states, particularly in a lingering financial crisis (e.g., Agier 2006; Barnett 2011; Duffield, Macrae, and Curtis 2001; Fassin 2012; Feldman 2010; Scherz 2013). Especially people employed in public relations or fundraising intimately understand this reality. The Haiti case, perhaps, because of its visibility, makes these contradictions—and their consequences—difficult to ignore. As many people in Haiti exclaimed, “They are making money off us!”

Related to this point, the post-quake aid response highlights the disaster narrative. While the nonstop barrage of media coverage engendered generosity, most stories also normalized foreign control. They did so first by portraying the most abject misery, framed in a narrative of a nation brought “to its knees,” a quadruple entendre referring to being physically jostled, extreme devastation, and a reflex to pray, not to mention being forced to beg. Second, by systematically ignoring the everyday heroism and solidarity of tens of thousands of ordinary people, framing them outside the story, media accounts painted a picture of *terra nullius*, if not *Lord of the Flies*. This served to justify a fear-based, militarized response.



Explaining what he called an “expatriate colonization,” Haitian NGO professional Sonson theorized, “It seems that they thought that the rubble fell on our intelligence too.” If we foreigners were responsible for everything, from security to nation building, because everything was destroyed and there was nothing left of the state and no local capacity, then why not continue to forge ahead with the war surgeries and cigar cuts, continuing to build T-shelters when the government actually did say no? Structuring this expatronizing, Haitian commentators discussed the tendency to turn recipients into objects, animals, or children (Louis 2015). Jackson, a director of a Haitian NGO, challenged one of these narratives: “NGOs are currently spending money any which way because they say Haitians can’t manage. Constructing autonomy begins here as well. We reject in advance all attempts to say that Haitians can’t manage.”

Media coverage focused almost entirely on what Paul Farmer (2011) called the proximate cause of the suffering: the hazardous conditions (Wisner et al. 2004). Lost in the majority of discussions in the media are the distal, more structural, causes: hyperurbanization triggered by one of the most successful implantations of free-market capitalism the world has ever seen, following a nineteen-year U.S. military occupation. Consequently, the opportunity to reinforce what Haitian people were actually doing was lost (Jean-Baptiste 2012). Rather than seize this opportunity to undo this urbanization and rebuild Haiti’s rural peasant economy, agencies contributed to the centralization, overcrowding, and individualism. As foreign aid worker Siobhan noted, supporting rural recipient communities wouldn’t have even occurred to humanitarian agencies. Using the same language, two Haitian directors argued that this is because of their need to “plant the flag,” to be seen where the journalists were. It was, in effect, a vicious cycle. Aid attracted journalists to the epicenter and the national plaza, and to the camps. Meanwhile, quietly, 630,000 Haitian people sought refuge with their rural family members, and even more individuals in Port-au-Prince were piecing together their homes, families, and neighborhoods outside the camps.

### ***Beyond Haiti***

Insights from understanding these disaster narratives are certainly not limited to Haiti. Discussing multiple cases of industrial accidents, from Exxon Valdez to the BP Deepwater Horizon spill, Gregory Button (2010) demonstrated how hotly contested the disaster narrative can be. Importantly, accounts that portray spills as “accidents” and without precedent actively discourage public recognition of these as systemic, and portray

these excesses of corporate greed and lack of accountability as normal. And thus the response is usually woefully inadequate, and certainly we are no better prepared against future catastrophes. Mahmood Mamdani (2009) analyzes the disaster narrative coming from Darfur that mapped onto global anti-Islamic discourses, turning the “responsibility to protect” into a “right to punish” (see also Clarke 2010).

Why do media anoint some disasters such as the 2010 earthquake in Haiti and disregard others such as the coal ash spill covered by Button and Eldridge, this volume? Haiti’s earthquake, like the 2004 Indian Ocean tsunami or Hurricane Katrina, became mega-disasters, whose media coverage obscures our understanding of disasters overall. Scholars of disasters have long pointed out that for an event to become known as a disaster requires vulnerability. Scholars and practitioners have correctly focused our energies on the factors that contribute to vulnerability, as the factors within our control and actually the factors that shape the deadliness of a hazard. We often lament the misrecognition of the disaster-as-event, often imbedded in media portrayals, as acts of God or their inherent singularity. However, it behooves us to pay attention to these narratives themselves. In effect, to be anointed as a disaster requires a disaster narrative. The difference between mega-disasters, slow-moving disasters, or hidden or forgotten disasters is the photo op, the ability to move people to an emotional response: in short, the story.

The extreme visibility and impact of foreign news coverage on Haiti’s earthquake is a powerful example of what Arjun Appadurai (1990, 9) referred to as “mediascape,” pervasive and insidious, shaping how people perceive the world. Michel Foucault (1978) has drawn scholars’ attention to the relationships of power surrounding the messages, media, and individuals regarding discourse. Building from these insights of mediascapes shaping people’s worldview, and how discourses reflect and reproduce inequality, the disaster narrative is the *istwa*, the story as well as the history, exposing the ways in which powerful interests define and frame the disaster, calling to question what issues are to be discussed—and what excluded—how, and by whom, and who is declared to be an actor, and who is framed out of the story. In this way the disaster narrative frames the responses. Deconstructing the disaster narrative thus exposes the political economy of knowledge production, dissemination, and action. One wonders whether mega-disasters themselves, notably Haiti’s earthquake, through the disaster narrative, constitute a global imagined community? The circuits of a community of concern overlaid on Haiti suggest that mega-disasters might represent the epicenter of a new transnational humanitarian order: a trans-nation.

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## Notes

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1. The full text of the letter is posted online, unnamed. It was published originally in *Le Matin*, with unofficial translation by Isabeau Doucet (“Letter from the Haitian Members” 2010).
2. In *Fatal Assistance* (Peck 2013), there was a strong implication that Bill Clinton backed Martelly in the elections. The documentary also showed Secretary of State Hillary Clinton strong-arming President Préval about the election results.
3. There were some individual efforts, notably a settlement built in the Belladères-Las Cahobas border region, and in Papaye.
4. For an example see the cover photo of Frédéric Thomas’s (2013) *Haiti: l’Echec Humanitaire*.

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## Contested Narratives

### *Challenging the State's Neoliberal Authority in the Aftermath of the Chilean Earthquake*

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NIA PARSON

“I have come to the conclusion that taking your body out to the street is the most political act you can perform,” a long-time women’s rights activist whose mother had been tortured by Pinochet’s dictatorship said to me in August 2011. We had just emerged from the CS tear gas cloud that hung around the Baquedano Metro station in downtown Santiago, Chile, during one of the widespread student protests there that year. She has participated in many protests over the past four decades in Santiago, but the police repression that day, she said, was stronger than she had seen in a long time. Indeed, many social observers noted that the *mano dura* (heavy hand) of the dictatorship era seemed to be reemerging under the first postdictatorship right-wing president, Sebastian Piñera. Potent tear gas grenades, manufactured in the United States, were launched indiscriminately into the crowds, exploding at the feet of protestors, the majority of whom that night seemed to be adolescents. Army cars, nicknamed *zorrillos*, sprayed tear gas as they patrolled the streets. A helicopter flew overhead with a searchlight to spot groups to target for dispersal. Large tank-like vehicles, windows covered in wire, sprayed protestors with heavy jets of water mixed with CS gas, even as protestors attempted to flee the chaotic scene. The repressive apparatus of the Chilean state reacted in similar fashion to social movements’ protests against the inaction of the state in the wake of the earthquake/tsunami of 2010.<sup>1</sup> Protests and social movements have historically been part of the fabric of Chilean society, reaching an apex during the waning years of the dictatorship in the late 1980s. Many of the current protests reflect widespread dissatisfaction with growing economic inequality and vulnerabilities, more than two decades after the end of Pinochet’s dictatorial regime.



## The 2010 Chilean Earthquake and Tsunami in the Context of Neoliberal Reform

Chile occupies a particular history in terms of its relationship to the consolidation of global neoliberal regimes. Following the military-backed coup in 1973, the Chilean state's neoliberal economic policies articulated with other manifestations of state violence against its citizens, including murder and torture, in addition to more-insidious repressive measures. The macroeconomic successes of the so-called Chilean miracle<sup>2</sup> often serve as justification for the seventeen-year dictatorial regime.<sup>3</sup> Chile's macroeconomic situation makes it a middle-income country. Chile has the highest level of income inequality among the thirty-four member countries of the Organisation for Economic Co-operation and Development (OECD; 2011). Nevertheless, Chile is widely touted on the global stage as exemplary of the successes of the neoliberal economic model.

### **February 27, 2010: 8.8 Magnitude Earthquake**

The disaster of February 27, 2010, occurred in this neoliberal context. On that day, various regions of southern and central Chile suffered an 8.8 magnitude earthquake, which produced a powerful tsunami in coastal areas. Regions outside of the capital city of Santiago suffered the most, though some zones of Santiago saw condemned buildings and severe damages as well. The government's official death toll was 524, with 31 people reported missing (Gobierno de Chile 2011). The events of February 27, 2010, or F/27 as they are popularly called in various Chilean media, affected people differentially depending to a large degree on the fault lines of the social inequalities that structured vulnerabilities prior to and following F/27 (Adams, Van Hattum, and English 2009; Gunewardena and Schuller 2008). The regions that were the worst hit by the disaster were also the most poverty stricken of Chile. Adding to the precariousness in which many in these areas already lived their lives, 279,000 families lost their homes (International Federation of Red Cross and Red Crescent Societies 2010). This situation left many to live semi-permanently in *campamentos* (camps). Two years later, many continued to inhabit these lodgings that were intended to be temporary.

### **Competing Truth Claims about the State and Everyday Life**

Claims by the state and by social movements about the events and aftermath of F/27 constitute not only narratives about reconstruction, but also

more-generalized, and opposing, narratives of the Chilean nation-state and the effects of neoliberal political economies. As global media attention is drawn to disasters, the Chilean state has sought to portray itself as powerful, authoritative, in control, and a bastion of modernity (see also Brown and Minty 2008). Meanwhile, Chilean activist groups protesting their exclusion from the benefits of the Chilean miracle, whose exclusion became only more apparent and dire on F/27, mobilized to protest the state's mishandling of the disaster and its aftermath, especially in poorer regions. These activist groups were oriented to the global as well, joining the globalized protests against economic inequality and neoliberal hegemony—such as the Global Call of the Indignant in Spain and Occupy Wall Street in the United States. Conflicting narratives of disasters, their aftermaths, and reconstruction often spring up in the aftermath (Oliver-Smith 2004, 10). States, private enterprise, local communities, and other actors have different stakes in the maintenance or contestation of “official” narratives (Button 2002), and they draw from and create competing forms of knowledge about the disaster as different forms of knowledge that emerge in its aftermath (see chap. 6 by Barrios, this volume; Button 2011a).

Tierney, Bevc, and Kuligowski (2006) have observed that media promote disaster myths in the wake of catastrophe that serve to bolster the state's authority and justify its use of repressive tactics on the populace. For example, a looting frame is common and Tierney, Bevc, and Kuligowski (2006) illustrate how this narrative, along with the frame of a war zone, were used to justify military intervention and martial law in post-Katrina New Orleans, and to show the necessity of the state for national security. This frame was also used in Chile, as media emphasized the lawless and dangerous nature of those who were stealing food from supermarkets in the wake of the disaster. However, Tierney, Bevc, and Kuligowski (2006) point out that often people are desperate and stealing food is not simply violent mob mentality but is largely a mode of survival under dire circumstances. It is important to note that similar to stealing food in the aftermath, post disaster social movements are produced largely out of desperation, not necessarily long-standing political activism against the state. However, new social media and the ubiquity of smart phone technologies in many places, as in Chile, make it possible for people in these crisis situations to talk back to the looting frame and purvey their own narratives of post-disaster realities on the ground, for consumption by national and crucially, for global audiences. They make counter claims about the post-disaster authority of the state, pointing to gaps in the state's provision of care prior to and in the aftermath of the disaster and therefore to the state's weaknesses.

This chapter builds on these rich theoretical frameworks about media, narrative, and power to show how the state's hegemony is at stake in its

deployment of narratives of authority and mastery in the post-disaster period, in part because of the state's need to assert itself as sovereign in the global context. It shows first how the Chilean state produces narratives that align the nation-state with modernity and "Empire," and asserts its authority through donation of humanitarian aid to Haiti in the wake of their 2010 earthquake, which occurred about a month before F/27. Then it examines the Chilean state's narrative of recovery, transmitted to the global stage in the wake of F/27 and the chronic disaster that has ensued (Adams, Van Hattum, and English 2009). The state used its spectacular rescue of the thirty-three miners in front of global media to bolster its narrative of Chile's technological modernity and mastery and therefore its belonging to the "first world" or "Empire" (Donini 2008), its belonging to the global North. Social movements have emerged in the wake of F/27 to assert their claims of the state's failures to act on their behalf following the disaster and their demands for inclusion in the state's reconstruction plans. In opposition to the state, these social movements proclaim the value of their members' lives and highlight to local and global communities that the state lacks authority and moral conscience. They assert that they are citizens who matter, and they assert this on a global media stage. They refuse to be what Agamben (1995) calls "bare life"—that is, persons with no political rights. Similar to the biological citizenship that Petryna described in the post-Chernobyl landscape (Petryna 2002), they assert their belonging to the state based on damages they have incurred. They make claims to and about the state's neoliberal successes in the process.

Resistance can be seen as an index for power (Abu-Lughod 1990). The greater the power, the greater the resistance it produces and the greater the power of the resistance, the greater the repressive response. The various social movements that have emerged since 2010 in Chile, including movements around reconstruction, are based broadly on claims to citizenship and a critique of the power of the state's implementation of *el modelo* (the neoliberal model), a set of policies and practices that people deem to negatively affect their lives, similar to contemporaneous social movements globally. These reconstruction-based social movements emerged within a wider ethos of social unrest on the registers of the local, the nation-state, and the global during 2011. Within Chile, people are increasingly disillusioned by the state's promises of democracy, citizenship, and prosperity, which many feel have not been fulfilled following the official end of the dictatorship. Various Chilean movements, including the student movement for quality education and the movement for fair reconstruction, have banded together and also consciously linked their agenda to social movements for democracy that occurred throughout the world during 2011. As social movements seek to show the failures of the Chilean

state to both national and global communities, through protests at times peaceful and at times violent that become media spectacles, the state in turn represses this expression through military force. Activists' counter-narratives of the aftermath of the disaster threaten the narrative of the Chilean nation as exemplar of neoliberal success on the world stage.<sup>4</sup> But activists and protestors have new tools to get their messages out to one another, to wage their campaigns, and to project their narratives to national and global audiences. The use of new Internet media such as YouTube, Facebook, and groups like Anonymous have shifted the balance and allowed for local political battles between citizens and the state to articulate with the global in novel ways. New possibilities for linkages among social movements throughout the world continue to emerge. As realities of inequalities and poverty emerge within Chile and are projected throughout the world under the spotlight of disaster, the state's narratives of mastery and authority act as a mask for the state's lack of authority and power. As Tierney, Bevc, and Kuligowski (2006, 74) note, "Ways of telling are also ways of not telling." Social movements in the wake of disaster make this reality more visible to global actors and challenge the power of the state. This chapter argues that part of the fair reconstruction movement's aim is to show the weakness of the Chilean state on the global stage in order to pressure the state to act on its citizens' behalf.

### **State Narratives of Empire and Technological Sophistication**

A common refrain throughout the global media in the wake of the Chilean earthquake was unveiled astonishment that "Chile is not Haiti" (Kurczy, Montgomery, and Ryan 2010), even though Haitian and Chilean histories are widely divergent. The surprise expressed in global media about how much better Chile fared reflects conflation of Chile and Haiti in the global imagination. And this is exactly what the Chilean state aims to dispel—the idea that it is but one of many "underdeveloped" Latin American countries. Both within Chile and as projected outward to the world, the Chilean government's master narrative of the recovery works against this conflation to portray and emphasize the stability and modernity of the Chilean miracle, exemplary of the promise of the neoliberal political economic model.

Following the January 2010 earthquake in Haiti, Chile offered humanitarian aid in the form of basic supplies, food, water, and tents, and provided trained dogs to search for people buried under the rubble (Agencia EFE [EFE] 2010b). The Chilean state asserted that it is not Haiti by mobilizing the moralizing, dominant discourse (Donini 2008: 34) of its hu-

manitarian aid to Haiti. By using the global discourses and mechanisms of humanitarian aid, a major force of globalization (Rabinow et al. 2008), to refute its image on the global stage as “underdeveloped” and “third world,” it claims its place at the table of “developed” nations, the table of Empire (Donini 2008). In so doing Chile eschews an image of the Chilean nation-state as Other (Etheridge 2011). Haiti, on the other hand, is Other. In the wake of Haiti’s disaster, Chilean president Michelle Bachelet emphasized that Haitians are “a people who have made enormous efforts to reconstruct their democracy, to move forward, to fight against hunger and poverty, and because of that, Chile will give support and a friendly hand of solidarity that is required in this moment” (EFE 2010a). By highlighting Chile’s support for Haiti’s moves toward democracy, the Chilean state can also signal that it is a nation that promotes democracy and is therefore democratic itself, a notion contested by social movements of various kinds within Chile in 2011.

In another instance of Chile’s construction of its national narrative on the global stage, in opposition to the Haitian disaster, in August 2011 Chilean president Piñera hosted Haiti’s president Martelly to show him the “exemplary” relief housing and reconstruction in Chile following F/27. Both presidents marveled at Chile’s successes in dealing with the aftermath of the earthquake/tsunami (*La Nación* 2011). Meanwhile, social movements continued their protests of the Chilean state’s lack of reconstruction after F/27, demanding the failures of the state be made visible. Once again, the Chilean nation asserted on the global media stage that it was *not* Haiti, this time because of what Chile had to teach Haiti about the great strides the Chilean state had taken in the aftermath of F/27. Chile claimed technological knowledge and mastery by using Haitian technological failures as a foil in order to demonstrate Chilean belonging to the “us” of Empire and not to the “them” of underdevelopment. Various global media streams broadcast this message.

### ***The Technological Embrace and Chilean Modernity on the Global Stage***

About six months after F/27, another catastrophe struck in Chile that drew the world’s attention—perhaps even more so: the rescue of thirty-three Chilean miners (a Google search on October 17, 2011 for “Chile earthquake 2010” yielded 1.83 million hits and for “Chile miners 2010” 4.4 million hits). The rescue of these miners, known as *los 33*, from the mine redirected attention from the ongoing suffering of those affected by the disaster(s) back to Chile’s modern version of the enlightenment narrative of technological mastery in the face of danger to human life. This time the disaster was induced by the failure of technologies that put men under the earth to

mine valuable metals and minerals for the global economic system. During the decade of the 2000s, on average thirty-four miners died in Chilean copper mines each year and received no global fanfare or lament (Long 2011b). The global media spectacle of *los 33* who were valiantly rescued in 2010, seemingly by President Sebastian Piñera himself, is emblematic of Chile's national narrative of technological embrace and its appearance not only as a modern nation, but as a *hypermodern* nation. The Chilean nation was invested in that moment in the technological embrace, the channeling of hope for the future, hope for humanity, into technological solutions. In this case, the technological solution was a metaphor in the global media for Chile as a nation, one that indicated, according to a CBS news headline, that "With Mine Rescue, Chile Sets Sights on 1st World: President Sebastian Piñera Could Change Landscape of Chile and Bring Nation Closer to Developed Status" (Associated Press [AP] 2010b). The "miracle" rescue of the miners effectively mirrored the desired image of the Chilean economic "miracle" that the state leveraged to reassert Chile's exemplary and even exceptional status on the global media stage. As Olsen, Carstensen, and Høyen (2003) have demonstrated, media focus draws attention and money.

The technological feat was further heralded by an exhibit entitled "Against All Odds: Rescue at the Chilean Mine" at the Smithsonian National Museum of Natural History (n.d.) in Washington, DC. However, a year after the miners' dramatic rescue, as the world watched, global media reported that many of them now struggled financially and psychologically, and, according to a *New York Times* report, "Many now get by on a steady regimen of sedatives and antidepressants." One miner told the *Times* reporter, "They made us feel like heroes. ... In the end, we are selling peanuts. It's ironic, isn't it? ... We feel a little abandoned here" (Barionuevo 2011). Apparently many of the miners, too, have been abandoned by the Chilean state, even after President Piñera carefully used the miners' rescue to promote Chile's image nationally and globally. The technological embrace had served its purpose for the image of the nation on a global stage but had failed for many of the Chilean miners, who were Chilean citizens.

### ***The State's Technological Failure***

In stark contrast to the miraculous rescue of *los 33*, the Chilean government lacked the technological knowledge to accurately predict the tsunami that followed the earthquake on F/27. Also in stark contrast to the spectacle of the rescue of *los 33*, the government's glaring failure to warn of the imminent tsunami has been notably muted in global media reports.

Directly following the earthquake, many residents of coastal areas drew from their historical, experiential knowledge about the risk of a tsunami following an earthquake and fled for higher ground. However, based on information gathered by the state's technological instruments, President Bachelet and the Oficina Nacional de Emergencia del Ministerio del Interior (Chile's office of emergency management, or ONEMI) were unconvinced that a tsunami would occur and gave the order for local authorities to tell people in coastal areas to return to their homes (Venegas 2011). The residents' knowledge turned out to be more sophisticated than the technological approximations of risk, but the state has authority, and scientific instruments represent authoritative knowledge, meanwhile experiential knowledge is figured as less reliable in modern systems (see chapter 6, Barrios, this volume). The Chilean state relied on a narrative of technological embrace that sees technological, scientific knowledge as the solution over and above other responses.<sup>5</sup> The technological embrace failed. On the two-year anniversary of F/27 the government had only begun to address its error publicly.

### **Neoliberal Inequalities within the Frame of the State's Discourses of Compassion**

Only six months after F/27, President Piñera, along with the International Monetary Fund, declared that recovery had been successful; meanwhile, the BBC reported that economic indicators suggested that “the percentage of Chileans living in poverty—a figure that has been declining for decades—rose to 19.4% in mid-2010 from 16.4% in 2009. It is widely accepted that the earthquake was to blame” (Long 2011a). In 2011 Piñera celebrated the first anniversary of the earthquake/tsunami, insisting that, “reconstruction is advancing firmly” (*El Mercurio* 2010–11). The government's *Balanced reconstruction 2011 a un año del terremoto* (reconstruction account), an official report on the recovery efforts a year after the disaster, boasted that 61 percent of housing subsidies to build new homes had been issued, and 99 percent of the public infrastructure had been restored or almost restored (Gobierno de Chile 2011, 6). The official government document is nine pages long and provides glossy before and after pictures of damaged and repaired infrastructure, but no pictures of the supposedly temporary camps where running water and electricity are often scarce, and no pictures or mention of rural, largely indigenous, Mapuche communities like Tirúa, which were also affected by the earthquake/tsunami (Rojas Bravo 2010). In response to critiques of the slow nature of the government's efforts, especially in the poorer areas, Chilean government officials have

asked that its citizens have patience, as rebuilding takes time, especially since the government claims to be rebuilding with better quality in mind, according to President Piñera (*El Mercurio* 2010–11). The state’s narrative of overcoming the damages of the earthquake/tsunami of 2010 serves to brand Chile on the world stage, again, in a way that emphasizes its competence as a neoliberal state; along with its modernity, development, and technological sophistication. Meanwhile, it minimizes the harsh realities of the structural inequalities that persist even as Chile’s GDP has grown.

In another move that elides the structural inequalities underlying vulnerabilities to earthquake and tsunami in zones most heavily affected, the Chilean state has focused its recovery programs on a discourse of compassion about the emotional distress and post-disaster trauma in affected, marginalized communities.<sup>6</sup> I posit that this is because emotional distress can be figured as natural—that is, not politically charged, part of *any* disaster and therefore channeled away from the uncomfortable reality of poverty that was exposed by the disaster. The Servicio Nacional de la Mujer (national women’s service, or SERNAM) launched a campaign in the affected zones called *Levántate Mujer* (get up, woman) and offered psychological interventions for women through their regional women’s centers. Psychologist Pilar Sordo gave motivational speeches to address what she called the earthquake of the soul that followed the disaster, promoting the state’s discourse of compassion, which masked the state’s failure to provide adequate material resources for those suffering. On the other hand, as of August 2011 SERNAM’s documentation center and its Santiago regional office told me that they had not done any research to ascertain how women in particular had been affected by the earthquake/tsunami (personal communication). SERNAM’s interventions, aimed at getting women to “just feel better” and continue executing their womanly gender roles to fulfill their “duties” as pillars of the Chilean family and nation (see Parson 2012), have been criticized by those working in non-governmental and academic settings in Chile. These interventions did not increase the visibility of social inequalities and social suffering—the roots of the unnatural disaster’s production of ongoing suffering. They called attention to the collective trauma of bare, “natural” disaster, one that could ostensibly be overcome through collective therapy, motivational speeches, and self-improvement. Similarly, Fassin and Rechtman (2009) have theorized how, globally, discourses of trauma and posttraumatic stress disorder have become the technical focus of humanitarian efforts in post-disaster scenarios. Attention is diverted to psychological trauma instead of to the underlying social contexts structured by inequalities that remain unquestioned. This allows the state to reinforce its authority, more legitimately and project an ethic of care for its citizens on the global stage,



meanwhile failing to provide needed material support. This is coherent with moves under neoliberal governance toward therapy as internalized social control (Merry 2001, 19).

