Disaster Archipelago

Locating Vulnerability and Resilience in the Philippines

Edited by
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Patz, J. A., Campbell-Lendrum, D., Holloway, T., & Foley, J. A. (2005). Impact of regional climate change on human health. *Nature*, 438(7066), 310–317.

Pezeshki, S. R., DeLaune, R. D., & Patrick, W. H. (1990). Flooding and saltwater intrusion: Potential effects on survival and productivity of wetland forests along the US Gulf Coast. *Forest Ecology and Management*, 33, 287–301.

Piñol, J., Terradas, J., & Lloret, F. (1998). Climate warming, wildfire hazard and wildfire occurrence in coastal eastern Spain. *Climatic Change*, 38(3), 345–357.

Quarantelli, E. L. (2000). Disaster planning, emergency management and civil protection. The historical development of organized efforts to plan for and to respond to disasters. Newark, Delaware (Preliminary Paper Nr. #301).

Quine, C. P. (1995). Assessing the risk of wind damage to forests: Practice and pitfalls. In M. P. Coutts, & J. Grace (Eds.), *Wind and Trees* (pp. 379–403). Cambridge: Cambridge University Press. doi:10.1017/CBO9780511600425.022.

Rosenzweig, C., Tubiello, F. N., Goldberg, R., Mills, E., & Bloomfield, J. (2002). Increased crop damage in the US from excess precipitation under climate change. *Global Environmental Change*, 12(3), 197–202.

Shyam, K. C. (2013). *Cost Benefit Studies on Disaster Risk Reduction in Developing Countries*. Washington, DC (Eap Drm Knowledge NOTES. Disaster Risk Management in East Asia And The Pacific Nr. 27).

Smith, K. (2013). *Environmental Hazards: Assessing Risk and Reducing Disaster*. Routledge.

Solomon, S., Plattner, G. K., Knutti, R., & Friedlingstein, P. (2009). Irreversible climate change due to carbon dioxide emissions. *Proceedings of the National Academy of Sciences*, PNAS-0812721106.

Sorensen, R. M., Weisman, R. N., & Lennon, G. P. (1984). Control of erosion, inundation, and salinity intrusion caused by sea level rise. In Barth, M. C., & Titus, J. G. (eds), *Greenhouse Effect and Sea Level Rise. A Challenge for this Generation*. Van Nostran Reinhold Company Inc, New York, pp. 179, 214.

Titus, J. G., Park, R. A., Leatherman, S. P., Weggel, J. R., Greene, M. S., Mausel, P. W., . . . & Yohe, G. (1991). Greenhouse effect and sea level rise: The cost of holding back the sea. *Coastal Management*, 19(2), 171–204.

Turvey, R. (2007). Vulnerability assessment of developing countries: The case of small-island developing states. *Development Policy Review*, 25(2), 243–264.

UNFCCC. (2007). *Investment and Financial Flows to Address Climate Change*. Bonn: U.N. Framework Convention on Climate Change.

Vanzi, S. J. (1998). Palawan, Puerto Princess in State of Calamity. Newsflash Philippine Headline News Online http://www.newsflash.org/199812/ht/ht000617.htm

World Bank. (2009). *The Costs to Developing Countries of Adapting to Climate Change: New Methods and Estimates. Global Report of the Economics of Adaptation to Climate Change Study*. Consultation Draft. Washington, DC.

Wu, S. Y., Yarnal, B., & Fisher, A. (2002). Vulnerability of coastal communities to sea-level rise: a case study of Cape May County, New Jersey, USA. *Climate Research*, 22(3), 255–270.

Yodmani, S. (2001). *Disaster Risk Management and Vulnerability Reduction: Protecting the Poor*. Paper Presented at The Asia Pacific Forum on Poverty.

Conclusion

Reframing "Disaster"

Noah Theriault

What is a disaster? Close your eyes and concentrate on the term. What do you see? If you're like me, your mind will cycle through a stream of demolished buildings, devastated landscapes, mangled infrastructure, and battered bodies. An online image search for "disaster" yields the same—a montage of what one encounters in the news in the wake of typhoons, fires, floods, earthquakes, tsunamis, volcanic eruptions, and other acute, large-scale events. If you