The state attempts to claim its authority from its discourses of compassion on the local and global registers and not from real accountability to its citizens. The state thereby asserts that it is not the role of the state to provide materially for its most vulnerable in times of need. The role of the state is to offer compassionate discourses, but the citizens themselves and global humanitarian organizations must provide the real care. The state's authority is therefore fragile once the reality of its provision of material resources is brought to light, and it is this weakness that social movements are able to unveil to global media, when they have a powerful enough voice to speak back to the state, via the global media stage. Also highlighting neoliberal values of self-sufficiency, many nongovernmental organization (NGO) programs emerged in Chile to fill the gaps in the state's provision of care. One such program, Chile Ayuda a Chile (Chile helps Chile) proclaimed, "Chileans, sisters and brothers, all compatriots, it doesn't matter how many times we fall, ONE HUNDRED AND A THOUSAND TIMES ALWAYS we pick ourselves up, because we are children of challenge and to this we always stand up" ("Fuerza Chile: Terremoto 2010" 2010). Indeed, such fund raisers generate funding from within disaster affected countries and from outside. Brown and Minty (2008, 9) found that after the widespread and devastating tsunami of 2004, for every minute of nightly news coverage or newspaper stories about the disaster, donations increased by 17–21 percent. By putting the responsibility on the populace to generate funds for those in need, the state is once again excused from accountability. International NGOs also have provided care where the state has not, thereby bolstering the global in the local.

### ***Recoveries in the Margins of the State***

One such place where the state has failed to care and international organizations have tried to "mind the gap" is Tirúa, a community populated mostly by indigenous Mapuche, a group that generally lives at the margins of the state (see Das and Poole 2004), and where poverty exceeds the generalized high levels of poverty in the southern regions most affected by the disaster (Rojas Bravo 2010, 6). In Tirúa, residents have criticized the state's failure to act after the disaster and people there, as elsewhere in Chile, have had to rely instead on mechanisms of global governance (see Ferguson and Gupta 2002; Ticktin 2011), which have taken the state's place. Ximena Rojas Bravo explained to me in July 2011 that she had been hired by the global NGO Non-profit Enterprise and Self-sustain-

ability Team (NESsT) to work in Tirúa on its campaign *Levantando Chile* (Uplifting Chile), based on her previous work on women's development and violence against women. Rojas Bravo conducted workshops and a survey of women's necessities in Tirúa in the wake of the devastation of the earthquake/tsunami there, something that the Chilean government had not done (Rojas Bravo 2010). Women in Tirúa reported to her that prior to, as following, the earthquake/tsunami their lives were lived in grave poverty and isolation from the state. From their descriptions, they lived almost in an abandoned state-less state. They felt isolated and marginalized, largely because of the lack of public transportation and the lack of telephone lines. "Here the mistreatment of the poor is very hard," noted one woman in an interview with Rojas Bravo. She continued, "It doesn't matter to them what happens to you. When we go to the Municipality for something, they see us enter and they put on a bad face. They look at us badly. They attend to us poorly and they criticize us a lot" (Rojas Bravo 2010, 8). All of the women reported that the authorities (municipality and national) did not give them help in the wake of the disaster and had not asked them what their necessities are, although 38 percent said that their houses suffered damages. No housing was offered for those who lost their homes (Rojas Bravo 2010, 8). In Tirúa the invisibility appears to be magnified by the abject poverty, isolation, and racism in which people live their lives. This example of global governance to fill the gaps in the state's attention to its citizens provides a dramatic counterpoint to the state's narratives of technological mastery, modernity, and economic success. But also, extremely poor, indigenous populations in rural areas of Chile, such as Tirúa, lack a powerful voice on the global stage. They are unable to protest their subjection on that level, and they lack the power to attract the state's attention. Global humanitarian organizations fill in the gaps left by the state, exposing weakness on the part of the state, and furthering the development of forms of humanitarian global governance.

### **Recovering Equality? Social Movements' Counter-Narratives**

"'Mayor, there are still temporary houses without electricity. Thirty-three are okay and the rest are fucked,' declared graffiti on what was once an interior wall presumably destroyed by the earthquake/tsunami on February 27, 2010" (Senador Navarro, 2011).

Chilean social movements have taken note of the state's selective attention. An ethos of distrust of the state has emerged strongly in a range of Chilean social movements during 2011: against a hydroelectric plant in Patagonia, for reform of educational systems, and for fair reconstruction after

the earthquake/tsunami. I posit that these social movements grow in part out of an ontological insecurity shaped by lingering memories of the state's repression during the dictatorial era and the lack of equality produced after twenty years of official democracy under the Concertación, the left/center-left coalition. In stark contrast to the state's narratives of development, prosperity, neoliberal modernity, and technological sophistication, many people feel left out of the Chilean miracle so touted globally. They see their nation represented globally as a success, but they themselves do not feel this success. In the wake of the F/27 social movements and most notably the student movement of 2011, the Chilean state has used great force to repress social movement protests, reviving memories of the dictatorship government. These local social movements also link with global movements as a tool to further their local agendas. Just as economies and humanitarian discourses are globalizing, so are social movements.

### **National Movement for Fair Reconstruction**

Around the first anniversary of F/27, a number of social organizations who had come together under the umbrella *Movimiento por una Reconstrucción Justa* (national movement for fair reconstruction; MNRJ) presented a petition to the Chilean government with their demands. The petition, presented in a protest march in downtown Santiago, demanded that reconstruction not be driven by “privatization and profit” (biobioprojecta.org 2011) and demanded, “a housing solution for all of the refugees,” including dignified housing, constructed with citizens’ participation, within two years. With community development in mind, they urged the government to make efforts to avoid, “ghettos of poverty [and] social exclusion in the [reconstructed] city.” They also demanded that crucial infrastructure such as schools and clinics be reconstructed, without privatization and profit, and that the coastline as well as water remain free from privatization in the process of reconstruction. In short, they argued against disaster capitalism. All of these measures, MNRJ argued, must be undertaken by the government within an environment of transparency. This critique of the privatization that has been at the heart of the neoliberal reforms in Chile that began under Pinochet resonates throughout the movement that has taken root around reconstruction. Romina Aros, the spokeswoman for *Red Construyamos* (we construct network) noted in an interview in 2011, “Definitely the issue of reconstruction is not a priority, nor education, nor health in Chile. The priority today is privatization. What the government is for today is to privatize all sectors, including reconstruction” (*Observatorio de Género y Equidad* 2011).

## Dichato Resists

A Chilean police water cannon tank and CS tear gas-spraying jeep was shown in a photograph of the temporary housing that is now the village of Dichato during a July 16, 2011, protest. The headline of the article associated with the photo says, “Police deny that police tanks entered the small village (*aldea*) of Dichato” (Terra 2011).

One of the most vocal towns in the struggle for fair reconstruction has been the small, coastal town of Dichato, which was completely wiped out by the tsunami. Dichato was one of the hardest-hit communities, with around 80 percent of inhabitants there losing their homes. One year after the disaster three thousand people were still living in temporary housing, some in El Molino camp in 20-square meter wooden shacks constructed for them after they lost their homes (“Terremoto: Campamentos, la emergencia que no termina” 2011). An article in *La Nación*, a widely read national newspaper, noted that these structures “lack insulation and they flood when it rains” (La Nación 2011). Furthermore, a citizens’ group report in February 2011 stated, “The sanitary situation of the families in temporary housing [*mediaguas*] is worrisome. They have difficulty accessing drinking water.... When there is electricity, it is from illegal installations that pose fire hazards. If there is a bathroom, many families have to use it” (Valenzuela 2011, 21).

A camp leader noted, “Life in the countryside is bad, it’s bitter, it’s ugly. For me, this is like a concentration camp. At 9 P.M. people lock themselves into their houses and that is it. Before it wasn’t like this. We went out. We went for a stroll” Valenzuela 2011, 21). They will be there for two to three more years, awaiting permanent housing, which is supposedly in process. One El Molino community leader referred to these living conditions and lack of governmental response as a “moral earthquake” that paralleled the seismic event (Toledo 2011), referring to the government’s unfulfilled promises of aid and challenging the state’s moral authority and its discourse of compassion.

Later in the year, on July 16, 2011, Dichato residents took to the streets to protest the continued lack of running water, lack of plumbing and insulation, lack of electricity, and the government’s failure to come through on its promises of reconstruction after eighteen months. And onlookers digitally recorded the events and then posted them on YouTube, for other Chileans and for the world to access. One YouTube video shows the bonfire of small trees that burned slowly in the middle of the highway, the protest banners, protestors talking to the press, and chanting, “El pueblo unido jamás será vencido” (“The people united will never be defeated”). Lorena Arce, a leader of the movement in Dichato, asserted to

the press, “If the government won’t respond to us and provide the rights we deserve, we will fight for them” (Sepulveda Arteaga 2011). Global media allowed the protestors’ voices to be heard far beyond the local and the national. The state is accountable to its citizens in new ways via new global media linkages.

The governmental authorities engaged the police’s force to defuse the situation. In a video report of the event it appears that the police calmly tried to talk with the protestors to ask them to disperse from the roadway. The protestors responded with their complaints to the government. For example, one man said that his wife was old and ill and it was very difficult for her to make it to the bathroom, which is outside (Sepulveda Arteaga 2011). Indeed, residents had to share one portable bathroom among several families and these were located outside of their homes, a problem that has been documented in particular for women and girls, as well (Sabrido 2011).

The police remained calm and quiet, but did not respond to this man’s and others’ complaints, returning without words to their vehicles. They soon returned to the crowd, dressed in full riot gear, army green helmets, shields, and bullet-proof vests; they walked almost in lock step to form a wall of bodies. They easily worked their way into the disgruntled crowd to clear the roadway of the burning debris and then physically pushed the crowd out of the way, using their shields to protect themselves. A protestor hit one of the shields with a stick in a futile rage, for the state had spoken. In this visual image of the state’s relationship to its citizens, the state’s ultimate power, with physical gear and tools of repression represent a force that is overbearing and is no physical match for the protestors. But the movements find other ways to broadcast their messages.

Indeed, as in the so-called Arab Spring movements, new forms of social media provide novel platforms for social movements’ narratives, presenting new possibilities for alternative versions of reality to emerge and for the state’s authority to be challenged. In addition to the facility with which the above scene has circulated via YouTube, social movements’ Web sites, like “Dichato hoy,” run by the Movimiento Ciudadanos Asamblea de Dichato (Dichato citizens’ movement assembly) promotes their goals. For instance, in a post by Legua York, a popular Chilean hip-hop group, they shared their *Rimas para Dichato* (Rhymes for Dichato): “First came the earthquake, then the tsunami. Then came this shitty government. Two winters without reconstruction. Two winters with a lot of repression. Dichato Resists: The People Should Rule” (Legua York 2011). Social movements around reconstruction emerged in many other post-disaster sites in 2011, including in Villa Olímpica (Olympic Village) in Santiago, to which this chapter now turns.

Although the socioeconomic fault lines that show through the cracks that the earthquake left behind in Villa Olímpica are different from those in Dichato, there are important similarities that tie them together. Like poverty-stricken populations living in camps in Dichato who have struggled to make their lack of running water, plumbing, and insulation visible after the disaster itself struck, the residents of Villa Olímpica also fail to embody the state's narrative of the "miracle" of Chilean modernity and prosperity.

Villa Olímpica was built by the Chilean government for the Soccer World Cup in 1962 and houses around ten thousand people. In its prime, Villa Olímpica was associated with the strengthening Chilean middle class as a desirable place to live. In recent years, however, it has been associated with the increasingly vulnerable lower-middle-class; after the earthquake's damage many there are clinging to their lower-middle-class status by a dwindling thread. Many of the blocks of apartments were damaged so badly during the 2010 earthquake that residents were displaced, forced to move in with relatives or live temporarily in tents. Many owned their apartments but had little financial solvency to confront homelessness that the quake produced. The day following the earthquake, in response to the dire situation in which residents of Villa Olímpica found themselves, these residents formed the *Asamblea de Vecinos de la Villa Olímpica* (Villa Olímpica neighbors' association). Soon after, the municipality government declared fourteen blocks of Villa Olímpica apartments condemned. Inappropriate and utter lack of government action has been a common complaint of the *Asamblea de Vecinos*. The residents have been disillusioned and frustrated at what they perceive to be the abandonment and corruption of their local and national governmental responses in the post-disaster. For instance, on May 4, 2010, the mayor of their municipality said in a television interview that reconstruction funds would be used to repair the leaky roofs in the Villa, and that within twenty days of that appearance they would start the work and from there it would be two months to finish the roof repairs (TVN 2010). However, by February 2011, one year after the quake, the roofs had yet to be repaired. This and other complaints led to a series of protests by Villa Olímpica residents. In an interview around the first anniversary of the quake in February 2011, a resident told the media the following:

One year after the earthquake we have thousands of families [in Chile] in camps in undignified conditions, where they have not even started to construct the houses that ended up in the dirt. Today, from the Villa Olímpica we send them support and strength, since we as a people should work together against adversities, fighting all together so that the government of this country realizes that we are a population that is conscious, critical, and that does not permit them to pretend to be blind

to all of the pain of the families. Mr. President, Ministers, Senators and Business People, we will remain standing, fighting for our homes to be repaired, organizing ourselves every day and reminding you that the state is for all Chileans. (Anonymous 2011)

By August 2011 when I visited, little reconstruction to speak of had begun, in spite of residents' struggles to make their voices heard to their municipality. Residents pointed out that the municipality's May 2010 promise to fix their roofs still had not been fulfilled, and the roofs had not been fixed. Problems of rain water dripping into apartments persisted; the signs were easily visible on ceilings and walls.

In spite of these conditions many residents have returned to their condemned apartments to wait for the government's promises of help, at least for the roofs and other common areas of the blocks, to come through. These peoples' resources are largely tied up in the apartments themselves. Many of Villa Olímpica's residents are particularly vulnerable to the devastation of disaster—not because they have nothing, but because they have *something*, but not enough to fulfill the neoliberal expectation to pull themselves up of their own will and work. In neoliberal systems Harvey (2005, 65) has noted, "Individual success or failure are interpreted in terms of entrepreneurial virtues or personal failings ... rather than being attributed to any systemic property." These people, then, do not fulfill the neoliberal ethic of (presumed) self-sufficiency. They reveal the cracks in the neoliberal regime, wherein hard work, a job, and a home are not enough in the face of disaster. Without the state's safety net, they live in utter vulnerability, and this is what they protest—their vulnerability to the neoliberal economic system and the marriage of the state and private enterprise. For in a seismic and volcanic country like Chile, disasters are a question of *when*, not *if* the next earthquake, tsunami, or volcano will strike.

### **The Global Call of the Indignant: The Local Struggle Is the Global Struggle**

The movements in Dichato and Villa Olímpica are two nodes of the wider social movements related to reconstruction after F/27, and these various movements to protest the state's lack of care for those affected by the disaster are symptomatic of a generalized dissatisfaction with the state's lack of attention to its citizens' needs. The reconstruction movements have now joined with other large social movements in Chile and *global* social movements for social justice. In a statement on October 8, 2011, the reconstruction movement in Chile joined its voice to the Global Call of

the Indignant. In doing so, the group Movimientos Ciudadanos (citizens' movements) made itself visible to the world. Movimientos Ciudadanos is a conglomerate social movement comprising Chilean movements against (1) HidroAysén, the thermoelectric project in Patagonia, (2) ineffectual reconstruction, (3) profit in public housing, and (4) "Piñera's Damned/Cursed Law" (Ley Maldita; Ley de Defensa Permanente de la Democracia, that was imposed during the Cold War to outlaw the Communist Party and curtail individual freedoms), which the government has proposed to revive and social movements see as an attempt to criminalize their efforts. Finally, the Movimientos Ciudadanos' demands include free and quality education for all, the central demand of the Chilean student movement that has been strongly repressed by the state, meanwhile gaining wide international attention, for example in a recent article on student movement leader Camila Vallejo, in the *New York Times* (Wilson 2012). In 2011 the Movimientos Ciudadanos gathered in front of the Chilean presidential palace, La Moneda, to proclaim with a unified voice, "Chile needs a real democracy," and demanded citizen participation in constructing a new constitution to replace the 1980 Constitution put in place by decree of Augusto Pinochet's violent military dictatorship (Movimientos Ciudadanos 2011). "Our demands add to the global call of the indignant all over the world," they proclaimed, using the word "*indignado/as*" (indignant) as protestors had done in Spain to protest their disenfranchisement in the global neoliberal economic system (Poggioli 2011). As the movement for fair reconstruction has developed, it has increasingly formed connections with other social movements in Chile and globally, which have the same basic complaints at their base—social inequality caused by corrupt political economic systems, which are both global and local.

### **Conclusions: Power Struggles on a Global Stage**

This chapter has shown that it is crucial to attend to the multilayered aspects of any disaster and its chronicity—including the media broadcast of forms of state actions and citizens' actions in the wake of disaster. As the state asserts the value-lessness of its citizens in its attempts to abandon them through inattention to their needs and through global narratives of its authority and modernity, social movements also create and purvey narrative claims to personhood, value, and rights on behalf of their members. In Chile, neoliberal economic policies are entrenched, but also entrenched in the Chilean social body are the tactics of resistance and protest finely honed by the population in their historical interactions with the state. These movements are largely cognizant of the need to broadcast their



voices of dissent on global stages, in the face of the state's assertions of its hegemony via global media pronouncements.

Resistance to the state's inactions in the wake of disaster is far from limited to the Chilean context, though it manifests in particular ways in Chile. At the same time, people most directly affected by disasters have found ways to attempt to talk back to the state and to make the state accountable to its citizens' needs by using media outlets, specifically widely viewed and available Internet sites like YouTube and Facebook. Protests and citizen unrest in the aftermath of disaster have become a widespread reaction to the immensity of both the visible and the invisible impacts of disaster, and this is a worldwide phenomenon. Protests in Japan over the nuclear fallout of Fukushima and the government's failure to provide accurate knowledge of the severity of the nuclear disaster have emerged (Button 2011b; Rose Johnston 2011; Tabuchi 2011). In Haiti protestors have rallied in response to allegations of government hoarding of aid (Vega 2010) and in the wake of widespread death due to the rampant spread of cholera in the camps (AP 2010a). In the aftermath of the BP Gulf oil spill in the United States, groups protested the handling of that environmental, health, and economic disaster (Jonsson 2010). Although states value lives differentially through their creation and enforcement of the rules of reconstruction and through the broadcast of global media narratives that attempt to consolidate its power and authority, social movements' power to assert a different narrative of the reality of these policies on the ground and to shift power relations and distribution of resources cannot be overlooked. Social movements protest and resist the devaluing of their lives, and their linkages with global media and globally dispersed social movements are crucial. These movements are part of new socio-political landscapes that emerge when the more insidious vulnerabilities that preceded the disaster suddenly become critical (see Kleinman 1999).

In disaster capitalism, national and international capitalist interests take advantage of post-disaster vulnerabilities in order to make profits (see Adams, Van Hattum, and English 2009; Klein 2007; Schuller 2008). The analysis in this chapter suggests that vulnerable people themselves and their social movements also leverage the visibility and the desperation of the disaster's aftermath to make claims on the state, claims that are about the aftermath of the disaster itself but are also claims to democracy, citizenship, and belonging to the state in an era of intensive globalization of economies, media, and inequalities. The disaster provides those who are disenfranchised subjects of the state the "conditions of possibility for forms of subjectivity" (Fischer 2009, 42) that hinge on protest of their submission to local and global orders. They use new Internet media to mobi-

lize attention to their experiences and protests—thereby to some extent engaging in attempts at “reshaping the public sphere by changing power relations” (Fischer 2009, 37). The question of how social movements will continue to affect and shape global political economies, and the ways these movements articulate with post-disaster landscapes in particular, is an open one.

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## Notes

Author did all translations throughout this chapter.

1. In May 2011 citizens from various sectors of the society came out strongly in protest against HidroAys, a hydroelectric company to be built in Patagonia in southern Chile.
2. It is important to note that Hale has argued that neoliberal economic regimes in Latin America were actually “consummated in tandem with a region-wide return to democracy” (Hale 2005).
3. In 1970, Salvador Allende, a socialist, was democratically elected president. Allende nationalized the lucrative copper mining industry, redistributed land, promoted free education, health for all, and other public policies directed at social justice. These policies, in concert with his friendship with Cuba during the Cold War represented threats to the United States’ political and economic interests in Chile. The U.S. government under the direction of Secretary of State Henry Kissinger backed the imposition of economic policies that drove scarcity of basic goods in Chile under Allende and then underwrote the violent overthrow of Allende during a bloody coup, led by General Augusto Pinochet, on September 11, 1973. Neoliberal economic policies were instituted under Pinochet’s dictatorial rule, led by *los Chicago Boys*, Chilean economists trained at the University of Chi-

cago under Milton Friedman, who led the charge to privatize agriculture, health care, education, and social security; to make trade unions of most types illegal; and to maximize trade profits.

4. See Button (2006) on counter-narratives in the aftermath of Hurricane Katrina in New Orleans.
5. Building on Del Vecchio Good's (2007) concept of the biotechnical embrace, which includes the affective dimensions that lead people to trust technological intervention in biomedicine and bioscience over and above other forms of knowledge and experience.
6. Fassin and Rechtman (2009) have explicated the phenomenon in global humanitarian aid whereby trauma, and not the underlying structural inequalities that shape vulnerability, has become the focal point of interventions.

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# Decentralizing Disasters

## *Civic Engagement and Stalled Reconstruction after Japan's 3/11*

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BRIDGET LOVE

What is this earthquake trying to teach us? If there is nothing it is trying to teach us, then what can we possibly have left to believe?  
Wagō Ryōichi 2011

After threading through miles of ruins, a mini-bus deposited our group in the parking lot of an incongruously named *bōsai sentā* (disaster prevention center). It stood in front of us, a battered and windowless two-story building. A lone bulldozer toiled in the rubble behind it. There were few other orienting points in sight. The remains of concrete foundations left by Japan's March 11, 2011, tsunami poked up jaggedly from the ground for miles in every direction. As we waited for a local guide to arrive and give us a tour of the center, members of our group wandered the parking lot snapping pictures of tiled bathrooms open to the sky, hardy clover flowering in piles of debris, and other curiosities in the ruins.

We were volunteers returning from a day spent building a community garden for tsunami survivors from this district of Kamaishi City. In 2013 they were still living in temporary housing enclaves wedged between nearby mountains. Rebuilding had yet to begin in Kamaishi, as in dozens of coastal municipalities along Japan's northeastern Pacific coast, even though *fukkō* (reconstruction) was a constant topic of discussion in the national news. This contradiction invariably surprised volunteers visiting the disaster site for the first time. Reflecting on our outing at a debriefing meeting later that evening, a young man from Tokyo marveled, "It's been two years, but nothing has changed."

Of course, this was not entirely true. According to Japan's Reconstruction Agency, over 18 million tons of debris were collected, sorted, and removed from the coast in the first year after the disaster (Fukkō chō 2012,

2).<sup>1</sup> Yet rubble is just one of massive challenges caused by the magnitude 9.0 earthquake that struck off the eastern coast of Tōhoku, the six-prefecture region comprising the northeast of Japan's main island. Triggered by the quake, mega-tsunami rising to heights of forty meters inundated three hundred miles of coastline. They killed nearly twenty thousand people before triggering a nuclear meltdown at the Fukushima Dai-ichi power plant in southern Tōhoku. This chain of disasters, referred to as 3/11 in Japan, produced vast and far-reaching effects. Five hundred thousand coastal residents were displaced from their homes. Radiation permeated Japan's domestic food system and has streamed into the Pacific in unknown quantity. Even as government teams work to decontaminate municipalities in the fallout plume of the Fukushima plant, advocacy groups have measured radiation hotspots in playgrounds one hundred and fifty miles south in Tokyo. Equidistant from the plant to the north, survivors in Kamaishi still waited two years later as plans to rebuild their communities lagged in deliberations.

During this time, Japanese politicians, pundits, and academics have been quick to glean crisp lessons from the sprawling tragedies. Just days after the earthquake, Tokyo's governor, Ishihara Shintaro, called the tsunami "a divine punishment" meant to "wash away the selfish-egoism" and "materialism" that has come to infuse Japan's national identity ("Daishin-sai wa tenbatsu" 2011). Critics quickly condemned his comments as absurd and insensitive. However, his was just one of many voices seeking to distill the vast disasters into pointed commentary on the legacies of Japan's high-speed economic growth. Tourism policy expert Inoue Kenji observed that the tsunami abruptly destroyed the illusion that Japan's relative affluence can ensure the security and well-being of its population. He explained, "We realized that a society premised on constant growth through the pursuit of material wealth and mass consumption can't be permanent. What is real prosperity? What is happiness? We need to rebuild, but first re-imagine our values and way of living" (Inoue 2011, 5).<sup>2</sup>

Domestically, the triple disasters prompted many Japanese to recognize the unequally shared costs of Japan's affluence. In their wake, Tōhoku came into view as an aged and economically vulnerable region that had been exploited to support the priorities of Japan's center. Having provided natural resources to support the nation's industrialization and military expansion, then labor to fuel Japan's postwar economic growth, Tōhoku became an ideal site for generating nuclear power to serve Tokyo's consumer needs. Highlighting this extractive relationship, 3/11 spurred a mood of critical reflection in Tokyo. Much of it has been directed toward the failings of the highly centralized system of governance that structured Japan's postwar economic recovery and high-speed growth. After two



“lost decades” of persisting recession, many argue that this centralized system has outlived its efficacy in an increasingly fast-paced and volatile global economy. In this self-reflexive climate, reconstruction has assumed significance as an opportunity to usher in changes that will forge a more resilient nation and reset Japan’s global standing.

Such realizations have bolstered an ongoing shift toward decentralization, implemented in the early 2000s through a series of structural reforms by Prime Minister Koizumi Jun’ichiro to update the nation’s political economy. Part of a concerted neoliberal agenda, decentralization aims to streamline Japan’s central government by demanding greater fiscal and administrative autonomy of its rural regions. Proponents of such reforms have seized on the disasters as evidence of the vulnerabilities inherent in Japan’s centralized energy industry, food systems, and public works juggernaut. In turn, they envision reconstruction as an opportunity to pursue more intensive structural reforms, under which Tōhoku would become one of several autonomous but competitive regional blocks within a decentered nation. Economist Fujita Masahisa (2011) thus refers to the disasters as a “creative destruction” that will spark the building of a more resilient and innovative Japan. Yet his logic differs from that motivating more virulent strains of “disaster capitalism” (Klein 2007) that exploit the chaotic aftermath of catastrophe as cover for implementing aggressive neoliberal reforms. Many post-disaster decentralization supporters argue that the catastrophes revealed latent civic energies, cultural resources, and environmental vulnerabilities suppressed within Japan’s highly centralized political economy. They frame their visions of post-3/11 reconstruction in terms of progressive goals of national inclusion, cultural diversity, and ecological resilience.

In this chapter I critically examine hopeful expectations that reconstruction might spark needed social and political change in Japan. Assessing the stagnant progress of coastal reconstruction, I argue that the revelatory insights sparked by the 3/11 disasters have failed to clarify the mechanisms through which decentralization might produce a more resilient nation. Two years later, Kamaishi’s survivors still waited for the outlines of a rebuilding plan to take shape. Even as they were appropriated as national symbols of community self-reliance, they increasingly feared the possibility of their own municipal recovery slipping beyond their grasp. Attempting to bypass this stalemate, relief volunteers, who continue to trek to Kamaishi and other sites in Tōhoku, concentrated on microrenewal initiatives to help build morale and relationships among survivors. This chapter draws on fieldwork with volunteer groups in Kamaishi in 2011 and 2013, and builds on a decade of prior research in Tōhoku. It shows that the decentered model of reconstruction following 3/11 promotes ad hoc

and small-scale relief and rebuilding efforts that reproduce, rather than resolve, regional inequalities.

The prolonged recovery period endured by Kamaishi's residents is a common outcome of catastrophes. Vincanne Adams is among medical anthropologists (Adams et al. 2011, 248) who characterize disasters as "chronic in nature." In their study of the long-term health impacts of Hurricane Katrina, Adams and her colleagues contend that as "disasters themselves 'age,'" they often produce lasting political inaction and "relentless long-term debility" (2011, 249). Their work builds on anthropological scholarship that considers disasters "from the perspective of a long-term continuum" (Button 2010, 248; see also Oliver-Smith 1996, 312). For disaster anthropologists, this corrects a popular misconception of disasters as isolated events—which in turn contributes to shortsighted visions of recovery. Here, I assess the debility and inaction emerging in the wake of 3/11 as an unexpected outcome in Japan, given collective hopes that the disasters would unleash change. Consistent with a shift toward decentralization, I show that the burden of these unrealized hopes has been transferred over time onto victims of the disasters in Japan's northeast. As decentralization becomes a global trend of governance, this chapter raises important questions about the growing vulnerability of communities in a global era marked by intensifying natural catastrophes and economic volatility, but devolving risks and responsibilities.

### Reconstruction Doldrums

News coverage of post-disaster Tōhoku has frequently attributed delays in coastal recovery to local disagreements over how to rebuild devastated communities. When our guide Tanaka-san arrived at Kamaishi's disaster prevention center, he explained to us that the battered building was at the center of one such conflict. Nearly two hundred nearby residents took refuge inside the center on March 11, 2011, only to drown when tsunami waters inundated the two-story building. While some local survivors wanted the structure retained as a memorial, others dreaded the prospect of encountering a graphic reminder of their tragedy on a daily basis. An energetic elderly farmer, Tanaka-san parsed this debate for us before detailing the prefecture's plans to rebuild the district atop a secure ten-meter elevation. As we surveyed the ruins, it was difficult to imagine such a feat—even more so since Tanaka-san was not optimistic about its execution. He warned of enormous shortages in the expertise and labor needed to initiate such massive earthworks projects simultaneously in dozens of municipalities up and down Tōhoku's coast. The cause of the

expected delays was not fiscal. When Prime Minister Abe took power in 2012 after a rapid succession of leaders from the center-left Democratic Party of Japan (DPJ), his conservative Liberal Democratic Party (LDP) committed to increase reconstruction funding to \$25 billion over the next five years (Oguma 2013). Even so, during the first year money allocated for reconstruction was returned unspent to government coffers because municipalities were unable to mobilize needed workers or materials (Borov and Tsubuku 2013).

As he lamented this deadlock in a thick northeastern dialect, Tanaka-san was prone to cheerful digressions—including a story about his pumpkins. It illustrated how, in the midst of systemic stalemates, many survivors took solace in projects symbolic of proactive, local forms of intervention. On his upland farm, Tanaka-san was cultivating heirloom pumpkins with seeds evacuated from Iitate, a city in the fallout plume of the Fukushima plant. Forced from their contaminated land, Iitate's farmers called on colleagues in other prefectures to maintain their distinctive local pumpkin variety. In rescuing the seeds to grow in Kamaishi and telling the story to our group while standing in a vast scene of tsunami wreckage, Tanaka-san was making a small but optimistic gesture in the midst of a situation mired in a massive structural quagmire. Nearby, local tsunami survivors remained housed indefinitely in rows of prefab housing units crowded onto narrow terraces of land. When they were moved into temporary housing months after the disaster, all Tōhoku evacuees were given a deadline of two years to relocate into permanent homes. Two years later in Kamaishi, basic plans about how to safeguard the city against future tsunamis still had to be finalized and approved before rebuilding could start. The situation was the same up and down the coast. On the eve of the second anniversary of the disaster, the national newspaper *Asahi shimbun* reported that only 15 percent of Japan's 270,000 evacuees had permanently relocated. Summing up the dilemma of Kamaishi's displaced families, Tanaka-san explained, "They can't see a way forward."

Indeed, there was increasing concern among officials about the psychological toll of such prolonged uncertainty on evacuees. Many predict that suicide rates will rise as the situation drags on without resolution. A study by the National Institute for Research Advancement (*Sōgō kenkyū kaihatsu kikō* 2013) highlighted hardships endured by survivors during their second year of displacement in temporary housing. Hardships were especially pronounced in Iwate Prefecture, the northernmost of the hardest-hit prefectures, where progress toward reconstruction particularly lagged in municipalities like Kamaishi. The study found that women remain socially isolated without adequate child care or job options. It noted that elderly living alone in temporary housing are under significant emotional

stress. They have been left behind in disproportionately high numbers as young families, eager to settle into new jobs and schools, begin relocating to start their lives elsewhere. Several relief volunteers that I spoke with commented that many elderly expect to live out the remainder of their days in temporary housing. Indeed, figures released by Japan's Reconstruction Agency suggest that delays have begun to endanger prospects for municipal rebuilding. In Kamaishi alone, there has been a 30 percent drop in the number of displaced families intending to rebuild their homes in the city. Commenting on these falling numbers, Iwate University agricultural scientist Hirota Jun'ichi urged officials to speed up the reconstruction process. He noted, "The longer decisions about relocation sites and land reclamation are delayed, more and more disaster victims will give up on rebuilding their homes" ("Hisaisha: jitaku saiken kōtai" 2014).

At the same time, such dismal predictions have not dampened the futuristic inflection of national rhetoric surrounding the rebuilding of Tōhoku's devastated regions. On the third anniversary of the disaster, Prime Minister Abe (Sōri kantei 2014) acknowledged the sluggish pace of post-disaster recovery, even as he reassured the nation: "I am determined that this coming year will be one in which the people of the devastated regions actually perceive reconstruction." Befitting this promise, the term "*fukkō*" (reconstruction) evokes the active and materially tangible work of rebuilding. Yet in the context of Abe's larger comments, its purpose is not just the restoration of well-being to affected communities. Rather, as he continued, "We must make [the 2020 Tokyo Olympics] an opportunity to demonstrate to the world that Tōhoku has achieved reconstruction." On an international stage, Japan's handling of the disaster has been seized upon as an opportunity for its government to model the kind of national resolve needed to restore a global status dimmed by decades of economic malaise. Likewise, the disaster has been appropriated in other forums as an occasion to translate Japan's downturns into global leadership in the arena of sustainable development. At the 2012 United Nations Conference on Sustainable Development in Rio de Janeiro, Japan presented its Future City Initiative, a set of urban design models showcasing principles of low-carbon building, recycling, health care, and disaster preparedness (United Nations 2012). Kamaishi was selected as one of several model cities in this initiative, since its reconstruction offered an opportunity to highlight innovative urban planning that promotes disaster resilience, elder-friendly communities, and environmentally sound construction.

Plans to promote the city as a global model of sustainability overlook the extent to which predisaster Kamaishi grappled with concerns about its future. During Japan's nineteenth-century industrialization and twentieth-century colonial expansion in Asia, the city prospered as a center of steel

mining and metal works. Though its postwar population peaked at around 90,000 residents, falling global metal prices meant the downsizing of the city's iron works and the closing of its mines. For the past half-century, the city has experienced steady demographic and economic decline. By the time of the 2011 disasters, the city's population had fallen to just under 38,000 residents, nearly one-third of whom were over sixty-five years of age.<sup>3</sup> Pre-3/11 Kamaishi was like many cities and towns in Tōhoku—in the throes of radical decline, and without expectations of future growth. The city is one apt example of why officials have adopted reconstruction as their post-disaster benchmark, rather than the related goal of *fukkyū* (recovery), which connotes the return to a previous state.

Indeed, Kamaishi's vulnerability prior to the disaster was intensified by a decade of neoliberal reforms. Designed to promote greater municipal autonomy by streamlining Japan's centralized government, neoliberal decentralization policies have largely entailed measures to reduce state funding to the nation's rural regions. In doing so, they have reversed a redistributive tax system that for decades transferred taxes collected in Japan's populous urban centers to shore up the municipal budgets of its flagging countryside. Proponents of such reforms assume that funding withdrawals will force Japan's municipalities to more effectively and responsibly manage their existing assets. In fact, many frame decentralization as a return to grassroots forms of local democratic governance—a way, according to DPJ politician Katayama Yoshihiro, “for residents to decide regional matters themselves” (Takenaka 2013). Despite such ideals, many rural localities, economically depleted and with large aging populations dependent on social welfare services, struggle to manage their needs on less and less government support.

It is in this context that that fascination with the idea of community self-sufficiency in Tōhoku blossomed after the 3/11 disasters. Mainstream media outlets quickly honed in on themes of communal resilience in their coverage of the tsunami aftermath. Stories of the collective strength and self-control of tsunami survivors—as they organized themselves in makeshift evacuation centers and peaceably shared scant resources—became staples of disaster reporting. The international press seized on such stories as examples of how traditional Japanese values of restraint and *gaman* (perseverance) patterned an orderly civic response to the disaster. In contrast, within Japan such traits are strongly associated with Tōhoku's rural communities, long viewed as repositories of traditions that have faded in prosperous, urban Japan. According to this logic, the history of famine and deprivation endured by Tōhoku's communities, within their rugged terrain and harsh winter climate, has produced a collective spirit of perseverance. As Jennifer Robertson (2011, 122) has critically noted, in

the wake of 3/11 celebrations of Tōhoku's culture displaced anger over an inadequate governmental response that abandoned vulnerable disaster victims to their own devices.

Indeed, the most common expressions of solidarity with tsunami survivors consist of calls for Tōhoku's victims to continue to persevere. As one example, Japan's Ministry of the Interior sought to drum up emotional support for the devastated communities by encouraging groups to endorse the slogan "Gambaru Tōhoku" [you can do it, Tōhoku]. A March 2011 Ministry memo explained, "As time passes after the earthquake and tsunami, a forward-looking energy is starting to return to victims of the disaster. In support, we've begun an initiative to send to the Tōhoku region the message 'You can do it Tōhoku.' ... It's meant to deliver hope to the hearts of Tōhoku's people who met with suffering in the disaster" (Kokudokōtsu sho 2011). The announcement contained a roster of academic, governmental, and business groups endorsing the initiative, as well as links to download "Gambaru Tōhoku" banners in various sizes for printing onto fliers and stickers. In the months after the disaster, such signage became ubiquitous throughout Japan. It was indicative of the tone of cheerful encouragement that has also permeated policy and academic responses to the disaster from within Tokyo.<sup>4</sup> Rooted in earnest optimism that the disaster-stricken regions will overcome their devastation, these responses from the center lack specific recommendations about how Tōhoku might translate its indigenous character into a vital regional future. Instead, Gambaru Tōhoku—in conjunction with the post-disaster slogan Gambaru Nippon (we can do it, Japan)—transformed the devastated region into a beacon of inspiration for Japan to rally strength and solidarity after two lost decades of stagnant economic growth and diminished global standing.

## Disaster and Decentralization

In Japan as elsewhere, decentralization displaces administrative functions and fiscal responsibilities of the state onto local government or civic and private entities. Because it is often driven by an impulse to free up markets from excessive oversight, geographers Rodriguez-Pose and Nicholas Gill (2003, 37) refer to decentralization as a devolutionary trend sweeping the world in relation to aggressive forms of neoliberal capitalism. It requires self-responsible citizens and self-sufficient communities that can maintain themselves with limited state support. The events of 3/11 revealed ambivalent public perceptions of these devolutions in Japan. On the one hand, the disasters proved an opportunity to recognize new sources of

agency and energy in Japanese society. For many social commentators, volunteer relief workers represented the potentials latent in Japan's civic sphere. On the other hand, the disasters highlighted the limits of community self-sufficiency. Volunteers have been among those most critical of calls encouraging disaster victims and their communities to persevere in the aftermath of the tsunami. The nonprofit organization that facilitated my visit to Kamaishi's disaster prevention center addressed this problem in a lengthy flier outlining its guidelines for new volunteers. It included the following advice: "When we don't know what to say, we automatically use words like '*gambatte*' (you can do it) and '*gambarō*' (let's keep trying). But try to use them as little as possible. There are times when people have no idea how to 'keep trying.'"

To illustrate the scope of losses experienced by victims, the organization took volunteers on mini-tours through the disaster zones. It was on one such trip that we followed Tanaka-san through the Disaster Prevention Center, where a makeshift shrine spanned one wall of the center's first floor. It was laden with Buddhist statuary and offerings of incense, canned drinks, flowers, and toys to comfort the spirits of the deceased. Almost two hundred residents, including children from a nearby preschool, took refuge in a cavernous room on the second floor following the 3/11 earthquake. They were following the protocol of a recent neighborhood drill during which residents had practiced assembling at the center. In a tragic oversight, the drill's organizers failed to clarify that the building was not intended for tsunami evacuation.<sup>5</sup> Residents seeking refuge there were caught unaware when water inundated both floors of the building. Of those inside who survived this deluge, a few clung to speakers and curtains mounted on the ceiling of the second floor. The rest were drawn out to sea as the water receded in the late afternoon. As we made our way through the center, Tanaka-san advised us not to linger around stairwells, closets, or other dark, enclosed spaces where bodies had been trapped. He explained that they were likely to be occupied by unsettled spirits that can influence and even possess the living who encounter them.<sup>6</sup> The enduring presence of such spirits within tsunami-devastated communities remains a highly localized effect of the tsunami, long lasting and difficult to resolve through proactive initiative.

In public forums, politicians and activists have worked to derive tidier and more-transportable lessons from the disaster. These often center on themes of collective resilience and personal agency, both highly suited to mandates of decentralized governance. In Kamaishi, the roof of the disaster prevention center overlooks the site of two former junior high and elementary schools. In contrast to the tragic losses at the center, all

six hundred students from these schools survived the tsunami by fleeing upland after the earthquake. As the story goes, older students took younger students by the hand as they ascended the road to the schools' designated evacuation site. They then decided to climb higher, a decision that ultimately saved both students and the residents who followed their example. Dubbed *Kamaishi no kiseki* (the miracle of Kamaishi) in the media, the students' actions have garnered nationwide publicity. The Web site of Japan's Public Relations Office features their story under its post-3/11 banner "Made in the New Japan" as an example of the spirit that Japan needs to forge a comprehensive recovery—both from the disasters and the nation's sustained downturns (Japan Public Relations Office 2013). According to the article, the students prefer to call the event *Kamaishi no jisseki* (the achievement of Kamaishi) to emphasize the role that preparation and self-responsibility played in their survival.

Among the many contexts in which it has been invoked, Iwate's former governor Masuda Hiroya cited the "miracle of Kamaishi" in a 2011 keynote speech at a conference on regional decentralization. For him, the students' actions reinforced the importance of self-motivated agency in twenty-first century Japan. They have been widely praised for their impromptu decision not to sacrifice their own lives by stopping to help the elderly they encountered along their route. His speech juxtaposed the students' agility and self-motivated resolve with the bulky system of centralized governance that worsened the impacts of the disaster. It included a costly centralized engineering and public works juggernaut of seawalls that failed to protect coastal citizens from the tsunami, as well as national supply chains and energy systems instantly disrupted by the disasters (Masuda 2011). In contrast to these, he evoked Kamaishi's "miracle" as a heartening parable about the efficacy of local initiative and flexibility.

Motivated and mobile volunteers have also played a visible role in post-3/11 relief and recovery. Figures collected by coastal volunteer centers show that nearly 1 million volunteers poured into Tōhoku's tsunami-devastated regions to provide relief to victims in the first year after the disaster.<sup>7</sup> Most worked on the coasts of Miyagai and Iwate Prefectures north of Fukushima Prefecture, where fear of radiation exposure inhibited volunteering. Volunteers cleared rubble, shoveled mud, washed photographs, distributed donations, and otherwise busied themselves with tasks that could be accomplished in the midst of the immense devastation. In turn, the outpouring of volunteers took many Japanese by surprise. The term "*muen shakai*" (disconnected society) has become a buzzword in recessionary Japan, summing up concerns that eroding familial support, job instability, and social isolation have come to pervade the character of



national life (Allison 2013). In contrast, the outpouring of volunteers was widely interpreted as an expression of latent forms of social connectedness that many feared had eroded in pre-3/11 Japan.

Yet it is important to note that Japan's volunteer movement was not a purely spontaneous emergence, but also the outcome of over a decade of political reform. It was shaped by policy initiatives to foster greater civic engagement from Japan's citizens so that its central government might retreat from so-called soft arenas of governance, including community building, social welfare, and environmental issues. The potential of volunteers was recognized as a resource to this end after the 1995 Kobe earthquake, a magnitude 7 trembler that killed over six thousand of the city's residents. Amid a sluggish official response, volunteers mobilized to rescue trapped victims, coordinate relief services, and clear debris in Kobe. Acknowledging the potential of volunteer activity, Japan's government quickly issued legislation to promote the expansion of its nonprofit sector in 1998.<sup>8</sup> Such moves parallel similar efforts in other national contexts to cultivate active volunteer and nonprofit arenas as states externalize their welfare functions (see Muhlenberg 2012; Paley 2001). In fact, Japan's disaster volunteer movement was interpreted by some as evidence of the government's reticence to provide timely aid to its most vulnerable margins. In a newspaper profile two months after the tsunami, an American-born resident of Ishinomaki City in Miyagi Prefecture equated the presence of volunteers with the abandonment of the region. He reasoned, "People in Tōhoku can persevere. But, to me, it's manifesting in a negative way. More people need to be angry with the government, and ask 'Why do you prioritize [Japan's] cities? Why aren't you acting?'" (Yamaguchi 2011). He is among many who suspect that Tōhoku's peripheral status played a role in the state's slow response to the tsunami. In this sense, he observed, the disaster has revealed the politically significant slippage between *gaman* (perseverance) and "enduring problems forced on you."

Still others have considered the proactive civic response to the Tōhoku's disaster a vital step in building a more inclusive nation and self-actualized citizenry. Commenting on the volunteer relief effort, social welfare expert Yamasaki Mikiko asserted, "If we don't do this, there is no hope. Every single citizen who participates is weaving hope" (Yamasaki 2011, 36). Rather than a sign of regional abandonment, she envisions that 3/11 volunteerism has boosted awareness of the value of Japan's regions in Tokyo-centric Japan. She continued, "It's always said that the regions are important... Each region has its own lifestyle and culture. But [through volunteering] everyone experiences this personally. So the experience of volunteering becomes reality within each person. It doesn't just pass away, but becomes an inspiration in the way they live, something that cultivates

them as citizens” (Yamasaki 2011, 36). She argues that in allowing many Japanese to experience Tōhoku for the first time under the auspices of providing relief, volunteering has helped them form a sense of their own agency as citizens within a diverse and inclusive nation.

In a broader sense, the disasters sparked the recognition of what sociologist Yamashita Yūsuke (2012, 20) calls “a gap in awareness between Tokyo and Tōhoku.” This gap is a product of the structural inequalities that displaced the costs of Tokyo’s rapacious energy needs onto Tōhoku. The nature of this relationship is a concern of intellectual historian Akasaka Norio, who has long advocated for the recognition of Tōhoku’s distinctive cultural identity and historical role within Japan. In a high-profile editorial published in *Asahi shimbun* on the second anniversary of 3/11, Akasaka, a governmental adviser on reconstruction, posed the provocative question, “Is Tōhoku still a colony?” His question drew attention to an extractive history during which Tōhoku’s population, resources, and economic vitality were drained to fuel the priorities of Japan’s center. In the wake of the disaster, Akasaka asserted that the region still remains bound to Tokyo in a “periphery to core” relationship that “completely conceals Tōhoku.” To end this subordination, he and many commentators have proposed that Tōhoku transform its abundant natural resources of wind, forests, and waves into a self-sufficient, renewable energy system (Akasaka and Oguma 2012, 312). They contend that such plans would foster regional autonomy and self-direction, allowing Tōhoku to devise its own future development priorities.

The logistics of this transformation remain unclear, especially in the wake of the disasters, though an array of popular commentary celebrates the capacity of Tōhoku’s devastated communities to rally. Economist and public intellectual Genda Yuji recalls that when he visited Kamaishi after the disaster, he was shocked both at the level of devastation, and at how “bright and forward-looking” the residents he encountered were in their resolve to “definitely rebuild” (2011, 16). Interviewed as an official adviser on Tōhoku’s reconstruction, he cited the city’s history—its experience overcoming “hardship and setbacks” (2011, 16)—as an explanation for this resolve and as a resource for residents to draw from. Genda has invested a great deal in understanding Kamaishi’s municipal disposition. As part of a *kibōgaku* (Hopology) initiative spearheaded by Japan’s prestigious Tokyo University in the early 2000s, he was among an interdisciplinary group of scholars who adopted Kamaishi as a case study for exploring the existence of hope in recessionary Japan. In their three-volume set of findings, Genda suggested that the group selected the city as a field site because it is an unlikely place to look for hope. He noted that Japan’s center-driven quest for economic growth and efficiency have destroyed Kamaishi’s economy

and propelled radical outmigration. For these reasons, Genda explained, “You’d think that this would be a region that’s lost its hope” (2009, 279). Yet he and his colleagues (2009, 278) found that, despite being “in circumstances in which it’s difficult to believe that [hope] can be realized,” Kamaishi’s residents do have hope for the future.

Their findings that hope can exist even in bleak circumstances were well received in recessionary Japan, mired in stagnant economic growth, falling birthrates, and an aging population. More so, because the hope that Genda and his colleagues discovered in pre-3/11 Kamaishi was not a vague inclination of better times ahead, but an actionable impulse—“a wish for something to come true through action.” As Genda clarifies, “hope without any possibility of realization does not produce well-being. It’s the same as not having hope” (2009, 278).<sup>9</sup> Equally important was their finding that it is within social relationships that hope flourishes as a productive force. In Kamaishi they concluded that while isolation and loneliness dull people’s capacity for hope, residents’ sense of attachment to their homes and community compel them to take action toward realizing a better future (Genda 2011, 17). In post-disaster Japan, Tōhoku’s communities have been celebrated for the durability of their ancestral culture and social bonds—qualities that activists, academics, and politicians expect will propel coastal reconstruction and rejuvenate Japan.

## Recovery Work

Official visions of reconstruction assert a cheerful certainty about the future of Japan’s tsunami-devastated margins. A report by Japan’s Reconstruction Agency promised, “Reconstruction will not just restore [Tōhoku] to its original condition. It is an opportunity to solve problems that grip Japan as a nation, including population decline, aging, and the hollowing out of industries. In building a ‘New Tōhoku,’ we will model for the nation and world ‘a future society with creativity and potential’” (Fukkō chō 2013). In framing the disaster as an opportunity for bold action, the agency channels the assertive vision of Prime Minister Abe. An LDP neo-conservative, Abe has cast the 2020 Tokyo Olympics as an event that will showcase the success of Abenomics, a stimulus and spending package launched in 2013 to jolt Japan out of its recessionary malaise. Internationally, Abe has created waves by advocating for the revision of Article Nine of Japan’s constitution, which prevents its military from engaging in nondefensive operations. This move, along with official statements downplaying Japan’s historical responsibility for the sexual abuse of so-called comfort women by its wartime Imperial forces, has raised concern in Asia and beyond. In-

deed, Abe's unapologetic stance has extended to efforts—supported by neo-nationalists, but opposed by a coalition of anti-nuclear activists—not only to restart domestic reactors following the Fukushima meltdown, but also to export Japan's nuclear know-how to Central and South Asia.<sup>10</sup> The disaster has been appropriated within an aggressive program to marshal domestic strength and relaunch Japan's global status.

Domestically, the mechanisms through which this bold agenda might restore well-being to the tsunami-ravaged coast remain unclear. The success of Japan's bid to host the upcoming Olympics was greeted with joyous fanfare in many sectors. However, critics quickly raised concerns that the building of Olympic infrastructure in Tokyo will draw needed resources away from Tōhoku's rebuilding. It will also deflect attention from ongoing struggles to contain the meltdown of the still-precarious Fukushima power plant. In fact, it is citizens who assumed new risks and responsibilities in post-3/11 Japan. An opaque government response to the Fukushima meltdown left everyday people, armed with scant information, to calculate the dangers they might face from nuclear exposure. Likewise, as Japan's bureaucracy struggled to respond to the disasters, a groundswell of volunteers flocked to Tōhoku's coast to assist victims in the weeks and months after 3/11. Their efforts have been celebrated as evidence of latent civic energies that will speed the nation's recovery from 3/11.

They also reflect an ad hoc response to the disasters that—addressing wide-scale destruction through small-scale and local engagements—mirrors the devolutionary framework of decentralization. When I first traveled to Iwate's post-tsunami coast in June 2011, I did so on a plush, private tour bus deployed by the prefectural government from Iwate's capital of Morioka. It carried a group of volunteers from all over Japan who signed up by following links on Iwate's prefectural Web site to a travel agency donating its resources for relief efforts. Our group emerged from the bus two hours later in a rubble-strewn rice paddy, where we spent the day cleaning out irrigation channels clogged with oily sludge and debris. Such work—dirty, strenuous, and focused on righting small patches within a vast scene of devastation—comprised much of what volunteers did on the coast during the first half-year following the tsunami. Japan's media coverage of their work emphasized buzzwords like *kibō* (hope) and *kizuna* (bonds) to reframe tragedy on the nation's margins as an experience that reconnects Japanese in bonds of shared resolve.

Still, ambiguities persist about the long-term roles of the state and civil society in coastal reconstruction. As volunteer with the nonprofit organization Magokoro Netto in 2011, I joined clean-up crews removing mud and debris from districts of Kamaishi. Two years later, when I returned to volunteer again, the organization had redefined their mission to that of

providing *pasoneru sapotto* (personal support) to survivors in the midst of stalled rebuilding. This time, I joined fellow volunteers creating recreational sites for evacuees in temporary housing. These sites included a community garden just north of Kamaishi where elderly women from nearby housing units tended small plots of vegetables. In the early summer of 2013 I worked on a crew cutting grasses and weeding the perimeter of the garden plots. We turned over an adjacent field with pick-axes to plant sweet potatoes in long raised furrows; students from a preschool across the road would harvest them during the fall harvest festival.

During a break one day, our supervisor and driver Yamaguchi-san gestured toward a nearby settlement of temporary housing units as he explained the need for the gardens: “People are anxious and aren’t leaving their temporary housing; they’re shutting themselves in. We want to make a place they can come when they want to leave, to relax and talk.” A single man in his late thirties, Yamaguchi-san had come to Tōhoku as a volunteer soon after the tsunami and stayed on to work for Magokoro Netto. He oversaw an herb and wildflower garden adjacent to another temporary housing enclave in Kamaishi. The organization hoped that elderly evacuees would eventually assume greater responsibility for the gardens, roles that staff contended would boost their morale and outlook on the future. In the meantime, volunteers weeded and watered them, hauling buckets from nearby irrigation channels to keep them alive.

Volunteers embraced such strenuous work as a temporary alternative to conventional career and life paths that are increasingly scarce and insecure in recessionary Japan. Many were long-term visitors at Magokoro Netto who boarded at the center in communal dorm rooms equipped with donated bedding for as long as they could afford to feed and clothe themselves. One young man was on a gap year before starting university. A woman in her thirties had a lucrative job as a nurse in Indonesia at the time of the disaster, but felt compelled to return and contribute to the relief effort. Another young woman working as a cook in Tokyo during 3/11 explained, “At the time of the earthquake ... there was a sense that we needed to keep working precisely because of the disaster. But I had such a strange feeling watching things up here. I was on a three-year contract then, but it ended. Even among free people, I am especially free.” Another prominent category of volunteers free from the demands of conventional work consisted of retired men with families in central Japan. I volunteered with two retirees from Tokyo, who both spent one week each month at the center. One described his work there to me as a kind of *asobi* (play), an absorbing occupation that he found pleasurable satisfying after a career as a white-collar, salaried worker. Though his characterization of volunteering as play was designed to communicate modesty about his contri-

bution, it also aptly summed up the personal satisfaction that long-term volunteers derived from the engrossing physical labor of digging, cleaning, and building.

Short-term volunteers took overnight buses from Tokyo to spend one or two days at the center, before returning home or traveling on to sight-see elsewhere in Tōhoku. Every workday at the center ended with a group meeting during which the organization's staff made announcements and volunteers commented on their experiences or the communal living situation. At the end of each meeting, departing volunteers stood to offer some reflections on their stay. Most observed that their perspective of the disaster had changed. They echoed that “to stand on the actual site” and “see with their own eyes” the aftermath of the tsunami helped them understand what they could not via their television in Tokyo. In fact, volunteer coordinators argued that the continued traffic of visitors from central to northeastern Japan was valuable because it communicated to victims that they had not been forgotten. One NPO staff member explained, “In coming to the disaster area, you give strength to the victims [*hisaisha*]. They see that volunteers are still coming, from Japan and all over the world, to support us.” Likewise, he encouraged us “to greet the victims with spirited ‘good mornings’ and ‘hellos,’ and talk to them.” Following his advice, we greeted the elderly grandmothers tending their garden plots and made purchases from shopkeepers who had restarted their businesses in prefab shops set up to serve evacuees and recovery workers. Yet there was little chance for most volunteers to have substantive exchanges with local residents. As our small groups traveled through the quiet disaster zone to and from our worksites, evacuees moved around us in their daily routines of school, shopping, and work.

One notable exception was a gregarious elderly man who visited the community garden site nearly every day and chatted with us during our breaks. During one conversation about the costs of reconstruction, he remarked in an inexplicably cheerful tone, “They’re waiting for us to die.” After two years of inaction, he suspected that government did not intend to rebuild the area. Rather, he explained, they would continue to delay until the young families had left the region and the remaining elderly died off. His comments are expressive of the frustration felt by many survivors, their sense of abandonment and alienation from the reconstruction process. In municipalities up and down Tōhoku’s coast, residents have expressed concerns not just about the pace of rebuilding, but also about their exclusion from its planning. One particularly thorny issue has been the costly replacement of seawalls and breakwaters that instilled a sense of security in coastal residents, but failed to protect them on 3/11. Kamai-shi was a particularly egregious example: the sixty-foot-deep breakwa-

ter, which took thirty years and \$1.5 billion of public funding to complete, crumpled under the first tsunami.<sup>11</sup> Evaluating such failures, planners and policy-makers initially emphasized reconstruction as a chance to abandon the hubris of centralized development and consolidate the coast into disaster-resilient smart communities. Along with many residents of Kamaishi, they were dismayed when the central government quickly and quietly approved plans to rebuild the breakwater. It has proven easier for municipal planners to secure government funding for such construction projects than for more-innovative but less-construction-intensive plans. Thus, the city's reconstruction plans—released on their municipal Web site (Kamaishi shi 2014a)—detail massive engineering and earthworks projects that will consolidate districts that are most vulnerable to future tsunami and rebuild them atop elevated plains.

In contrast to the immensity of such plans, NPOs such as Magokoro Netto envisioned their purpose as that of easing the tension and isolation experienced by evacuees. The small recreational spaces they maintained through volunteer effort were designed to provide evacuees with temporary respite. Many volunteers were motivated by the idea that their efforts to attend to the feelings of evacuees also served as an intervention amid the larger structural deadlock that gripped the coast. This was the case with one young group of volunteers who visited Magokoro Netto: newly hired central government employees sent by their respective ministries from Tokyo in small groups to experience the disaster aftermath. I overlapped for several days with one such group during my time at the center. On the night before they departed, they shared their earnest personal reflections on what they'd seen. Nearly all noted that their visit had made them aware that Japan's government must better understand what life is like in the tsunami-devastated regions. What is needed, several observed, is not just large-scale construction projects, but small human gestures to improve the circumstances and spirits of evacuees. Likewise, many volunteers and organizers saw their work as a direct form of human-to-human engagement that can break through the debility miring Kamaishi and other coastal localities.

Representing an engaged and self-motivated civic sphere, volunteers and nonprofit relief organization comprise one element of a decentralizing Japan. They are not the risk-embracing, competitive individuals normally associated with neoliberal ideals. Rather they reflect what Illana Gershon (2011, 539) characterizes as a ubiquitous form of neoliberal agency that envisions people as repositories of talents to be mobilized and directed. In what she calls "a misrecognition of scale" (2011, 541), a similar logic extends to communities, that, according to the mandates of decentralization in Japan, can mobilize their energies and resources to support their

own autonomy and self-sufficiency. Prior to Tōhoku's disaster, questions about the future of aging and depopulating regions unable to survive the competitive climate of decentralization abounded. Such questions are even more critical in the context of post-disaster reconstruction. As the group of young government officials said their farewells at Magokoro Netto, one young man enthused, "Instead of just doing what we can, we need to do things we can't yet imagine." This earnest statement, expressive of a sincere desire to see the coast reconstructed, also hinted that this outcome was a possibility so difficult to envision that it required a flight of imagination. Such hopeful optimism that tsunami-devastated communities can sustain themselves on their own resolve and the support of volunteers soothe anxieties in Japan's center, but does little to ensure a viable future for Tōhoku's coast.

## Conclusion

In the aftermath of 3/11, academics, pundits, politicians, and activists expressed widely shared expectations that the disasters in all their scale and fury would spark needed political and social change in Japan. Such expectations derive from seeing the catastrophes as revelatory events that exposed the troubled legacies of Japan's centralized high-speed growth era—including entrenched regional inequalities and energy insecurities long masked by Japan's prosperity. The idea that catastrophes are "revealing crises" that lay bare features of social and political order has become a cornerstone concept among disaster scholars (Garcia-Acosta 2002, 50; Oliver-Smith 1996, 304). In Japan, 3/11 sparked a mood of critical reflection on the costs of centralization. It prompted continued support for decentralization as a strategy for producing resilient local economies, self-sufficient regions, and a stronger and more sustainable nation. In fact, the Tōhoku disasters have highlighted unlikely consensus between neoliberal market enthusiasts eager to streamline the bulky apparatus of Japan's central government, and advocates of a more inclusive and more diverse national model in which Japan's regions set their own autonomous priorities of sustainable development.

Given the sluggish pace of recovery on Tōhoku's coast, I have argued here that the revelations associated with the 3/11 disasters remain detached from the logistics of reconstruction. Two years after Kamaishi City's tsunami, groundbreaking had yet to begin on the massive engineering and construction projects that will be the first stages of a long-term rebuilding process. As residents, including a growing ratio of elderly survivors, endure extended delays, volunteers continue to visit the city to



work on small-scale relief projects that aim to boost the spirits of evacuees and provide them with *kokoro no kea* (heart-mind care). Meanwhile, reconstruction has been appropriated in diverse spheres as a rubric for discussing visions of Japan's future. Economist Fujita Masahisa (2011) argues that reconstruction provides an opportunity to create an updated "socio-economic system which values the knowledge of each individual, and which has more rich diversity and autonomy than the present." Like many commentators, he envisions Tōhoku's recovery from 3/11 as an important step in building a more resilient, flexible, and innovative nation. As I have shown here, Japan's disaster will also provide long-term insight into how a decentralizing state functions in the aftermath of catastrophe. This chapter suggests that as it devolves risks and responsibilities, decentralization will create new constellations of vulnerability in an era marked both by intensifying disasters and global economic precarity.

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## Notes

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1. The Reconstruction Agency was created nearly a year after the disaster in February 2012 to replace a temporary Reconstruction Headquarters established in June 2011. Despite the frequency of earthquakes, tsunami, typhoons, volcanoes, and

other natural catastrophes in Japan, there is no permanent agency to manage disasters. The Reconstruction Agency has a ten-year mandate.

2. Here I follow Japanese practice by listing the names of Japanese authors with surname first, followed by given name.
3. The Tōhoku disasters will serve as important case studies for understanding the relationship between aging and catastrophe. Preliminary reports suggest that over half of all tsunami fatalities were elderly, and that large numbers of elderly survivors presented enormous challenges for those providing relief. At the same time, the social resources of the elderly served as strengths in the wake of the disaster.
4. As one rare counter-example, sociologist Oguma Eiji (2011) has broached sensitive questions about the prospects of Tōhoku's future.
5. After an investigation into deaths at the disaster prevention center, located in Kamaishi's Unosumai District, the city released a formal report (Kamaishi shi 2014b), and held information meetings for families of those who perished in the center.
6. In addition to washing away thousands of bodies, the tsunami destroyed family graves, Buddhist household altars, and local crematoriums. These sites are considered vital to the ritual care needed to help the deceased attain a comfortable afterlife.
7. These figures are compiled in a report by Zenkoku shakai fukushi kyōgikai (2012, 20). The report also notes the difficulty of gathering accurate statistics on volunteers, given that some reported to different centers or made multiple trips to the disaster site.
8. See Avenell (2012) for further analysis both of the 1995 volunteer response to Kobe and the Japanese government's active facilitation of post-3/11 volunteering.
9. In Genda's formulation, hope produces action that might lead toward a better future. This future orientation gives hope utility as a force productive of deliberate social change, but distinguishes it from other scholarly visions of hope. For example, North American cultural theorist Brian Massumi situates hope firmly in the present, "separated from concepts of optimism and pessimism, from a wishful projection of success" (Massumi 2003, 211).
10. Soble (2013) and Kingston (2014) critically assess this nuclear agenda.
11. For further details on this engineering debacle, see Onishi 2011.

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# Expert Knowledge and the Ethnography of Disaster Reconstruction

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ROBERTO E. BARRIOS

For social scientists, disasters are not natural, unavoidable, or discrete events (Bankoff and Hilhorst 2004; Oliver-Smith and Hoffman 1999). Disasters, instead, are processes that (a) extend in space and time beyond the perceived boundaries of an affected community, (b) are engendered through policies and everyday practices that enhance the destructive and socially disruptive capacities of geophysical phenomena, and (c) have effects that are inequitably distributed along socially produced race, class, and gender differentiations. In today's world, most disasters occur within the boundaries of nation-states and contemporary ideals of modern governance (Foucault 1991) uphold state governments as partly responsible for assisting disaster-affected populations recover from catastrophic events. In this context, people who live through disasters routinely find themselves interacting with representatives of state agencies that are charged with the task of implementing and monitoring reconstruction programs.

State organizations, however, are not the only agencies involved in post-disaster recovery. Disasters, by definition, overwhelm the capacity of a given community, population, or nation to respond to a catastrophe's conditions of social disruption, resulting in a situation where affected community members, civil society leaders, and elected officials request or welcome assistance from international relief agencies and nongovernmental organizations (NGOs). Whether it is the staff of governmental institutions, international aid agencies, or NGOs, disaster-affected communities often find themselves interacting with a number of institutional actors who claim expertise in disaster recovery (e.g., aid program managers, architects, urban planners, emergency managers). While the majority of these latter actors usually approach disaster-affected communities with the best

of intentions, the ways they define and operationalize best practices and recovery can articulate a number of inherent assumptions about the natures of people, communities, and well-being that are not shared by disaster survivors. Furthermore, the rigid imposition of these assumptions on the part of recovery experts can actually perpetuate a disaster's social effects, leading to a disaster after the disaster.

Over the course of sixteen years of ethnographic research on disaster reconstruction, I have documented how the assumptions about the natures of people and communities on the part of disaster recovery experts are products of unique cultural histories and therefore culturally subjective; on the other hand, recovery experts often uphold these assumptions as matters of fact, applicable and relevant anywhere regardless of cultural context. In this chapter I review a number of anthropological insights concerning the application and production of expert knowledge in disaster reconstruction. These insights are the result of two ethnographic studies I conducted in Honduras after Hurricane Mitch in 1998 and in New Orleans following Hurricane Katrina in 2005.

A number of anthropological studies of disaster have recognized that policies and practices associated with neoliberalism<sup>1</sup> on the part of government agencies and non-NGOs can contribute to environmental degradation and the creation of stark socioeconomic disparities, two key factors in the political-ecological production of disasters (Gunewardena and Schuller 2008). Other studies have also focused on the way expert knowledge and knowledge-making practices can function as means of exercising power over disaster-affected populations and the production of social inequities in post-disaster contexts (Barrios 2010; Button 2010; Fortun 2001). Gregory Button, for example, has shown how the work of scientists working for either liable corporations or government agencies sometimes mobilize the knowledge they produce to undermine demands on the part of disaster survivors for reparations and accountability. Button's work demonstrates how scientists, executives, and government officials mobilize scientific expertise to produce uncertainty in terms of toxic exposure, duration of impact, and spatial extension of affected areas.

In this chapter I will explore other ways in which the relationship between expert knowledge and governance (i.e., reconstruction policies, state-sanctioned planning) plays out in disaster reconstruction contexts. I will do this by summarizing two ethnographic studies I conducted in southern Honduras after Hurricane Mitch from 1999 to 2003, and in New Orleans after Hurricane Katrina from 2005 to 2014. These two studies show how disaster reconstruction is a moment when affected populations interact with government officials and aid program managers who attempt to assist them through techniques of governance such as bud-

gets, fiscal cost-benefit analysis, and modernist and neoliberal principles of urban planning. These studies also illustrate how policies on the part of governments, expert planners, and aid organizations that rigidly uphold technoscientific knowledge as a nonnegotiable foundation of reconstruction practice can actually perpetuate and enhance the deleterious social impacts of disasters. Finally, these cases also shed light on the kinds of practices among disaster-affected populations, aid program managers, and government officials that can help adapt reconstruction programs to the social and environmental particularities of disaster-affected localities. These practices include

1. Recognizing acts of resistance and political insubordination on the part of disaster-affected populations as critical elements in the adaptation of reconstruction aid to the social and environmental specificities of disaster-affected sites, and
2. The importance of flexibility on the part of aid program managers, government officials, and expert planners charged with the task of assisting disaster-affected populations, especially when using the techniques of governance listed above (i.e., budgets, modernist and neoliberal principles of disaster recovery, fiscal cost-benefit analysis) to devise or apply reconstruction policy.

The chapter concludes by emphasizing the importance of acts of resistance on the part of disaster survivors to policies and arrangements of disaster aid they find undesirable as critical actions that can help inform NGO program managers and government officials on how to adapt recovery aid to the cultural particularities of disaster-affected sites. As the case studies featured in this chapter will demonstrate, the negotiation of disaster aid and recovery policies in Honduras and New Orleans was routinely cut short by expert planners, NGO program managers, and government officials when they invoked fiscal cost-benefit analysis, principles of modernist and neoliberal urban planning, and budgets as nonnegotiable and self-evidently relevant mechanisms of disaster reconstruction governance. The case studies also demonstrate that, on occasions when NGO program managers were willing to demonstrate flexibility in their use of expert techniques of disaster governance, they were able to successfully negotiate reconstruction projects that were meaningful and useful to disaster-affected communities. Consequently, I argue that such flexibility does not threaten disaster reconstruction with chaos and inefficacy but is an important element of negotiating reconstruction assistance with those who are most affected by catastrophes and in greatest need of assistance following a devastating event.

## Case 1: Honduras after Hurricane Mitch: Modern Urbanism and the Budget as Technologies of Governance

### *Two Communities, Two Outcomes*

Hurricane Mitch struck Honduras in late October 1998, causing the deaths of at least six thousand people and the disappearance of eight thousand others, destroying more than 35,000 homes, and claiming 70 percent of the country's GDP. The disaster was the result of more than five hundred years of mining, logging, agricultural, and national development practices that resulted in the mismanaged growth of urban areas, widespread deforestation, and the alteration of the region's hydrology.

My research in Honduras focused on the construction of two housing resettlement sites: Limón de la Cerca and Marcelino Champagnat, which were located seven kilometers away from the city of Choluteca. What interested me about these two sites was that, despite the common origins and livelihoods of their residents before Mitch, the two resettlement communities demonstrated dramatic differences in their reconstruction outcomes three years after the storm. Limón (which was the largest housing reconstruction site in the country's southern region) was plagued with violence and social fragmentation. Over the course of its brief history, the site had become renown as a place of street-gang activity, where transnational gangs known as *maras* operated with impunity and victimized other residents. Limón also featured the construction of 1,200 homes whose spatial design and structural qualities did not suit the social and environmental particularities of the region. Homes featured a single 25-square-meter room design with no internal divisions. Displaced Cholutecans living in this site had a median household size of seven residents, and the small houses proved to be unsuitable for families with such numerous members. The structures were located on diminutive land parcels (120 square meters), which limited the possibility for future expansions. Houses lacked structural reinforcements like concrete columns on their corners or supporting cross-beams. The structures also featured haphazardly attached tin roofs that were repeatedly blown off during heavy thunderstorms. Over the course of ethnographic interviews, residents reported the severe injuries or deaths of family members and neighbors because of the housing structures' inadequate construction. Finally, Limón was plagued by the incompleteness of important infrastructural projects including community electrification.

In Marcelino, in contrast, street-gang activity was curtailed by a robust network of grassroots community organizers. These community organizers also effectively negotiated housing and infrastructural reconstruction programs with donor organizations and representatives of foreign gov-



ernments. Two years after the storm, Marcelino featured the construction of 330 housing structures whose spatial and structural design residents found suitable to their daily habits and local environment. Homes had larger floor plans (40 square meters) with internal partitions separating sleeping, dining, and cooking areas; homes also had concrete columns and cross beams, which made the structures more resilient to environmental hazards like heavy thunderstorms and earthquakes. Homes were located on land parcels that were more than twice the size those of those in Limón, allowing for the planting of house gardens and fruit trees, and allowing for small-animal husbandry (pigs and chickens), which were common activities among working-class Cholutecans. The community also counted with the timely completion of infrastructural projects such as electrification, which residents boasted as being the best public lighting project in southern Honduras.

My ethnographic research revealed that the majority of residents who came to live in Limón and Marcelino lived in twenty-two different *barrios de clase obrera* (working-class neighborhoods) of Choluteca prior to the disaster. In the storm's immediate aftermath, these disaster survivors sought refuge in the city's schools and churches and remained living there for three months. Due to continued delays on the part of local officials, in January 1999 disaster survivors who had a history of participation in civil society organizations decided to take a proactive role in the recovery process and began an independent search for a resettlement site. This group of residents picked the locality of Limón de la Cerca due to the site's low land value, which would allow for the distribution of 297 square-meter land parcels, a size they considered adequate for the daily practices of displaced *clase obrera* Cholutecans. The city's mayor, however, perceived the proactive role of these disaster survivors as a political threat, and he proceeded to use reconstruction aid (houses, land parcels) as political gifts to secure the alliance of some grassroots organizers and alienate the most proactive leaders. The politicization of reconstruction aid led to a schism among disaster survivor organizers, with those who accepted the mayor's gifts remaining in Limón, and those who were ousted founding a new resettlement community, Marcelino Champagnat. From this point on, the two resettlement sites followed dramatically different paths, with one leading toward mitigation of the disaster's effects (Marcelino) and one leading toward prolonged vulnerability (Limón).

In Limón the cooptation of disaster survivor leadership created a relatively docile population whereas, in Marcelino, proactive grassroots organizers became renown for resisting or rejecting reconstruction projects they found unsuitable to their social and environmental needs. As we will see below, Limón's docile leadership translated into a social landscape

where recovery experts could implement reconstruction projects and project assessment instruments irrespective of the voices of disaster survivors who clamored for different arrangements of reconstruction aid. In Marcelino, in contrast, acts of insubordination and resistance on the part of disaster survivors became a key element in the negotiation of reconstruction projects into arrangements they found meaningful and useful.

### ***Land Parcel Distribution: The Implicit Individualism of Modernist Planning***

In Limón, land parcel distribution was organized by a municipality-appointed land committee. This committee invoked principles of modern governance such as equity and transparency in its distribution of land parcels among disaster survivors, and used a raffle as the mechanism for ensuring these principles. Numbers were assigned to each land parcel, and disaster survivors were given the right to purchase the land parcel whose number they drew. Through this distribution of reconstruction resources (land), the municipality land committee made a number of assumptions about the nature of people, communities, and social well-being that did not apply to Choluteca's displaced. Residents of Cholutecan working-class neighborhoods relied on each other for assistance with child care and household security. Working mothers were accustomed to leaving children to the care of trusted neighbors for periods as long as eight hours, and residents were known to keep an eye on each other's houses to prevent burglaries. What is more, knowledge of one's neighbors and one's neighborhood residents was a key strategy against delinquency and violence. As trusted interlocutors taught me, the most effective strategy against becoming a victim was to know the identities of gang members, who were less willing to assault someone who knew them. The land parcel raffle (which was selected as a means space distribution by the municipality-appointed land committee under the justification that it would ensure transparency), in contrast, ignored the importance of these relationships among disaster survivors in the creation of a sense of place, community, and recovery. The random land distribution spatially separated long-time neighbors and created conditions of anonymity among Choluteca's displaced. These conditions became a fertile ground for the proliferation of street-gang activity.

The municipality-appointed land committee also relied on a national engineering firm to devise a master plan for Limón de la Cerca. The master plan articulated a common convention of modern urbanism, the idea that the homogenous and standardized regimentation of space can produce socially normalized people (although the anthropological litera-

ture demonstrates that such attempts at normalization are never fully accomplished). The master plan for Limón regulated the reconstruction site's space through the meticulous division of land parcels along neat rows, which collectively created a diamond shape. At the center of the diamond-shaped community was a health center and an elementary school. Two years after the storm, municipality annual reports heralded photographs of neat rows of houses as definitive proof that Limón was following a predictable linear path toward development and mitigation. My ethnographic research, however, suggested the experiences of disaster survivors differed significantly from the municipality's representation of the reconstruction, and that the social and material conditions taking shape in Limón made it exceedingly difficult for the site's residents to experience a sense of recovery.

### ***Housing Construction Programs in Limón and Marcelino***

Once Limón residents were randomly assigned land parcels, they were assisted in home construction by one of several NGOs working at the site. In Limón, one of the primary aid organizations involved in housing reconstruction was Samaritan's Purse, a United States-based evangelical NGO that operated with funds partially provided by the United States Agency for International Development (USAID). Architects contracted by Samaritan's Purse proposed the construction of the structurally unsound, single-room, 25-square-meter structures described above. The minimal houses were justified under the logic that smaller houses would benefit a larger number of disaster survivors. What was interesting about the case of Limón was that construction work was the most frequently reported occupation among adult male residents (27.3%), meaning that a significant proportion of disaster survivors were familiar with construction techniques. These residents were quick to notice the design flaws of the proposed houses, and requested Samaritan's Purse architects to redraft their design to include concrete columns and cross-beams. Samaritan's Purse architects denied these requests, citing reasons of cost-benefit and claiming that such construction techniques were too costly to be accommodated within the project budget. Still, Limón residents insisted that the construction of columns and cross beams would not increase the costs in terms of materials, but would do so in terms of required labor, which was provided by the disaster survivors themselves. Nevertheless, the invocation of cost-benefit analysis by professional architects as a nonnegotiable technique of reconstruction governance prevailed and the requests on the part of disaster survivors for alternative construction techniques were denied. Hence, the negotiation of recovery resources into an arrange-

ment that made sense to disaster survivors was impeded, leading to the construction of housing conditions that prolonged the vulnerability of Limón's residents.

In Marcelino, in contrast, relationships between NGO project managers, architects, and disaster survivors took a dramatically different form. When presented with similar minimalist housing designs by the NGO CARE, proactive community organizers were quick to reject the plans, stating that they would rather remain living in tents than accept an aid package unsuitable to their living habits. In this instance, CARE project managers initially cited reasons of cost-benefit for proposing minimalist designs similar to those of Limón. The assertive stance of Marcelino residents, however, urged CARE program managers to reevaluate their project budget. In this case, the budget was not treated by project managers as a nonnegotiable element of disaster reconstruction, but rather as a tentative plan that could be modified to fit disaster survivor requests. CARE project managers decided to cut some of their costs by doing away with what they considered to be redundant expenses on highly paid personnel like architects and construction supervisors. Instead, CARE project managers borrowed a plan for larger houses with internal partitions and supporting columns that had already been drafted for the nearby community of Renacer Marcovia, and relied on qualified disaster survivors to fill in the construction supervisor positions. In this case, CARE project managers demonstrated flexibility in their use of disaster reconstruction management techniques (the willingness to redraft the budget and make accommodations to disaster survivor demands); their flexibility was key to achieving long-term disaster mitigation.

### ***The Budget as an Instrument of Disaster Reconstruction Governance***

Beyond these two reconstruction sites, budgets were also used by USAID as an expert means of tracking and evaluating reconstruction projects. In this case, reconstruction programs were said to be successful if the allocated funds were spent on their designated purposes at specific points in time. This emphasis on the use of the budget as an instrument of assessment, however, marginalized other concerns, such as ensuring that housing reconstruction projects be relevant in cultural and environmental terms. According to USAID project evaluators, Limón de la Cerca was a shining example of successful reconstruction: Project funds were spent on time on those services and materials they were allocated for. Still, the voices and experiences of Limón residents argued otherwise. Unfortunately, this emphasis on fiscal accounting obscured rather than documented the politicized relationships between disaster survivors, local

government, and NGO program managers that shaped Limón de la Cerca and Marcelino Champagnat as dramatically different reconstruction communities. As Emel Ganapati and Sukumar Ganapati have shown (2009), this is not an isolated case of the use of budgets and financial cost benefit as a means of assessing development programs, but rather is an example of a more pervasive expert practice of disaster reconstruction.

## Case Study 2: New Orleans after Hurricane Katrina

In 2005 the city of New Orleans suffered the flooding of 80 percent of its area. This flooding was caused by the failure of flood protection systems that were inadequately constructed or maintained by the U.S. Army Corps of Engineers and its subcontractors (Andersen et al. 2007). As an ethnographer of post-disaster reconstruction, my research has focused on the different ways government officials, expert planners, developers, and disaster survivors of various socioeconomic backgrounds defined and envisioned community, social well-being, and recovery; the ways these different social actors negotiated (or did not negotiate) these different positions; and the stakes of these differences for the city's long-term reconstruction.

When Hurricane Katrina struck the U.S. Gulf Coast, New Orleans was already facing a number of social challenges. During the four decades preceding the disaster, the city had experienced the loss of more than 200,000 residents, taking the population from nearly 650,000 residents in 1960 to 438,000 in 2000 (Campanella 2006). This demographic contraction began in the 1960s following the desegregation of public schools and public housing. Many residents who self-identified as white left New Orleans Parish for the suburban cities of Chalmette and Metairie to avoid living in contiguity with working-class African Americans. The racial motivations behind New Orleans' urban-suburban flight were also nuanced by the meanings of life in suburbia (the imagined escape from inner-city problems, the association of modernity with suburban life) and federal subsidy programs meant to encourage home ownership, which drew city residents to outlying suburban areas (Schuller and Thomas Houston 2006). At the same time, many college-educated middle-class African Americans left southeastern Louisiana in search of employment opportunities, as many still faced discrimination by would-be employers (Jackson 2011). In the mid-1980s the city also faced economic hardship as major oil companies moved their operations to nearby Texas, leaving tourism as one of the city's major sources of revenue and employment. The tourism economy, in turn, relied on low-wage labor, systematic underemployment, and public

services like housing subsidized by federal or city government to capitalize on its investments (Sorant et al. 1984).

Together, these economic and demographic trends had a number of impacts on the city. The diminished population translated into a lowered tax revenue. Louisiana is a state renowned for its high tax breaks and tax credits, meaning less money from industry is reinvested in essential public services like education, public health, and housing. The city of New Orleans also featured low property taxes. Additionally, the post-desegregation suburban flight meant many jobs and services were lost in the inner city while they increased in the suburbs. Finally, the exodus from the city left a high number of blighted and abandoned properties throughout central neighborhoods.

The result of these trends was the creation of a large underemployed and underpaid working-class population, a significant proportion of which self-identified as African American. These conditions of social and economic marginalization led to the growth of the informal drug economy in New Orleans. At the same time, city and federal housing agencies systematically neglected large public housing facilities, with the intention of letting these structures deteriorate to the point where demolition and redevelopment became necessary. In New Orleans and its suburbs, residents who remained ignorant of the structural impacts of racism and the capitalist tourism economy on working-class African Americans relied on racist explanations for making sense of the large underclass that had formed over the course of the city's history. When Katrina struck, many residents saw public housing projects as dens of violence and criminality, although others insisted on the importance of these structures as housing for the city's indispensable, yet historically exploited, African American working class.

Despite their socioeconomically marginalized status, working-class African Americans developed a number of rich practices for reshaping the city's urban space from a landscape of racialized difference into a landscape of identity-making. These practices included the African American carnivals of Uptown and Downtown Super Sunday and Second Line Parades that run from August to May (Breunlin and Regis 2006; Lewis and Breunlin 2009; Regis 1999). As George Lipsitz (2006) has noted, in the face of limited spatial and social mobility, working-class African Americans developed profound attachments to place, and produced the places they lived in through the cultivation of social relations with friends, relatives, and neighbors.

The mandatory evacuation of the city during Katrina's aftermath created a context in which local government officials, federal agencies, and gentrifying resident constituencies imagined New Orleans as a space

wiped clean of its pre-disaster social challenges and open for new imaginings of the city's future. Many of these visions of urban recovery, however, did not foreground the fundamental contradictions of the capitalist tourism economy, the state's tax-break system, or the racial dimensions of the city's urban-suburban flight as the root causes of New Orleans' social challenges. Instead, many of the recovery plans, policies, and practices on the part of city government proposed the conceptualization of the city's urban space as a mechanism for the investment, circulation, and reproduction of capital: a technoscientific solution for what was ultimately a sociopolitical problem. As we will see below, these visions of urban recovery articulated a number of implicit assumptions about the natures of people, community, and social well-being that clashed with the ways many New Orleanians envisioned recovery. Additionally, these assumptions were characterized by a number of contradictions that inhibited the addressing of New Orleans's principal social challenges before and after Katrina.

### ***Spaces of Neoliberalism in Disaster Reconstruction***

In the immediate aftermath of the disaster, Mayor C. Ray Nagin organized a panel of developers, planning experts, and local government officials and charged them with the task of devising a recovery plan for the city. This plan was eventually titled *Bring New Orleans Back*. As part of this initiative, local real estate developer Joe Canizaro and the Urban Land Institute, based in Washington, DC, were assigned the task of drawing a new land use plan for the city. The Urban Land Institute proposed that New Orleans should have a smaller footprint in its future and that there should be a moratorium on the reconstruction of the most heavily flooded areas (which should be allowed to revert into green space). This proposal met with widespread opposition on the part of residents from devastated neighborhoods like the Lower 9th Ward and Broadmoor and the greater New Orleans community at large because it ignored the importance to city residents of neighborhood identity and glossed over the fact that catastrophic damages were caused by the technological failure of the levee system and not because of residents' settlement patterns.

At the same time, the Housing Authority of New Orleans (HANO) and the United States Department of Housing and Urban Development (HUD) took advantage of the city's mandatory evacuation to expedite their plans for the demolition and redevelopment of major public housing projects (Breunlin and Regis 2006). In the immediate aftermath of Katrina, HANO and HUD ordered the closing of major public housing projects and planned for the demolition and redevelopment of 50 percent of these units, the majority of which had not been made uninhabitable by the storm's flood-

ing. The city and federal housing agencies assured the public that these redevelopments would feature a one-to-one unit replacement, but this replacement was also accompanied by privatization as individually owned mixed income housing. Only a fraction of total units were to remain as public housing, while the rest would be sold through various programs as mixed income housing. Residents of New Orleans had mixed opinions about the redevelopment of public housing. Some public housing residents and nonresidents saw this as a welcome change, while others worried that the redevelopment would lengthen the time many working-class New Orleanians remained displaced and that few pre-Katrina residents would be able to successfully navigate the bureaucracy of home ownership programs. These latter residents insisted on the immediate reopening of undamaged units and the facilitated return of public housing residents.

The debate over the future of the city's public housing would carry on to two recovery planning processes that superseded Mayor Nagin's Bring New Orleans Back plan: the Lambert-City Council and Unified New Orleans Planning initiatives. Critiques of the Bring New Orleans Back plan for lacking broad-based citizen participation resulted in the organization of these two planning processes, which were required to include a participatory element by the U.S. Congress prior to the disbursement of recovery funds. These planning initiatives were officially represented by local government officials and organizers from major philanthropic organizations as bottom-up processes in which all city residents, regardless of their socioeconomic backgrounds, could be the collective authors of the city's reconstruction directive. These planning processes, however, did not function in this way in practice.

Although many residents continued to insist on the importance of the expedited return of public housing residents, who they saw as an integral part of the city's human landscape, professional architects hired as expert planners defended HANO and HUD's decision as a *fait accompli*. Most importantly, professional planners beckoned residents to think about the city as a space of capital and energy investment, and not as a landscape of social relations among people who were shaped as unique persons over their histories of life experiences in New Orleans neighborhoods. During one of the Lambert-City Council planning meetings, for example, architect Bernard Zyscovich rejected residents' requests for the immediate reopening of undamaged public housing, saying, "Recovery plans need to be sold in terms of their investment potential, the federal government is much more willing to invest 5 dollars when it is going to get 25 dollars in return, than 5 dollars in mere social services." In this statement, Zyscovich articulated the implicit assumption that all elements of urban plans must uphold a logic of capital investment and reproduction (neoliberalism). In this in-



stance, Zyscovich mobilized a neoliberal principle of disaster recovery as a nonnegotiable tenet of disaster recovery and, in doing so, shut down an important negotiation of reconstruction policy with New Orleans's most affected population, effectively enhancing and prolonging their vulnerability through the continued closure of public housing.

It is also noteworthy that Bernard Zyscovich represented public housing as a "mere social service" that allegedly did not multiply capital and was therefore an unreasonable request on the part of city residents. Still, it could be argued that public housing was an integral part of the capitalist tourism economy of New Orleans, as the residents of public housing composed a significant proportion of the low-wage service sector from whose labor the entertainment and hotel industry derived its profits, and whose consumption of food, clothing, and basic commodities also supported local retail businesses.

Beyond public housing, New Orleans witnessed other disinvestments on the part of federal and city governments from the provision of public services that were so critical to the survival of low-income households. Charity Hospital, the city's single public hospital, has remained closed since the storm. While there are plans for a new Louisiana State University Veteran's Administration medical research complex, the new teaching hospital will not be a public facility open to all economically disadvantaged New Orleanians, as Charity was.

This pattern of disinvestment from public services was also followed by the staff of the Office of Recovery and Development Administration (ORDA), an office created during the administration of Mayor Nagin, initially directed by Ed Blakely, and charged with the implementation of recovery plans. Over the course of ethnographic interviews, ORDA staff insisted that the optimal way to help a city recover from a disaster was to use public funds to encourage out-of-state investment with the hopes of using generated tax revenue to one day provide the public services (e.g., schools, firehouses, hospitals) needed by the city's residents. This trickle-down economics/business-first approach, however, is limited in its efficacy to provide New Orleanians with much needed services due to the high tax-break system that encourages out-of-state investors to extract their financial gains from the state, the unwillingness of out-of-state investors to invest in New Orleans due to the quality of life limitations already present in the city, and the difficulties that offices like ORDA have found in identifying suitable investors.

To summarize, in the context of post-Katrina New Orleans, city planners and local government officials have prioritized the conceptualization of the city as a space of capital investment as a means of recovery. These conceptualizations have deprioritized the expedited provision of

much-needed publicly funded social services. Ten years after Katrina, this approach toward urban recovery seems to have taken a toll on the most socioeconomically vulnerable sector of the city's population. After the hurricane, the city has witnessed a substantial increase in the cost of housing (46%, Sayre 2015), a loss of more than 100,000 residents, and increased socioeconomic disparities between race and ethnic groups. The city also continues to see significant disparities in the provision of public services to highly devastated neighborhoods like the Lower 9th ward, which remains critically underserved in terms of public education, fire houses, and police presence. What is more, the demographic profile of a significant number of returning residents does not match that of pre-Katrina New Orleans, suggesting that many of Katrina's survivors have either decided not to return or have not been able to do so (Mack and Ortiz 2013). The decrease in the city's total population has put further strain on what was an already decimated tax base, leading to a rise in the cost of energy and property taxes. As one resident commented recently, "In New Orleans, you pay more for less."

## **Discussion and Conclusions**

Although the cases of Choluteca and New Orleans feature significant differences, there are a number of common themes that must be noted. In both cases, disasters precipitated by relationships between policy, technologies, cultural values, and the agency of geophysical phenomena created contexts in which government officials and recovery experts (planners, architects, NGO project managers) saw disaster-devastated localities as spaces opened for social transformation. Recovery experts engaged these transformative processes from vantage points that were, in one way or another, influenced by neoliberal and modernist principles of disaster reconstruction management and governance. In southern Honduras, for example, the municipality-appointed land committee and professional architects envisioned recovery as being contingent on the random distribution of minimal land parcels, parcels that were themselves distributed on a grid that regularized spatial relations between disaster survivors. The random distribution of land parcels articulated an assumption about the nature of people and communities that is characteristic of modernist urban planning: the idea that people are entities unto themselves who can be predictably shaped through the regimentation of space. The case of Limón, in contrast, demonstrates that people in Choluteca were not such individualized entities, but were, instead, persons embedded within rich social relations with friends, relatives, and neighbors, and that it was

these relations that comprised the communities of Choluteca's *barrios de clase obrera*. As Henri Lefebvre (1996) once noted, cities are places of social production, and it is social relations among people that make a city. Limón's master plan, however, reiterated a fundamental principle of modernist planning: the idea that the regularization of space (the placing of disaster survivors in a meticulously organized grid of minimal land parcels) can produce social norms: the neat rows of houses were used in local government reports to demonstrate the restoration of normalcy after the disaster. In reality, however, the removal of disaster survivors from their social networks and their placement in the minimal land parcels of this grid did not produce conditions of predictable development. Instead, the conditions of social fragmentation created by the plan and the land parcel raffle emboldened street gangs who could then act with impunity under conditions of anonymity.

In addition to the modernist assumptions of Limón's master plan and land distribution, the emphasis on the part of assisting NGOs on the use of budgets as a mechanism of reconstruction project assessment both enabled the articulation of power by professional architects on disaster survivors (i.e., their ability to reject disaster survivor requests for alternative house construction practices) and hid the politicized relationships between disaster survivors and local government that shaped Limón and Marcelino as dramatically different resettlement sites.

In the case of post-Katrina New Orleans, we also see how the disaster was perceived by local government officials and urban planners as a space-clearing moment when the city could be transformed through the application of expert plans, policies, and practices conceived on the premises of neoliberal governance. Professional planners upheld the idea that urban spaces were, first and foremost, localities of capital investment, and that such investment logics were a self-evidently rational and fundamental practice for the production of social well-being. But some residents—specifically, displaced New Orleanians—differed in opinion, emphasizing that, to them, recovery meant the reinstatement of the city's human landscape. Once again, the voices of disaster survivors echoed Lefebvre's theorization of urban space as something made by and made up of social relations. Rather than emphasizing the immediate provision of those social services that could once again support New Orleans' pre-Katrina population, local government officials and the staff of the city's ORDA emphasized the use of public funds to encourage capital investment, upholding the logic that tax revenue would one day provide those much-needed services. The implications of this perspective on disaster recovery are becoming clear ten years after the storm. The emphasis on capital investment over the provision of public services has failed to address pre-Katrina social inequities,

which have actually grown after the storm, thus enhancing, rather than mitigating, social vulnerability.

In both the cases of southern Honduras and of New Orleans, we see how local government officials, architects, and expert planners engage in practices that reference assumptions about the natures of people, society, and social well-being that are associated with neoliberal and modernist urban planning and governance. In both cases, we also see how these social actors appeal to a sense of self-evident rationality when engaging in these practices (the unquestionable necessity of narratives of cost benefit and budgets as fundamental elements of reconstruction practice), especially when confronted with requests on the part of disaster survivors to consider alternative arrangements of reconstruction resources (the construction of homes with columns and cross beams, the use of reconstruction resources to expedite the reopening of public housing and hospitals and the expedited return of public housing residents). Inherent in these appeals to the self-evident rationality of budgets and neoliberal or modernist master plans is the idea that the knowledge of experts is readily applicable across space and time, anywhere, anytime. Both of these case studies, however, bring into question the relevance of these policies and practices to the social and environmental particularities of disaster-affected sites. In the case of Limón, we see master plans and land distribution practices that ignore the social relations of Hurricane flooded neighborhoods of Choluteca and the construction of housing structures whose roofs are repeatedly damaged during heavy thunderstorms. In New Orleans we see neoliberal urban plans and policies that ignore the ways many city residents prioritized the return of the city's pre-Katrina population and how these policies and plans have failed to address (and may have exacerbated) the social, political, and economic challenges confronted by the city before the storm.

At the same time, these two case studies also provide us with a number of recommendations for practice. These ethnographies of disaster reconstruction demonstrate that the practices (the use of budgets as an instrument of project assessment, and participatory recovery planning as a means of defining recovery) and policies of recovery experts need to be negotiated with disaster-affected populations. To engage in these negotiations, recovery experts must be able to recognize the variable, historically configured, and locality-contingent ways people meaningfully engage their environments and both define and experience well-being and reconstruction. Recovery experts must also recognize the cultural histories of those rubrics of disaster reconstruction they uphold as matters of fact (the self-evident and unquestionable logic of cost-benefit analysis, the conceptualization of urban space in terms of capitalist investment).

But what does such an approach to disaster reconstruction look like in practice? How do we apply this?

What is interesting about the case of southern Honduras is that the case of Marcelino Champagnat shows us exactly how some disaster survivors and NGO program managers engage in the dialectical acts of “epistemological flexibility”—a term I use to define the act of negotiating reconstruction policy and practice between recovery experts and disaster-affected populations—that are absolutely necessary to make reconstruction aid socially and environmentally relevant. While professional architects in Limón and New Orleans rigidly upheld narratives of cost-benefit analysis and capitalist investment as nonnegotiable elements of disaster reconstruction, CARE program managers in Marcelino saw their budget as having a greater degree of plasticity. CARE program managers had the flexibility to modify the individual items of their budget without exceeding total project costs, and were therefore able to provide Marcelino residents with the kinds of housing structures they preferred. In this case, the budget did not operate as an unquestionable mechanism of power/knowledge at the disposition of recovery experts, as it did in Limón. Instead, CARE program managers saw the budget as a malleable and adaptable institutional requirement that could be tailored to fit disaster survivor self-defined needs. Recovery experts, then, must begin to problematize financial cost-benefit analysis and neoliberal/modernist principles of urban planning as a fundamental and nonnegotiable tenet of disaster reconstruction, and must learn to listen to the variety of ways disaster-affected populations clamor for reconstruction assistance that suits their socioenvironmental circumstances. Finally, governmental officials, expert planners, and NGO program managers must learn to appreciate acts of resistance on the part of disaster survivors and to see these acts not as undesired deviation from their expected role as passive and grateful recipients of minimal and ineffective aid. Instead acts of resistance like the rejection of inadequate housing or neoliberal logics of urban planning must be seen as critically important moments for the negotiation of recovery aid and plans, moments that allow for an equitable conversation about what community, well-being, and recovery are to those most affected by disasters, and not an imposition by those who purport to help them.

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work has focused on the interactions between displaced populations, assisting NGOs and governmental agencies, taking a specific interest in the assumptions about the nature of people, community, and well-being inherent in the latter's policies and practices. His work has been featured in such high-profile venues as *Human Organization*, *Disasters*, *Anthropology News*, and *Identities: Global Studies in Culture and Power*. His current book project is titled *Governing Affect: Modernities and Neoliberalisms of Disaster Reconstruction* (in press by the University of Nebraska Press). Barrios is a founding member of the Disasters Topical Interest Group of the Society for Applied Anthropology and has served as a specialist on the anthropology of disasters for the National Science Foundation Doctoral Dissertation Improvement Grant Review Committee.

## Note

1. Micaela di Leonardo (2008) defines neoliberalism as the idea that market deregulation is conducive to optimal social ends, while Elizabeth Povinelli (2010) understands neoliberalism as the expansion of capitalist logic of financial cost-benefit analysis to all facets of human life are best thought of in terms of financial cost-benefit.

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# **“We Are Always Getting Ready”**

## ***How Diverse Notions of Time and Flexibility Build Adaptive Capacity in Alaska and Tuvalu***

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**ELIZABETH MARINO and HEATHER LAZRUS**

Community-held notions of time, flexibility, and uncertainty, which underpin disaster preparedness planning, are important organizing principles for climate adaptation efforts. However, communities currently facing climate change impacts may simultaneously be on the margins of climate change and disaster planning centers and discourses. Subsequently, notions of time and preparedness may not translate smoothly between boardrooms and community settings. Flexibility in the face of uncertainty—for instance, about how and when global climate change will manifest locally—is critically linked to these personal and community interactions with time. That is, cultural relationships with time imbue how people cope with, and make plans to cope with, risk and uncertainty. In some cases, the ability to preserve flexibility is a critical contribution to building adaptive capacity in response to disasters precipitated by climate change. We explore the intersections of time, flexibility, uncertainty, and adaptation planning in two case studies from communities in very different settings—the village of Shishmaref in Alaska and the country of Tuvalu in the southwest Pacific Ocean—both of which are already negotiating the effects of a changing climate and of planning efforts designed to mitigate climate change impacts.

Consider an afternoon in May, 2010, when Fred Eningowuk, a resident of Shishmaref, Alaska, asked the Immediate Action Working Group (Working Group)—a network of State of Alaska and federal agency workers tasked with responding to communities for whom the risk of extensive flooding had become critical—for help moving a bulk fuel container. Shishmaref is not eligible for new fuel containers, along with much in the way of state-sponsored infrastructure development, since the community



voted to relocate in 2002 because of flooding pressures, but eroding fuel containers are a big problem in the small community. In order to help, a neighboring village donated its retired—but still working—fuel container, but moving the large piece of equipment was beyond the capacity of the small village’s transportation capabilities, leading to Eningowuk’s request to the Working Group.

The Working Group, located in Anchorage, was silent in response to this request. Fuel tanks are not part of their mission statement. On this particular day, the Working Group was meeting remotely with several Alaskan villages to identify assessment strategies for adding new communities to the classification of “most at risk,” and carrying out projects such as new flooding and hazard maps. The agenda for the meeting dictated that the topics of discussion should concentrate on these tasks for four hours and twenty minutes, with the last ten minutes were opened for public discussion and unplanned input from community leaders and representatives listening in over the phone.

There is nothing unusual about this interaction, but we see that there can exist divergent understandings of what constitutes preparation between different actors in bureaucratic meetings aimed at building adaptive capacity to deal with disasters and climate change. Because of this, government planning meetings between local communities experiencing or preparing for disaster and the government representatives charged to assess and offer assistance, aid, and in some cases relief from acute risk, are rich ethnographic moments. In the above example, the Working Group’s discussion centers largely on drawing categories of risk and measuring risk in the future, while Eningowuk’s discussion brings up an unexpected (by the participants in Anchorage), immediate need in the present. These differences indicate unique and situated experiences of risk as a construct that exists, for example, in the evolving present (fuel tanks) or something that is located and predictable in a not-yet-upon-us future (where is it likely to flood next?). Notice also how that unique and powerful cultural artifact of the agenda dictates time allotted to appropriate topics of risks and adaptation. These differences in what constitute appropriate topics indicate power dynamics during adaptation-planning interactions and help point to what are acceptable time frames for—and of—engagement within bureaucratic settings.

Interactions such as these are cultural performances of the kinds of risk mitigation and management strategies that are acceptable within and across social and cultural actors and institutions. Disaster planning becomes an ethnographic hot spot for understanding divergent experiences of risk, climate change adaptation, and disaster preparedness among stakeholders. *Ethnographies of communication* (Hymes 1964) help

to make visible the suite of experiences and conceptual frameworks that various stakeholders bring to the locations and events where disaster mitigation and climate change adaptation are discussed; through these ethnographies anthropologists gain a better insight into the spectrum of meanings and experiences of disaster planning, and which meanings and experiences have value within centers of decision making.

In the following chapter we discuss how culturally appropriate and locally derived notions of flexibility and relationships with time and uncertainty in Shishmaref and Tuvalu offer remarkable and well-situated frameworks for thinking about adaptive capacity in their respective locales, and yet how these notions of flexibility can be overlooked by agency workers and nongovernmental organizations (NGOs). We hypothesize that these concepts of flexibility can be difficult to incorporate into bureaucratic institutions, in part because they confound the limited notions of time and task that become habit within bureaucratic cultures and protocol. By highlighting some situated experiences of time and task in Shishmaref and Tuvalu, we hope to demonstrate that flexibility, constructed in relationship to time- and task-orientation, can be expanded on to support adaptive capacity in these island communities, as well as potentially to support adaptive capacity in other communities and locales around the globe.

Our insights are ethnographically grounded in fieldwork conducted in Alaska and Tuvalu and ongoing conversations with residents of these places, and are supplemented through discourse analysis of texts and films produced in media and policy contexts. Our close observations of community engagement and climate change adaptation processes over the past decade allow us to explore the evolving ways that people interact with their shifting physical and policy environments. From this vantage point, we compare and contrast the experiences and situations in the Arctic (the community of Shishmaref, Alaska) and in the tropics (the low-lying island communities of Tuvalu). This comparative perspective, between places in very different geographic settings, allows us to comment on some broader patterns that emerge from the specific details of each case.

### **Climate Change and Vulnerability: Unfolding Disasters in Shishmaref and Tuvalu**

Anthropogenic climate change is causing shifts and reverberations throughout the earth system, which in turn create both known and unknown effects in ecological and social systems (Maslin and Austin 2012).

For human communities and individuals, these changes will be experienced in part through the increasing likelihood and frequency of rapid-onset hazards such as intense hurricanes, fires, large storms, and flooding, and through slow-onset hazards such as erosion and drought (Oppenheimer et al. 2014). Anthropologists and other social scientists understand, however, that exposure to hazards and experiences of disaster are filtered through underlying social conditions including access to political power, economic and social capital, social geographies of race and ethnicity, risks linked to gender and age, histories of colonization, and many other cultural and social conditions (Kelman, Gaillard, and Mercer 2015; Lazrus 2012; Marino 2012, 2015; Oliver-Smith 2004). Because of this, marginalized and vulnerable communities will experience hazards more acutely, creating socially constructed disaster situations that may result in death, diaspora, loss of infrastructure and property, and social disarticulation, among other negative outcomes. Communities that are vulnerable to adverse outcomes of climate change are frequently also communities that have historically contributed least to greenhouse gas emissions—such as Shishmaref and Tuvalu. Thus, the combination of least developed, least culpable, and most likely to experience negative effects of hazards related to anthropogenic climate change make climate change-related disasters a critical ethical issue (Marino 2015), as well as an important human rights issue for the twenty-first century (Adger 2004; Watt-Cloutier 2015).

Thus climate change—its causes and consequences—exists not only as a set of biophysical outcomes, but also as a set of decisions, rules for decision making, networks of actors, pools of financial resources, legal agreements, publications, and communicative events. These sets of discourses determine how, which, whether, and when people will make changes to physical and social landscapes to prepare, mitigate, and adapt to changing ecological conditions. Both physical outcomes of climate change and climate change discourses enter a stratified society (Marino and Ribot 2012). Whether climate change discourses and resulting policies exacerbate inequity to power and decision-making, or whether climate change discourses provide opportunity to reimagine the power dynamics among sets of actors, is an area in need of greater empirical investigation.

Of course we know that climate change discourses and the actors who participate in them are heterogeneous, both within and across cultural contexts. As such, some situations in which international political actors discuss climate change create new opportunities for traditionally marginalized communities and leaders to make themselves heard. In 2009, for example, Tuvaluan representatives criticized the text and procedure leading to the Copenhagen Accord produced by the Conference to the Parties (COP) to the United Nations Framework Convention on Climate

Change (UNFCCC), refusing to sign a nonbinding deal brokered by the United States, India, China, and South Africa (International Institute for Sustainable Development [IISD] 2009; Radio New Zealand 2009), leading to widespread protesting and international attention. In another example, representatives from Shishmaref and other communities in Alaska met with President Barack Obama in 2015 when he visited the state—a meeting spurred, in part, by the president’s personal investigation of climate change outcomes and acknowledgement of rural Alaska leaders and thinkers as being on the forefront of this global phenomena. In the Arctic in particular, Sheila Watt-Cloutier and the Inuit Circumpolar Council successfully moved the climate change agenda to include Inuit concerns and successfully positioned Inuit knowledge systems as critical to global climate conversations (Callison 2014). These examples point at an emerging vocality of historically marginalized populations in the climate debate.

While the above examples offer great promise, other research has demonstrated that international discourses on climate change and climate change adaptation have reentrenched pathways of inequity and exploitation. This happens repeatedly when powerful actors simplify disaster experiences for small island communities, such as those in Tuvalu, and small indigenous communities, such as those in Shishmaref. Media coverage often repackages these experiences as metaphors (e.g., conjuring ideas of a canary in a mine, a litmus test, or the drowning islands of Atlantis) and illustrate simplistic anecdotes that serve to justify the desires and actions of more-powerful institutions (Beymer-Ferris 2012; Farbotko and Lazrus 2012; Marino 2012). In these instances, marginalized voices are diminished even as the exotic cache of these voices is used to sell newspapers and further preexisting agendas (Farbotko and Lazrus 2012).

Investigating communicative events surrounding climate change and the adaptive capacity to anticipate and cope with climate-related disasters, as we do in this article, may contribute to establishing equity in climate change-related discourses, including mitigation interventions (e.g., international policy, funding for hazard mitigation and adaptation) (Marino and Ribot 2012). We hope to show how capitalizing on situated concepts of flexibility in the face of uncertainty born both of a changing environment and of the social processes that lead to disasters can offer insights into supporting more inclusive forms of adaptive capacity planning and can open bureaucratic institutions to alternative pathways of engagement.

### ***Shishmaref and Tuvalu***

Shishmaref, Alaska, is a village on a low-lying, barrier sand island that is sandwiched between the Chuckchi Sea and the Shishmaref Lagoon. The

community is primarily Iñupiat, and self-identify as the *Kigiqtamiut* (literally, people of the island). The *Kigiqtamiut* have inhabited the extensive coastal areas around the island for at least three thousand years in family groups, each of which is identified by different land tenure and political affiliation (Burch 1998). In contrast to Shishmaref's Arctic setting, Tuvalu is composed of nine low-lying coral and atoll islands that form an arc across the Pacific Ocean just south of the equator. Approximately ten thousand residents live in the archipelago, and are descended from Polynesian voyagers who settled the islands roughly two thousand years ago when sea levels fell during a small ice age and exposed the atolls (Nunn 2007).

Despite vastly different geographical settings, both areas have experienced social and political constraints tied to colonization and both experience similar effects from extreme weather and storms. Shishmaref is threatened by flooding brought by fall storms that come off the Chuckchi Sea; as storm intensity and erosion increase, these floods become more threatening to lives and homes. As oceanside bluffs erode, the likelihood of a large-scale disaster that claims lives and critical infrastructure increases. Erosion can be slow onset, or can be sudden and dramatic during a storm event. In 1997 a large storm took approximately ten meters (thirty-two feet) of land in a single night. In total there have been six state flood disaster declarations issued for Shishmaref since 1988 (Kinsman, DeRaps, and Smith 2013). Similar to Shishmaref, Tuvalu is also affected by storm activity. Cyclones and storm surges *kai fenua* (literally meaning to eat the island). In March 2015 the winds and surge from Cyclone Pam, the season's most intense tropical cyclone in the southern hemisphere, resulted in waves up to five meters breaking over some of the Tuvaluan islands. Infrastructure was damaged, houses flooded, crops ruined, and families driven to evacuate. Annually, king tides also eat at the coast lines of the Tuvaluan islands. These perigeon spring tides raise water levels higher than normal, and can be driven even higher by a full or new moon, storm surge, la Niña conditions, and climate change-driven sea level rise. The Tuvalu Meteorological Service has recorded maximum tides of 3.4 meters (occurring on February 24, 2006, and again on February 19, 2015), significant in a country with an average elevation of just 4.6 meters above sea level.

Seawalls and revetment projects have been common responses to encroaching waves in both places. Since 1981 more than \$10 million has been spent on seawall projects in Shishmaref. These protective revetments have a life expectancy of fifteen years if not properly maintained and twenty-five if regularly maintained (Gray et al. 2011). There is disagreement on the efficacy of the current seawall in Shishmaref (Mason et al. 2012), but historically seawalls in Shishmaref have been infamously ineffective. One revetment project intended to protect the coast from greater

erosion failed a few weeks after it was constructed at great cost to both the state and the village (Mason et al. 1997, 106–110; Mason et al. 2012). In Tuvalu, wave energy tends to scour the coast where seawalls have been installed, exacerbating the loss of land. In many places, seawalls have tumbled down and their components used for other structures including boat ramps. In a few cases, the seawalls become dams, preventing sea water that overtops the walls during high tides and storms from returning to the ocean. The trapped sea water kills vegetation and infiltrates the narrow freshwater lens, leaving soil infertile for decades. Almost all stakeholders in Shishmaref and in Tuvalu agree that seawalls and other revetment projects are not a long-term solution to flooding and erosion.

Given the common threats and inadequate infrastructure solutions in both places, community members in Tuvalu and Shishmaref are faced with extremely difficult considerations concerning relocation (Marino 2015; Mortreux and Barnett 2009). Numerous documentary films and popular media articles attempt to capture how people in Tuvalu feel about a future relocated from their home islands, illustrating an early climate refugee crisis. The lived experience of climate-related sea level rise and associated decisions, however, is complex. Tuvaluans resist the label of climate refugee (Farbotko and Lazrus 2012), even finding ways to cement connections to place in the face of discourses about relocation (Farbotko, Stratford, and Lazrus 2015). While there are currently no specific policies in place to aid migration in response to climate-related changes in Tuvalu, some people who have relocated to Australia or New Zealand—or who plan to do so—cite climate pressures among their reasons. In at least one case, the New Zealand court has recognized climate refugee status of a Tuvaluan family, granting the family residence (Farbotko, Stratford, and Lazrus 2015).

Shishmaref residents consistently and unanimously resist relocating to a more urban environment or merging with a preexisting village, but in 2002 the community voted to reestablish the community on the mainland, within subsistence hunting territory (Schweitzer and Marino 2006). Reconstructing a village on the mainland would require significant state and/or federal support to develop critical public infrastructure such as schools, an airstrip, a post office, a medical clinic, and other infrastructure, as well as planning for this infrastructure. The burden of these costs has not yet been allocated in state or federal budgets, but residents are currently in talks with state and federal agencies to set out a plan for short-term protection of the island as it is today, and long-term planning for possible relocation.

Under these conditions, residents of both areas negotiate strategic development and relocation planning with agency workers along hierarchies of government institutions and through programs of international aid,

as well as among local governments and family groups. It is within these negotiations and advocacy arenas that divergent experiences of risk and timeframes for adaptation emerge.

### Task Duration

One evening, Shishmaref resident and friend of author Elizabeth Marino, Nancy Kokeok, was cleaning seal hides. Kokeok worked slowly and cautiously, running the *ulu* (women's knife) along the edge of the fine, spotted animal hide. It's a job that takes a delicate touch to get the soft pink blubber off the sealskin with the sharp knife without nicking the skin itself. These skins are used for *mukluks* (boots), mittens, and hats—all of which need continuous swaths of skin to make them water proof. A hole interrupts these swaths and cannot realistically be sewn back together to make a full, waterproof piece—so this challenging skill of scraping is critical to making sufficiently warm Iñupiat clothing. It was getting cold and dark in the early spring, and Marino asked Kokeok if she was hurrying through her last seal so she could get inside and warm her hands, which were wet from the work. Marino was, in fact, hoping Kokeok would hurry up so that the inexperienced anthropologist could go inside and warm her hands, which were not wet from work. “What do you mean?” Kokeok responded. “It takes as long as it takes.”

The sentiment “it takes as long as it takes” is not uncommon in rural Alaska. Seeing a task through to completion demonstrates what outsiders might call patience, but bespeaks a more ubiquitous understanding of due diligence, work, and flexibility with time. The notion of seeing a task through to completion is a concept that is infused into life in rural Alaska and one that can grate against bureaucratic protocol. Of course individuals break from a task when necessary, but task-driven engagement, as opposed to the clock- and calendar-driven partitioning of time (Postill 2002), breaks the formal organizing structure of most meetings held by outsiders in Shishmaref. To see something through to completion requires a relationship with time that is less rigid and more amenable to surprises and unexpected diversions. The differences between task-driven engagement and clock-driven engagement are particularly striking with regards to notions of speaking, being silent, and being heard.

In Shishmaref, an elder may get up to speak at a meeting about what may seem like a divergent topic; but it is common that when people speak they are given the floor until they are finished. Under these conditions, the divergent topic nearly always winds its way back to convey a profound insight to the conversation at hand. This relinquishment of the floor for

unspecified amounts of time is not the organizing structure for most formal engagements sponsored by outsiders—even among people who try and demonstrate cultural sensitivity in an Ifupiat context. Nicole Gombay writes about the awkwardness and profound discomfort of the audience at an Inuit studies conference when a senior Inuk, Peter Irniq, went over his allotted time during a luncheon speech and ran into the time when paper sessions were to start (Gombay 2009)—and this audience was made up of people gathered to talk about Inuit society! Similarly, in Tuvalu, elders speak first when community members gather in the *maneapas* (open-air community houses). There, too, elders, especially members of the *falekaupule* (island leadership), weave together what initially appear to be disparate and seemingly mundane topics, even gossip, ultimately arriving at insightful conclusions that may not have been evident through a more direct style of oration (Besnier 2009).

During meetings like the example with which we opened this chapter, we also see the critical influence of the agenda as a cultural object of great power. These meetings often assume an agenda and chronological progression from one item to the next with limited and clearly defined time allocation for each topic. Under these conditions there is little room for conversations to diverge from agenda topics, for unknown and unexpected topics to emerge, or for solutions to play out after discussions take as long as they take. It might, in fact, be antithetical to some notions of successful engagement to begin a meeting by announcing, through an agenda, when it will end.

We offer these examples of situated tasks to illustrate how daily life may be organized in ways that prioritize the task itself over the clock- and calendar-driven partitioning of time (Postill 2002) that dominates in offices, board rooms, and laboratories around the world where climate-related science, discourses, and policies are often developed. However, as Postill demonstrates, we are careful not to assume that the temporality of tasks and schedules in Shishmaref or Tuvalu is fundamentally distinct from the clock and calendar time of global centers of science and planning, but that clock time is just one of many elements involved in scheduling and planning. In other words, activities are planned in ways that reflect how time is made meaningful according to the tasks at hand or the situational context. Hall’s (1959) descriptions of monochronic and polychronic time have been influential in anthropology, contributing to our understanding of how people organize space and time to communicate nonverbally, including the message conveyed through the particular ways in which a task may be accomplished. Interrogating the partitioning of time in disaster studies lends a richness to understanding how people interact with scheduling and planning and gives rise to the idea that a singular method of scheduling



may undermine solutions that could arise more easily under different social conditions. In other words, decolonizing meeting spaces, and their unique notions of time, might actually lead to different kinds of solutions.

### **Foresight: Is Prediction the Only Basis for Climate Change Knowledge?**

Climate change information and knowledge created and disseminated by scientists and by global initiatives such as the Intergovernmental Panel on Climate Change (IPCC) are overwhelmingly about prediction. Knowing the future and what the future will bring seems essential in global climate change discourses for knowing how to prepare, what to mitigate, and where to put adaptation funding. Asking, “Where and when will the next storm be?” can seem like the only rational way to begin preparing for climate change, particularly when landscapes are becoming uninhabitable and migration is becoming necessary. A recent UK government-funded series of reports on climate change, among other issues, is titled *Foresight Projects*: and claims “Foresight uses the latest scientific evidence and futures analysis to address complex issues and provide strategic options for policy.” (The Government Office for Science 2013, accessed April 18, 2016).

Foresight is an integral part of our understanding of how to prepare for climate change in the coming centuries, and yet the idea of foresight as prediction or knowing the future is not universally embraced as a prerequisite for preparedness (Taddei 2012). We note the concept of foresight makes particular presumptions about the construction and partitioning of time. As Bates writes, “Assumptions about time as a linear flow of constant rate, with neat chronologies linking events in the past, present, and future are convictions that are deeply embedded in Western thought” (2007, 88). In many climate change discourses, the future as a distinct, linearly defined, point is a deeply embedded conviction; adaptation planners can even take the additional cognitive leap of the future as being knowable and predictable.

Climate change institutions and social discourses of climate change themselves are organized around these principles of the future being knowable (Taddei 2013). To build projections about the future global climate and its more local effects, climate modelers make assumptions about deterministic social and physical systems and about their relatively linear, and relatively knowable, evolution (Shackley and Wynne 1996). These assumptions are culturally embedded and socially negotiated. Fine explains, “Predicting the future is social, both in the act of prediction and in the organizational infrastructure that permits its acceptance” (Fine

2007, 134). Lahsen (2005) describes the complexity involved in projecting the future climate, including the levels of certainty with which modelers imbue the models and model outputs and thus both how future time is measured and known.

Today, climate change research and policy-making organizations place enormous value and resources on a preoccupation with knowing the future as the single most important mechanism for preparedness. The IPCC qualifies predictions of change as *more likely than not*, *likely*, *very likely*, and *virtually certain* (Cubasch et al. 2013). The demarcation of degrees of certainty about the future is a perfectly adequate way to think about the climate system and within a scientific epistemology may lead to building adaptive capacity in places that are very likely to experience damage, for example. This likeliness of damage is one reason anthropologists work with and are interested in communities such as Tuvalu and Shishmaref in the first place. On the ground in Tuvalu and Shishmaref, however, local notions of preparedness and adaptive capacity do not necessarily rest on knowing the future—though of course, local leaders, administrators, and scientists can and do engage these conversations.

The degrees of certainty with which the future can be known are problematic outside of the context of the IPCC report, and especially when translated to local communities experiencing change. As Polynesians, many Tuvaluans interact with time in ways that make it hard for them to conceive of certainty about the future. According to some Polynesian knowledge systems, we walk through time in two directions. One may walk forward into the past (which we can see because we have experienced it, therefore it is in front of us) and walk backward into the future (which we cannot see, and therefore is behind us) (Salmond 1978). The present in this temporal conception is a composite of future unknowns and past experiences that is shifting and negotiated. The past, in front of people, can serve as a guide in the ever-changing present. In this construction, therefore, it is the past that guides, not the future, even and especially under novel conditions. The present is malleable and uncertain. During fieldwork, people from Tuvalu talked about the changes they observed in their environment as deviations from expectations based on oral histories and lifetimes of interacting with the weather, ocean, and water. Thus, coastal erosion and precipitation changes were known—not because of projections of the future, but because of comparisons with the past. While this is not a unique feature of Tuvaluan understanding, it does present a contrast with the presentation of information derived from climate models of future projections that we need to acknowledge; we must build a bridge between these ways of knowing in order to align priorities about planning.

Similarly, in Shishmaref, predicting precise ecological futures can be problematic because assuming one knows what the future will be can be seen as a severe form of hubris (Wisniewski 2010)—and while this does not eradicate a sense of what may come—taboos on knowing and being certain about the future place parameters on acceptable discourses and mechanisms for preparedness. These ethics are coded into the language used to talk about the future. One consultant in Shishmaref made this point, early in the research process: “When we talk about this sort of stuff [flooding in the future] it’s almost like we have to joke. You have to learn to talk to people here if you want to know about this stuff.”

### **Adaptive Capacity in an Uncertain World: Toka and Getting Ready**

In Tuvalu and in Shishmaref we find that preparing for uncertainty, not predicted outcomes, is a central organizing tool around which adaptive capacity is often built outside of bureaucratic settings. Many everyday practices provide preparedness for unanticipated events and are a way of coping with uncertainty—whether that is uncertainty *that* something will happen, or uncertainty *when* it will happen. In Nanumea, the northernmost atoll of Tuvalu, the notion and practice of *toka* is about being ready. *Toka* is often used in the context of familial obligations during funerals or other unforeseen events including disasters—from droughts that reduce coconut availability to marine infestations that kill important subsistence species. If a family is *toka*, it is prepared with surplus items to fulfill food requirements to feed extended relatives following a death or to keep the family fed when harvests are slim. The importance of *toka* has faded with the introduction of the cooperative store and a few small businesses from which canned or frozen meat, noodles, and rice can be readily purchased at a moment’s notice—depending on when supplies are replenished by the infrequent boat visits. Given the unreliability of imported food supplies, *toka* is still a strategy many families use.

*Toka* is not explicitly connected to the idea of disaster by people in Nanumea, yet it was brought up in field interviews in response to actions that could be and are taken to mitigate the impacts on households of droughts, storms, or infestations when food or water supplies might be imperiled. *Toka* represents a way of being flexible, given the uncertainty of the future. The rafters of open-air *fales* (houses) in the outer islands are often filled with aging coconuts that are a delicacy at the best of times, and an infusion of nutrients at the worst of times. These brown coconuts are a visible indication of whether a household is *toka*.

Arguably, with the increased reliance on cash economy, people in Nanumea are becoming less flexible—for example, people rarely have surplus cash due to multiple financial demands from church obligations and school fees, so when people need to buy unanticipated supplies they are sometimes unable to do so. Confounding that constraint, in Tuvalu, especially in the outer islands, supplies in the island shop often run low, for example if a boat has not visited for several weeks or if someone else has had cause to purchase large amounts of imported food. Still, the concept of *toka* is present and can be used to frame a culturally relevant discourse of preparedness.

In rural Alaska, preparation for uncertainty is captured in a similar phrase, getting ready. Getting ready is an integral part of daily life and stands out as a particular relationship with the unknowable future. This concept of getting ready is a practiced, intricate part of daily life in Shishmaref, and is as ubiquitous as it is difficult to grasp. Breakfast is always a full meal, a way of preparing for whatever the day will bring. You always take extra food when traveling. You watch, listen, and make yourself ready in the present for what might happen in the future. Bates argues that this preparedness does not negate conceptions of the future or ideas surrounding forecasting and prediction, but rather that the future is, by its very essence, unknowable (Bates 2007). If the future cannot be fully known, preparedness must take place in the present for a spectrum of possible outcomes.

This explicit relationship with uncertainty and preparing for uncertainty, however, is beginning to seep into scientific discourses as well. Some Western scholars and practitioners are starting to interpret the future in ways less confined to the parameters of what is considered known and knowable, developing the notion of flexibility. Flexibility is particularly useful in dealing with climate change, where models of local outcomes and how those outcomes will interact with social systems are extremely complex and difficult to predict. In Western technical jargon this may be called the “precautionary principle.” That is, in situations when an activity threatens to harm the health of humans or the environment, precautionary measures should be taken even if some cause-and-effect relationships are not fully established scientifically. In other words, do no harm under conditions of uncertainty.

In climate modeling of future climate-related changes, modeling that yields projection of the future, ensemble work is important. Several models of future climates are used in ensembles that indicate a range of possible outcomes based on each models’ outputs. This spread allows modelers to indicate directions and possible degrees of change and to move away from deterministic predictions. Yet the forward planning—days, weeks, years, decades in advance—still embodies certain notions

of time and what is knowable and unknowable, even if uncertainties are acknowledged.

Despite these new discourses of uncertainty emerging in scientific settings, in practice, climate change adaptation discourses are still heavily dependent on forecasting. In Shishmaref, for example, the Army Corps of Engineers has designated various village sites as having 15–20, fewer than 100, or more than 100 years before flooding is likely to make places uninhabitable. Government planners see these numbers as essential determinants for setting priorities. These observations lead us to wonder what adaptive capacity built around uncertainty, rather than prediction, might look like.

## Conclusion

Relationships to time and the future are not static, nor are they singularly defined by cultural identity or geographical location. The question we pose here is how different conceptual engagements with time may influence strategies for preparedness and methods of building adaptive capacity. We see that they can influence preparedness and adaptive capacity profoundly, particularly around the idea of flexibility and relationships to uncertainty and an unknowable future. Of course, Alaska Native and Tuvaluan scientists and politicians are fully engaged participants in the IPCC and other central drivers of the foresight narrative, and as such fluently inhabit diverse conceptualizations and vernaculars of time. Conversely, an emerging generation of anthropologists are consciously bringing attention to nonhuman agency and actors, including weather and other ecological systems that render the future less and less knowable (Havey 2005; Sillar 2009).

By examining the cultural relationships with time that underpin flexibility in the face of uncertainty in Shishmaref and the islands of Tuvalu, we are inspired to question assumptions about the need for certainty in planning. One implication of this insight is to reduce the emphasis on the need for more-precise climate projections about the future, and instead to prepare communities in the present for a suite of possible risks. Along the lines of arguing for the precautionary principle in climate adaptation (Lewis 1999) these findings also help us see alternative and culturally relevant ways of interacting with climate projections, and the agencies and agendas that are designed to address the impacts being projected. Another implication is how we can think of disasters not as discrete events, but as events embedded in and produced by the uncertainty of a changing climate on one hand, and of social vulnerability on the other. Systemic vulnerability—entrenched in political and economic processes with deep his-

torical roots—is another source of uncertainty that extends the causes of disasters beyond any sort of discrete timeframe or singular driver. A final outcome of this interrogation of time is an understanding that “managing the future” as a risk reduction strategy is a culturally constructed model. We can, then, posit the idea that there are other ways to handle risks in the present and the future, including orientations that deal more directly with historical inequities as a risk management strategy.

The examples we provide here show that the meaning—and implications—of uncertainty shift between boardrooms and communities. Getting and being ready—whether for the vagaries of everyday life, for life-altering events such as funerals, or disasters—are ways of making uncertainty meaningful and productive through specific cultural practices that boost a person’s, household’s, or community’s ability to deal with the unanticipated. Here, we demonstrate what Gregory Button has previously called for from disaster anthropologists: how an ethnographic approach “can unveil the social, cultural, and political meanings inherent in the nature of uncertainty, which are too often ignored. By contextualizing uncertainty in the domains of culture, meaning and power, we create [a] coherent idea of its role in society” (Button 2010, 16). Supporting grounded conceptions of flexibility, based on particular relationships with time, can make local strategies of preparedness powerful antidotes to the power discrepancies and climate risks that render some communities’ futures particularly uncertain. In other words, contextualizing uncertainty, in this case, might shed light on and bolster support for strategies of preparedness that have been there all along.

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## Note

All translations in this chapter were completed by the authors.

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# Tempests, Green Teas, and the Right to Relocate

## *The Political Ecology of Superstorm Sandy*

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MELISSA CHECKER

Until October 30, 2012, Debbie and Sam Manus<sup>1</sup> lived on the East Shore of Staten Island in a neighborhood known as Oakwood Beach (King 2013). Comprising mostly bungalows constructed between 1930 and 1950, Oakwood Beach was the kind of neighborhood where people stuck around, worked on their homes, and passed them down to their children. Sam, for instance, purchased his childhood home from his siblings so that he could live in the house he loved, amid his family and neighbors. From 2008 to 2012, the Manus's renovated their house, piece by piece, as they could afford it. In the summer of 2012 they finished the last renovation—a back deck. But their enjoyment was short-lived. Just a few months later, Hurricane Sandy slammed into New York and New Jersey, laying the Manus's dream house to waste. As Debbie described it, “We were trapped by flood waters that rose so high so quickly that we barely managed to escape up into a small crawl space in the attic of our home.... We struggled to stay calm for the almost twelve hours that we were there, watching the water levels rise to over 8 feet in our home, ending just below the ceilings, and the space we were hiding in.”<sup>2</sup>

Debbie went on to say that, from the crawl space, she and Sam “could hear each wave come in. You would hear a crash and dishes breaking and everything moving.” When they emerged from their attic on the morning of October 30, they found “everything was in a big pile. It was like a snow globe, like someone shook the house.” Three months later, the Manus's joined approximately a thousand other residents of Staten Island's East and South Shores in petitioning Governor Cuomo to buy out their homes, tear them down and return the land underneath them to wetlands. Still reeling from 2011's Hurricane Irene,<sup>3</sup> petitioners believed that floods were

only going to worsen as storms became more frequent and severe. They wanted out.

Across the Island, on the North Shore, the National Hurricane Center reported storm tides (the combination of storm surge and the astronomical tide) of 14.58 ft above Mean Lower Low Water (MLLW).<sup>4</sup> These waves washed a 72-ton oil tanker ashore (although property damage here was not nearly as severe as it was on the East and South Shores).<sup>5</sup> This heavily industrialized area contained at least twenty-one industrial sites with uncontrolled contamination, some of which were only seventeen feet away from residential properties.<sup>6</sup> Residents worried that flood waters could potentially dislodge contaminants and distribute them into the area's dense residential neighborhoods. These neighborhoods housed the borough's largest populations of low-income, immigrant, and people of color; moving away was not an option for most of these people. In 2010 the U.S. Environmental Protection Agency (EPA) named the North Shore as one of its ten environmental showcase communities due to the preponderance of chemical hazards in the area and residents' socioeconomic status and lack of political clout.<sup>7</sup> (That designation, however, had done little to stop local officials from permitting new industrial facilities on the North Shore, or to encourage them to install better flood barriers and buffers).

Demographically and politically, the densely populated North Shore seemed worlds apart from the suburban East and South Shores. For instance, low-income residents, many of whom were people of color, of the North Shore routinely voted for Democratic candidates in local and national elections (Kramer and Flanagan 2012). The rest of Staten Island, however, was a notorious bastion of conservatism in overwhelmingly liberal, Democratic New York City. It was this area that spawned the city's earliest and largest Tea Party groups (Kramer and Flanagan 2012). But despite these seemingly stark divisions, coastal residents came together to warn local officials that the combination of rising sea levels, ongoing shoreline erosion, and a lack of adequate storm barriers were setting them up for a disaster.

Hurricane Sandy unbinds our notions of disasters. In addition to revealing Staten Island's complex dynamics, it illustrates the far-reaching webs of significance in which disasters are caught up. This chapter shows how a changing global political economy shaped the borough's divergent demographic and political terrains, as it also transformed Staten Island's coastal ecology and produced the conditions of vulnerability that led to the storm's widespread destruction. In addition, my contextual approach to the storm explains why displaced Staten Islanders overwhelmingly preferred to relocate rather than to rebuild, demanding that the state compensate them for their storm-damaged properties and return the land to

wetlands. These demands stood in stark contrast to typical post-disaster activism in which survivors fight for the right to return (Adams, Van Hat-tum and English 2009; Arena 2012; Bullard and Wright 2009), and they opposed the city’s resiliency plans that refused to back down from water-front development. Indeed, I argue that residents’ holistic and in-depth understandings of the causes of the storm, and their awareness of the ways in which it connects to other disasters, suggest potential new trends in post-storm activism.

Anthropologist Anthony Oliver-Smith defines disasters as processual events that begin prior to “a specific, event-focused agent” and calls for disaster analysts to explode the boundaries of time and space that usually circumscribe disaster studies (Oliver-Smith 1996, 30). Following that call, this volume’s editors, Gregory Button and Mark Schuller (see introduction, this volume), emphasize the necessity of researching the broad historical, political, economic and geologic contexts of disaster events in order to fully understand the extent of their destruction, and possibilities for building future resilience. As Button and Schuller note, this perspective also offers an essential counterpoint to media and academic representations of disasters, which portray them as discrete, isolated events. By dramatizing a disaster’s unique qualities, such depictions send mixed messages, both playing on public fears about a post-climate change future and giving the impression that devastating storms are freak occurrences (see the introduction). For instance, media reports about Superstorm Sandy emphasized the singular meteorological conditions that allowed several storm systems to collide. My examination, however, reveals that while the meteorological aspects of the storm might be unprecedented, its effects were utterly *predictable*, given a long history of ecological degradation. In addition to exploring the global political and economic conditions that fostered this degradation, I also show how Hurricane Sandy linked Staten Island to other technological and environmental disasters, from Hiroshima to Hurricane Katrina. In short, this chapter demonstrates the degree to which disasters are deeply entangled in extensive political and economic webs that stretch across time and space. Viewed in this way, disasters make visible the ways that local ecologies and communities, however far-flung or historically distant from one another they may seem, are actually connected to each other.

I begin with a brief introduction to the political ecology of Staten Island’s northern and southeastern shorelines. I then address each geographic area in turn. Starting on the North Shore, I trace the historic proliferation of industry and the political decisions that facilitated that unrestricted growth, while also allowing builders to create an ample supply of nearby housing for immigrant workers. In the latter half of the twentieth century,

as deindustrialization reshaped many of the city's waterfronts, industry on the North Shore continued to grow. Along with it, residents' environmental risks from chemical contamination, flooding, and/or climate change also rose. Moving south, I then show how these same economic trends and processes produced very different results. Here, residential and commercial development skyrocketed in the late twentieth and early twenty-first century, thanks to a pro-development attitude among city officials and the globalization of real estate investments. Although local residents consistently challenged the environmental consequences of this development, their concerns were largely ignored—until Hurricane Sandy hit in 2012. My concluding sections then focus on how residents' responses to the storm consistently called attention to the multiple and interlocking links between political and economic trends, environmental degradation, and the storm's disastrous aftermath.

### A Tale of Two Shorelines

In 1928 the *New York Times* quoted W. Burke Harmon, president of the Harmon National Real Estate Corporation, referring to Staten Island as “this forgotten borough that has suddenly stepped into the limelight.”<sup>8</sup> Harmon was referencing the vast potential for development on the borough, which at the time remained largely agrarian and sparsely populated (see Steinberg 2014). Thirty years later the nickname resurfaced when mayoral candidate Edward Corsi spoke at a rally on Staten Island. Corsi condemned the Tammany government for ignoring the specific needs of Staten Island residents, including putting an end to the excessive smog that was wafting over from New Jersey and covering the Island (Zuckerman 2012). The nickname stuck, as did the general conditions Corsi decried. In 2016, Staten Islanders were represented by three out of fifty-one New York City Council members, and pollution continued to plague the northern third of the Island, known as the North Shore.

Beryl Thurman, president of the North Shore Waterfront Conservancy of Staten Island (NSWC), liked to joke that her neighborhood “was like an industrial *Girls Gone Wild*” video. The North Shore's dense residential neighborhoods were bordered by a narrow stretch of waterfront that twenty-one contaminated properties, including two private waste transfer stations, a Department of Sanitation garage, a sewer treatment plant, an industrial salt company, and several bus depots. Most of these sites sat on top of older industrial sites that had operated prior to environmental regulations and thus contained high levels of dangerous chemicals. Accordingly, seven properties on the North Shore were scheduled for

state-sponsored remediation and another four appeared on the federal Superfund list. What's more, the Kill Van Kull (a thousand-foot-wide tidal strait that divided this part of the North Shore from Bayonne, New Jersey) was itself contaminated. As the principal access to the Staten Island Port and the Port Newark-Elizabeth Marine Terminal, the Kill also hosted hundreds of ships each day that spilled oil into its waters and polluted the air (Checker 2009). The antiquated Port Richmond Sewage Treatment Plant discharged millions of gallons of storm overrun into the Kill Van Kull each year. Since 1984 the Kill had been part of a federal Superfund cleanup due to its high levels of dioxins, polychlorinated biphenyls (PCBs), mercury, dichlorodiphenyltrichloroethane (DDT), pesticides, and other heavy metals.<sup>9</sup>

The North Shore was also the borough's densest district, historically attracting large numbers of immigrant groups to work in nearby industries. The immigrant population remained, even as industrial jobs dried up. In 2012 40 percent of households on the Island's North Shore were white non-Hispanic, 22 percent were African American non-Hispanic, 29 percent were of Hispanic origin, and 7 percent were Asian (New York City Department of City Planning 2012). These groupings included large populations from Liberia, Sri Lanka, Albania, Pakistan, China, and Mexico (Mansour 2012). In addition to being the borough's most ethnically and racially diverse district, the North Shore was by far its poorest. In 2012 the poverty rate on the \ North Shore was 19.8 per cent compared to 14.5 percent on Staten Island as a whole. (Jorgensen 2014).

But if one followed Staten Island's coastline east and then south, an entirely different physical and social landscape was revealed. Industrial properties and strips of vacant land gave way to beaches, shorefront neighborhoods, small single-family homes, and tree-lined streets. Here, in the borough's mid-Island and South Shore districts, incomes were solidly working and middle class. Average pre-Sandy home values on the South Shore hovered around \$352,000, considerably less expensive than the city's overall average home price of \$485,000. This affordability historically made the area a magnet for public sector employees.<sup>10</sup> In 2012, 22 percent of residents in these neighborhoods were employed by New York City as teachers, police officers, and firefighters (Kramer and Flanagan 2012, 6). These Staten Islanders also stood out for their political views, which leaned far more to the right than those of most New Yorkers. A report by the Center for the Study of Staten Island found that 38 percent of Staten Islanders called themselves conservative, in comparison with 26 percent of New Yorkers. Eighty-eight percent of those conservatives lived in the mid-Island and South Shore districts (Mansour 2012). Importantly, in 2013 17.2 percent of all Staten Islanders were registered as Republicans compared to 6 percent of the city's total population (Kenney 2013). These

statistics earned the entire Island a reputation for being a bastion of Republicanism, despite the North Shore's tendency to vote Democratic.

Racial and ethnic diversity lined up with these political views. That is, according to the 2010 census, approximately 80 percent of households in the mid-Island and South Shore districts were white and 13 percent were Hispanic.<sup>11</sup> In 2013 the New York City Planning Department reported, "South Staten Island had the lowest concentration of immigrants of any section in New York City, with only 14 percent of its population born abroad" (as quoted in Sherry 2014). Yet, in recent years, immigrant populations were increasing. For instance, the South Shore saw a 50–80 percent increase in its Hispanic population between 2000 and 2010. Many of these newcomers were working-class and middle-class home buyers (Lavis 2013). At the same time, although Staten Island was a changing borough, its geographic position and its demographic and political history positioned it as isolated from the rest of the city. In turn, this outsider-ness rendered the exploitation of the Island's natural resources invisible to most New Yorkers. In the next section I show how this very invisibility made Staten Island essential to the city's overall economic development strategy.

## **A Global History of the North Shore**

Located a five-mile boat ride across the New York Harbor from southern Manhattan, and providing easy access to East Coast shipping channels, the North Shore has been tied to global politics and economics for over a century. One of the oldest of New York's settlements, during the colonial era and into the nineteenth century the North Shore served mainly as a resort area for the city's hoi polloi. In addition, the area hosted Snug Harbor, a haven for, as Robert Richard Randall put it in 1801, "aged, decrepit and worn out sailors,"<sup>12</sup> and a cluster of farm buildings that provided housing for the city's poor, infirm, mentally ill, and developmentally disabled (Lam 2013) In a way, this story of harboring early New York's elderly and/or disabled citizens foreshadows the area's postindustrial use as a repository for noxious and unwanted facilities.

Once the industrial era ramped up, the North Shore's provincial uses were quickly replaced by industrial ones. Resort homes disappeared, and the Kill Van Kull became an important channel for commerce as it provided a passage for marine traffic between Upper New York Bay and the industrial towns of northeastern New Jersey. The installation of a local rail system in 1860 connected the North Shore to the B&O railway, which carried freight into New Jersey and beyond. The 1914 opening of the Panama

Canal transformed maritime trade across the world by connecting the Atlantic and Pacific Oceans. In 1937 the U.S. government ensured the port's global significance by establishing it as a foreign trade zone, allowing tax-free trade (Tiefrenbrun 2012). As the port flourished, its prosperity spilled over to the immediate, surrounding area. Ship-repair and building yards proliferated, as did manufacturing industries, including a linoleum plant, a Proctor and Gamble factory, and an Archer Daniels Midland (ADM) linseed oil plant (NSWC 2007).

The North Shore's centrality to maritime trade helped some of these manufacturers to globalize and cement their position in international geopolitics. In fact, a unique series of events linked the ADM linseed oil plant to the advent of nuclear science, which in turn indelibly altered the environmental, economic, and geopolitical landscape of countries throughout the world (Button 2015; see also Masco 2006). In the late 1930s ADM's owners made an agreement with African Metals Corporation to store raw uranium from the Belgian Congo in their three-story warehouse located near the base of the Bayonne Bridge. The Metals Corporation then sold the uranium to an Army colonel working on behalf of the U.S. government. The Army planned to use it in a new top-secret initiative, known as the Manhattan Project (Zoellner 2010). At some point during its stay on Staten Island, a significant portion of the uranium spilled, either from leaky barrels or during a transfer. The spill was covered over, first with topsoil and then with pavement (NSWC 2007). ADM sold the property, and it subsequently changed hands numerous times. At some point a chain-link fence was erected to enclose the spill site; otherwise, no remedial action was taken. In the early 1980s the U.S. Department of Energy sent representatives from the Oak Ridge National Laboratory to survey the site. Oak Ridge reported high levels of radium and uranium, but no action was taken. A later study by the New York State Department of Environmental Conservation confirmed those findings; however, once again, no action was taken (Checker 2009; see also Metropolitan Waterfront Alliance 2010).

Nearby residents reported that they had always heard rumors about the radioactive site, although none of the agencies studying it ever contacted them. In 2007 Beryl Thurman was conducting research on contaminated sites around the area and uncovered documents reporting the above history. Concerned that the site flooded frequently during heavy rains, Thurman began to contact state and federal agencies. About a year later, the EPA responded and agreed to conduct a third study of the property. This time they found levels of radium and uranium approximately two orders of magnitude greater than the levels initially reported in 1980 (Checker 2009). After another year of sustained pressure from local activ-



ists, and negotiation with the U.S. Department of Energy, the EPA agreed to clean the site, subject to a congressional funding allocation, which to date has not been fulfilled.

For North Shore residents the dangers of living near long-buried uranium intimately connected them with Native Americans as well as with other communities in nations impacted by nuclear weapons manufacture. For instance, in 2009 a Japanese film crew traveled to the North Shore to film part of a documentary about the legacy of the atomic bomb. Additionally, European journalists or filmmakers contacted Beryl Thurman every so often to discuss what they call “the Manhattan Project site.” In August 2011, to mark the sixty-sixth anniversary of the bombings, the Unitarian Church of Staten Island planned a memorial service, which included Japanese musicians and Native American drummers. These groups were liked through various kinds of technological disasters, as well as the shared experience of being considered expendable by their national and local governments.

## **The Production of Expendability**

If federal policies and practices established the North Shore’s place in a global trade economy, state and local policies ensured that it supplied cheap land to private industries and for public utilities and services. As industrialization took hold of New York City, manufacturing businesses and new immigrant neighborhoods flourished, often side by side. Eventually, elite families grew alarmed by the haphazard industrialization and immigrant-ization of the city, and they pressured political leaders to take steps to curtail it. In 1916 New York City passed its first set of zoning laws, dividing the city into residential, business, or unrestricted (usually industrial) uses. Although zoning laws were meant to protect residents from noxious industries, sociologist Julie Sze argues that they mainly protected the property values of the affluent (Sze 2006, 43). For instance, in contrast to the controlled growth of residential zones, unrestricted zones came to house both industries and massive public housing projects. According to historic records, living near industries gave public housing residents “advantageous opportunities for walking to work” (New York City Planning Commission, Division of Master Plan, 1940, 5, as quoted in Maantay 2002, 70). While residential zones remained relatively stable, unrestricted zones grew increasingly dense. By the mid-twentieth century, over half of the city’s inhabitants lived in these districts (Sze 2006, 45).

Recognizing the need to revise its codes, in 1961 city leaders implemented a new set of zoning laws. This time they specified three kinds of

districts—residential, commercial, and manufacturing (called M zones). The last had substandard or derelict housing and was suitable for urban renewal. As a result, entire swaths of working-class neighborhoods were classified as manufacturing, even if they were solidly residential (Maantay 2002, 71; see also Angotti 2008; Sze 2006). Although city leaders assumed that residents living in M zones would eventually move out of them, the zoning designation itself undermined financial opportunity. M zones were redlined by banks and insurance companies, making it difficult to get home improvement loans, mortgages, or home insurance (Maantay 2000). As manufacturing declined across the city, policies and practices such as planned shrinkage and the Blighted Areas Plan deliberately cut their city services to M zones in order to distribute resources to the city’s central business districts and white middle and upper-middle class enclaves (Greenberg 2010, 141). Geographer Julianna Maantay explains that, as the conditions of M zones continued to deteriorate, their largely minority residents became increasingly trapped in poverty and had little choice but “to live in or near M zones having high concentrations of noxious uses” (Maantay 2002, 99; see also Angotti 2008).

Decades after the 1960s-era zoning reforms, North Shore residents continued to live cheek by jowl with industries, without buffers to protect them from contaminants (Maantay 2002, 71; see also Angotti 2008; Sze 2006). Moreover, as new industries replaced older ones, those contaminants multiplied. Unlike other city neighborhoods in the last half of the twentieth century, the North Shore never really deindustrialized, although the nature of its industries changed. Smaller businesses and municipal services moved in while large factories relocated their operations overseas or to southern states. For instance, a Sedutto’s Ice Cream factory was located on a site where lead paint had once been manufactured. Similarly, the Port Richmond Sewer Treatment Plant took the place of an oil tank storage facility. Dozens of companies changed hands multiple times, turning the North Shore’s waterfront into a toxic layer cake (NSWC 2007).

The area’s M zone designation facilitated this turn-over by allowing industrial properties to change hands without having to obtain new zoning approvals or to install buffers to protect residents from contaminants. In addition, the North Shore’s access to trucking routes, rail lines, and other East Coast ports continued to attract manufacturing businesses. Finally, as the city emphasized gentrification in certain areas, it intensified industrialization in others (see Brown-Saracino 2010; Lees, Slater and Wyly 2013). For instance, Robert Fitch finds that as early as the 1970s New York City leaders made a deliberate attempt to *disinvest* in, and displace, industry, especially in Manhattan. He states, “New York rid itself of everything that blocked its potential to become the biggest and best FIRE [finance, insur-

ance, and real estate] and producer services city in the world” (Fitch 1993, 12–13).

In Manhattan, city leaders accomplished this goal in a number of ways. As Sharon Zukin’s (1989) study of the neighborhood south of Houston Street (known as SoHo) details, in the early 1960s, city officials rejected a proposal for urban renewal clearance and new housing in SoHo because its local industries were still thriving. Yet, as the nearby Wall Street area proliferated with corporate office buildings, city planners began to eye SoHo as prime residential real estate. Accordingly, officials tacitly encouraged landlords to convert manufacturing spaces to residential lofts (see also Curran and Hanson 2005; Marcus 1991). Not only did they look the other ways as these conversions took place, but the strict enforcement of noise constraints and other regulations helped to displace manufacturing firms and make way for more residential conversions (see Zukin 1989; Buck et. al. 2005; Curran and Hanson 2005; Curran 2004; Harvey 1985; Marcuse, 1986). Between 1967 and 1976, New York lost a fourth of its factories and one-third of its manufacturing jobs (Levinson 2006, 99).

As industries were pushed out of gentrifying neighborhoods, many of them relocated to M zones in the city’s outer boroughs (Curran 2007). Thus, the displacement of manufacturing businesses from Manhattan, combined with the North Shore’s port, ensured that it remained a repository for heavy industry, despite its dense residential population. In the next section I describe how Staten Island’s eastern and southern shorelines came to play a strategic role in the city’s economic development, albeit in a very different way.

## **Global Capital and Hyperdevelopment**

During the post-World War II period, as droves of white New Yorkers left the city for the suburbs, Staten Island’s South and East Shores played a strategic role in helping to navigate fiscal crisis. As part of New York City, Staten Island had far fewer land-use restrictions than most suburban areas. At the same time, it contained large swaths of undeveloped land. Thus, developers could cram more homes into smaller tracts of land, and make them affordable to a wider range of buyers. Moving to the Island also appealed to those who wanted to stay close to work and extended family (Jackson 1987; Ross and Levine 2012). Finally the population in these parts of Staten Island was still overwhelmingly white, attracting those would-be suburbanites looking to escape the changing demographics of their inner-city neighborhoods. Thus, this part of Staten Island became “a paradise for the home building industry” (Danielson and Doig 1982, 79)

and for homebuyers who sought greener (and whiter) pastures. Once the Verrazano Bridge was completed in 1964, thousands of Irish and Italians crossed the bridge to buy homes in the mid-Island and South Shore sections of Staten Island (Kramer and Flanagan 2012). These families could enjoy the single-family dwellings, driveways, shopping malls, and homogeneity that the suburbs offered, while easily returning to Brooklyn to attend to family needs.

The prosperity of the early 1980s triggered another residential development boom, largely in piecemeal fashion, as local builders tore down vacation bungalows and subdivided existing lots to make room for year-round homes that were even more densely packed. According to urban planner Tom Angotti, around this time, giant, multibillion-dollar investment firms began to overtake the city's locally based real market. These firms quickly developed powerful alliances with New York City Hall and gained substantial influence (Angotti 2008). On Staten Island city agencies granted more and more permits for closely packed condominiums and master-planned communities, some of which were just feet from the high-tide line (Rudolf et al. 2012). For instance, Port Regalle, a 65-unit condominium project on the tip of Great Kills Harbor, was built by the Lockton Corporation, a Manhattan real estate development firm. Captain's Quarters, which also sits directly on the water, was built by Muss Development, one of New York City's largest real estate developers. Both of these developments were badly damaged during Sandy. At Port Regalle, two elderly residents drowned while attempting to flee after failing to heed evacuation warnings until the storm was already upon them (Rudolf et al. 2012).

The city permitted both developments despite opposition by local conservation groups. As Richard Lynch, a Staten Island biologist and environmental activist said, "It's literally been a pitched battle between conservationists and the developers" (as quoted in Rudolf et al. 2012). Especially after a 1992 nor'easter caused severe flooding, local residents started to agitate for better flood protections and storm management. After much agitation, in 2000 the U.S. Army Corps of Engineers installed some berms and other measures to mitigate beach erosion, although some of those protections began to come undone by the end of the decade (Rudolf et al. 2012). Residents fought hard for better infrastructure. In particular, Dee Vandenburg, president of Staten Island Taxpayer's Association told me in August, 2013, "We have no sanitary sewers, no storm sewers."

In lieu of storm sewers, plentiful vacant lots had always soaked up excess storm water runoff. But the constant subdividing of lots and infilling of vacant land cleared the vegetation and wetlands that acted as natural sponges, soaking up storm water. As William J. Fritz, geologist and presi-

dent of the College of Staten Island told the Huffington Post, “We’ve hard-scaped those sponges, so that they no longer naturally slow down the impact of that incoming surge” (Rudolf et al. 2012). In 2004 the New York City Council responded to residents’ concerns by passing new zoning rules meant to stem unchecked growth. But city officials continued to grant variances that allowed dense new developments, and even state agencies allowed development adjacent to wetland areas. Between 2001 and 2008 nearly seven hundred new structures went up in a high-risk storm surge zone on Staten Island (Benimoff 2010). Indeed, by the time Sandy hit New York, Staten Island’s South and East shorelines had been laid bare of storm protections.

For those coastal residents who fought for better storm protections only to be ignored by government officials, Sandy’s destruction was all the more poignant. The following story (told to the author by Dee Vandenburg in September, 2013) illustrates this point. In 2010, Mike, a South Shore resident, discovered that the New York Department of Environmental Conservation was considering a permit application to turn a vacant lot next to his house into a new housing development. Mike corralled his neighbors and local civic organizations to fight to preserve the lot, which was next to a wetland and held water during heavy rains. They lost the battle, however, and the development proceeded. Two years later, Hurricane Sandy wiped Mike’s house right off its foundation. Like many Sandy survivors, Mike waited nearly a year to get an insurance assessment of the damage to his home. Noting the irony of the situation, Vandenburg said ruefully, “The insurance company keeps going out there to give [Mike] an estimate on his house. Every time, they call him because they can’t find it. [Mike] has to keep telling them, ‘That’s because it’s not there. It’s gone.’”

In sum, the opportunity for suburban-style development in Staten Island’s mid-Island and South Shore neighborhoods made it an essential component of the city’s strategy to combat white flight in the 1970s and 1980s. A decade or so later, the globalization of finance capital available for real estate further amplified the pace of this development. The consequences of this growth, however, were severe. As local residents predicted, developing in wetland areas and the absence of storm sewers obliterated flood protections and left the area vulnerable to flooding from storms and other weather events.

## **Environmental Gentrification**

While the environmental consequences of rampant residential development were clear to Staten Island’s coastal communities, the implications

of waterfront over-development in other parts of the city have been more controversial. The availability of global capital, coupled with a prodevelopment mayoral administration, fueled a citywide building boom during the early 2000s. Former Mayor Michael Bloomberg vowed to rebrand New York as a luxury city (Brash 2011), seeing to it that between 2001 and 2010 one-third of the city was rezoned to make way for new, luxury apartment buildings (Furman Center for Real Estate and Urban Policy 2009). In particular, Bloomberg directed the New York City Economic Development Corporation to provide millions of dollars in subsidies to waterfront development in Manhattan, Brooklyn, and Queens; these boroughs converted former manufacturing zones into loft-, condominium-, and commerce-filled areas that catered to the lifestyles of the creative class,<sup>13</sup> or the upwardly mobile gentrifiers who could afford to live in the luxury city (Brash 2011; Greenberg and Aronczyk 2008; see also Hackworth 2002; Lees, Slater and Wyly 2013; Schlichtman and Patch 2013).

The concept of sustainability was a central component of this development, in part because it suggested a particular kind of progressivism and sophistication with which members of the creative class identified (see Greenberg 2015). Moreover, Michael Bloomberg was already a famed warrior in the global fight against climate change. Stressing sustainability, his mayoralty created bike lanes and street trees, installed green and white roofs, and took other measures designed to reduce the emissions that contribute to global warming. However, Bloomberg was equally famous for refusing to retreat from waterfront development. Notable climate scientists, meanwhile, frequently warned that the city's waterfronts were increasingly at risk from rising sea levels and storm surges (Navarro 2012). Further pointing out the degree to which waterfront development has eroded natural habitats, and caused nutrient pollution, historian Ted Steinberg calls the massive coastal flooding during Hurricane Sandy a "self-inflicted calamity" (Steinberg 2014).

The implications of contemporary redevelopment are especially felt by those living in nongentrifying areas like the North Shore. Elsewhere I define the joining of environmental improvements and sustainability measures to high-end redevelopment as "environmental gentrification" (Checker 2011). As formerly industrial waterfronts are cleaned up and greened for incoming, affluent residents, noxious facilities are displaced to those neighborhoods not slated for redevelopment, and which already host a disproportionate number of toxic facilities. Among other things, environmental gentrification highlights the way that popular political rhetorics and discourses about sustainability actually add to the environmental risks and burdens carried by low income communities of color (see Checker 2011, 2015). The following case describes the gentrification of

Gowanus, Brooklyn and exemplifies how environmental gentrification in one neighborhood leads to environmental degradation in another.

Completed in 1869, the Gowanus Canal connected the Upper New York Bay to Brooklyn's maritime and commercial shipping activity. Soon, factories, warehouses, tanneries, coal stores, and manufactured gas refineries sprang up alongside the Canal, and the neighborhoods surrounding it grew rapidly. These new populations generated more sewage, which drained downhill into the Gowanus. By World War I the Gowanus was the nation's busiest commercial canal and, arguably, its most polluted. In the 1950s the amount of dredging required to maintain the Canal made it no longer viable. In addition, the rise of the freight trucking industry was rendering the need for the Canal obsolete. Throughout the 1960s and 1970s industries declined until the Canal had become more of a dump site than a waterway. Its putrid waters, contaminated with toxic chemicals, sewage, and debris, became legendary (Pearsall 2013).

Throughout the late 1990s and early 2000s gentrification overtook all of downtown Brooklyn except for the areas adjacent to the Gowanus Canal. The waterway's reputation and reported stench continued to deter investors. But toward the late 2000s, artists who had been priced out of their gentrified neighborhoods found that the cheap rents and ample spaces of Gowanus outweighed its smells and noxiousness. As they settled in, popular cafés, clubs, art galleries, and restaurants followed. In 2009 the city caught on to this trend and launched an aggressive campaign to rezone parts of the neighborhood. Here again, with global financing behind them, real estate developers began to make grand plans for Gowanus (Navarro 2009; see also Pearsall 2013). The city facilitated these plans by offering incentives to those who wanted to purchase and redevelop contaminated properties (see Checker 2015).

Meanwhile, long-term Gowanus residents had been lobbying the EPA to clean the Canal since the 1970s. In 2009 the EPA finally heard their pleas and announced a plan to add the Canal to the federal Superfund list. The Bloomberg administration, however, stridently opposed the designation, arguing that it could scare away developers and stigmatize the area (Navarro 2009). Instead, the city proposed its own plan, a piecemeal strategy that relied on private development (funded partially through tax incentives) to clean contaminated properties around the Canal, and federal and state dollars to clean the water. After a protracted series of public meetings and delays, the EPA plan prevailed. While the city's grand rezoning plan was shelved, individual developers could apply for and receive single variances that enabled them to build large, multifamily apartment complexes. Soon, plans were in the works for a 470-residence condominium at

the edge of the canal, and a 700-apartment rental compound alongside it (Navarro 2009). Interestingly, the city's fears about the Superfund stigma seemed unwarranted. In 2013 a 56,000-square foot Whole Foods Market opened, complete with an in-house record shop, bike repair station, rooftop beer garden overlooking the Canal, and the only commercial rooftop greenhouse in the entire country. Median rent in Gowanus increased 17.4 percent to \$3,134, twice as much as Brooklyn as a whole in 2014, and the median sales price rose to \$785,000, up 6.1 percent from the year before (Kaysen 2014). The upcoming Gowanus Canal cleanup seemed to amplify development, rather than impede it.

### Reindustrialization and Vulnerability

In 2013 the EPA announced that it planned to dispose of dredged materials from the Canal by transporting the least toxic portion of the sediment to a barge just off the shore of Red Hook, a neighborhood about a mile from Gowanus (also gentrifying at a rapid pace). There, the sediment would be mixed with concrete and repurposed as construction materials. (Berger 2013). Red Hook residents, however, ferociously opposed the plan. Eventually, the EPA announced that neither Gowanus nor Red Hook would bear the environmental burden of treating Gowanus sludge. In fact, the agency promised to ship the waste out of Brooklyn entirely (Musumeci 2013).

Not coincidentally, several months later, North Shore residents learned of a permit application to expand operations at Flag Container Service so that the facility could start bringing in dredged spoils from across the five boroughs and process it into concrete mixtures (Rizzi 2013). Making matters worse, the facility would be located right near the site of a new plaza and green space being planned as part of a community-based initiative.

North Shore residents recognized that, as one of the few heavily industrialized waterfronts left in the city, they were bearing the brunt of gentrification. As activist Victoria Gillen commented in August, 2012, “Wonderful Hipster Havens are created; Water-front parks offer diversion to the residents of new “luxury” units. Where do the displaced heavy industrial firms go? ... Bottom line: the areas with people of color, people without tremendous economic resources, are paying the price for Bloomberg’s projects—while our taxes support these changes, we do not share in the benefits, and find ourselves, here on Staten Island, once again a dumping ground for the City’s unwanted garbage.”<sup>14</sup> In sum, the globalization of real estate investment, along with pro-development policies, fueled a real estate boom across most of the city’s waterfronts. Displaced industries



then concentrated in those neighborhoods that had been left out of the boom.

These shifts accompanied other kinds of shifts in global trade. For instance, in 2007 the Panamanian government began widening the Panama Canal so that it could accommodate enormous cargo ships, known as Post-Panamax vessels. Although the larger ships already served Chinese, European, and U.S. West Coast ports, the Canal was too narrow to allow them to pass through to U.S. East Coast and Gulf Coast ports, putting these ports at a serious trade disadvantage. In anticipation of the Canal's long-awaited widening, the Port Authority of New York and New Jersey (PA) initiated two major projects to expand Staten Island's ports to accommodate Post-Panamax ships. First, they issued a permit to raise the Bayonne Bridge; and second, they proposed to expand the Staten Island port into seventeen acres of regulated wetlands.

Unsurprisingly, both proposals came under fire from North Shore activists. First, they pointed out that the bridge-raising project could disturb local contaminants (in particular, much of the construction was taking place directly adjacent to the radioactive ADM site). Second, the project risked the health of thousands of local residents, truck drivers, and port workers who would be exposed to pollutants during the construction period as well as from the new ships. Studies estimate that just one of the gigantic ships spews out as much cancer-causing pollutants as 50 million cars every year (Cannon 2008). Both the completion of the bridge and the expansion of the port would bring larger ships closer to North Shore neighborhoods. Finally, the proposed expansion encroached on the western edge of Arlington Marsh, the largest tidal wetland and one of the last remaining natural wetlands in New York City (Sherry 2011). By extending the bulkhead and channeling the creek that flowed through the marsh area, the project would also likely affect tidal flow to other important wetlands (Schwartz 2007).

The campaign to save Arlington Marsh drew support from across the borough, bringing North Shore activists together with their South and East Shore counterparts. The campaign emphasized the importance of the Marsh to the Island's entire ecosystem, which was already made vulnerable by decades of residential and industrial development. In other words, the dangers of overdevelopment and impending climate change affected all of the Island's coastal communities. Beryl Thurman articulated these concerns in an e-mail to her usual list, which included the New York City Council; the mayor; officials from city, state, and federal environmental regulatory agencies; and assorted civic leaders. Thurman wrote, "What preventive measures can New York City provide to protect the coastal communities before a severe Nor ' Easter [sic], or class 1 to 3 Hurricane hits

Staten Island? ... It can and will happen, it's just a matter of when." Notably, this e-mail was dated June 29, 2010, over two years before Sandy hit.

## After the Storm

Even the prescience of Beryl Thurman's e-mail about the dangers of climate change could not predict the extent of the destruction wrought by Hurricane Sandy. On the East and South Shores of Staten Island, peak storm tides rose as high as sixteen feet and spread three-quarters of a mile inland (NYRCRP 2014). Twenty-three of New York City's forty-three deaths caused by the storm occurred on the South and East shores, and thousands of households in those areas were displaced. In mid-October 2013, nearly a year after Hurricane Sandy hit, I attended a public workshop sponsored by New York Rising, the state's storm recovery program. The workshop was held in a high school gym in Midland Beach, one of the areas hardest hit by the storm. Throughout the gym, the state had set up stations based on different categories of recovery—infrastructure, housing, transportation, natural resources, and so on. Attendees were asked to go to the stations, write down their suggestions on sticky notes, and stick them on posters displayed at each station. By the end of the meeting, the posters were filled with sticky notes with statements such as, "Give us what we're entitled to," "We paid insurance for a house that's gone," "Accelerate the blue belt," "Without proper drainage, what good is anything else?," and "They never should have let them build over there."

By the date of the meeting, almost no residents had settled their recovery claims, or received money from the city's Build it Back Program, which was meant to help eligible applicants make up the difference between insurance payouts and costs of repairs. Although more than five thousand Staten Islanders registered for the program, six months later, only a handful had reached the second phase of the process, home evaluations, and no one had received any funds.<sup>15</sup> Meanwhile, many displaced homeowners were still paying mortgages on their houses, as well as rents on their temporary homes. As well, thousands of storm survivors complained that their private insurance companies had barely paid out on their claims. "A lot of people are only getting half of their policy. So they're getting \$125,000 but they need more like \$250,000," said Nicole Romano-Levine, president of the New Dorp Civic Association. She went on to explain that insurance payouts were based on national averages that were far below the costs of construction in New York City.

But the main issue on meeting-goers' minds was buyouts. In February 2013, three months after the storm, Governor Cuomo had announced the

state program that offered homeowners in Fox Beach, Oakwood Beach and Ocean Breeze, all of which suffered severe storm damage, 100 percent of the prestorm value of their homes. The state would demolish the houses and leave the properties undeveloped, returning the land to wetlands. But a few weeks later, the city put forward its own acquisition plan. In this case, though, it offered homeowners poststorm home values plus a relocation bonus. The city also intended to redevelop land it acquired to be more storm-resilient. Over a thousand Staten Islanders signed petitions to be included in the state's program, but few supported the city's acquisition program. Just before the meeting, however, the state announced that it would not be expanding its buyout program beyond the areas already mentioned, although the city would continue to acquire certain storm damaged properties.<sup>16</sup>

A sense of betrayal pervaded the meeting, as residents listed all of the ways that development had chipped away at their storm protections. A woman named Joanne, for instance, remembered that sometime around 2010 she awoke to find the city taking down a bunch of trees across the street from her house to create a soccer field. "As soon as we saw the trees come down, we got nervous," she said. Joanne, whose family had lived in a community called New Dorp for four generations, did not want a buyout herself, but she supported her neighbors who were signing up for them. "I want people to have the option," she explained.

Other residents believed that the city should have never allowed development in wetlands. "We can't take a beating every year," said Dimitri, who along with his neighbor, Alex, purchased townhomes in 2002. Their townhouse development was just a few blocks from the Lower New York Bay in a former marsh. "We suspected [the development] was in a wetlands when we bought," they said, but they assumed since the city had permitted a development there, "it was safe." But every year, they experienced floods. Both men signed a petition asking to be added to Governor Cuomo's buyout program. For them, it made perfect sense that the government should relocate them since it was the government that had betrayed them in the first place. "Rising sea levels makes it all worse," said Alex.

In a sense, residents believed that the whole system of homeownership had failed them. For years they invested in homeownership and the complex of institutions—insurance, property taxes, mortgages, and so on—that it entails. Now, they were unable to collect on their investments. As Debbie Manus said, "We did everything right, and now you're telling us that we're not entitled [to relief]." Others agreed, saying, "It doesn't seem like they care about the homeowner," and "The middle-class working homeowner is falling through the cracks here."

## Conclusion

Studies of the aftermath of disasters in the United States reveal similar levels of frustration, disaffection, and betrayal as survivors encounter labyrinthine bureaucracies (Arena 2012; Bullard and Wright 2009; Button 2010; Reed 2006). In most of these cases, people struggle to return to and rebuild their original homes. But Sandy survivors were different. They fought to *relocate* from, rather than return to, their homes, no matter how deep their attachments had been. I argue that these responses reflect several recent political and economic shifts.

Across the Island, residents' foretelling of the risks of overdevelopment, and their inability to stop it, created a common sense of skepticism. While East and South Shore activists continued to support and campaign for Republicans, and North Shore activists consistently voted Democratic, all of these Islanders' agreed that in certain ways their shared experiences overrode party partisanship. For instance, when I asked one South Shore activist how she reconciled her different political views with those of her colleagues on the North Shore, she answered, "The differences don't matter. This is a dire situation. It crosses party lines all over the place."

Historically, home ownership had insulated Staten Island's middle-class residents from the vulnerabilities facing the low-income and minority residents of the North Shore. But an era of late-stage global capitalism ensured that only the very wealthy and privileged were protected from the dangers of rising sea levels and increasing storms. The recognition of this situation effectively ruptured the social contract between middle-class homeowners and a government they saw as increasingly controlled by financial interests. Perhaps the case of Staten Island shows us that in the wake of this rupture, new forms of dis-sensus politics may arise to offer crucial alternatives to an unjust, exploitative, and inherently disastrous system.

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## Notes

I would like to thank the editors of this volume, anonymous reviewers and, most of all, the residents and activists of Staten Island for their contributions to this essay.

1. I have used pseudonyms unless permitted otherwise by the person quoted.
2. This quote is taken from a letter to Governor Cuomo, written approximately three months after the storm. The letter is posted on the following website: <http://foxbeach165.com/stories/>.
3. Residents whose homes were damaged during Irene claimed that they never received insurance reimbursements or Federal Emergency Management Agency (FEMA) recovery money.
4. MLLW is the standard against which storm tides are measured (Blake et al. 2013).
5. Geologists agree that the differential damage had much to do with the fact that the storm was funneled through Raritan Bay, between southeastern Staten Island and New Jersey, as it made its way toward the Atlantic coast. Combined with the strong winds, the storm surge kept waters from receding during low tide as they normally would (Gammon 2012).
6. Research conducted in the aftermath of Hurricane Katrina found that flood waters dislodged and distributed heavy metals in some places; in others, Katrina's waters breached retaining walls and other barriers meant to seal in toxic chemicals (Rotkin-Ellman et al. 2010; Valhouli 2012; Zahran et al. 2010).
7. See US EPA 2016.
8. Popik 2005.
9. U.S. EPA 1987.
10. Data obtained from: <http://www.city-data.com/neighborhood/Midland-Beach-Staten-Island-NY.html>
11. Data obtained from: <http://www.city-data.com/neighborhood/Midland-Beach-Staten-Island-NY.html>
12. Randall as quoted on the Snug Harbor website. See <http://snug-harbor.org/about-us/history/>
13. Economist Richard Florida coined this term to refer to upwardly mobile professionals who work in a range of post-industrial jobs including finance, insurance, law, education science, engineering, computer programming, research, as well as arts, design, and media. He predicted that these people would drive economic growth in 21<sup>st</sup> century cities (Florida 2002).
14. This quote is taken from an unpublished response to an editorial in *Architects Newspaper* (Iovine 2012). The response was written and circulated (via email) by Victoria Gillen the day after the editorial's publication.
15. Fourteen thousand people applied for assistance from the Build it Back Program.

But in 2014, two years after the storm, only 727 construction projects had been started and 878 reimbursement checks had been sent out, up from zero in January of that year (Wolfe 2014).

16. In the end, no further land acquisitions were protected from further development.

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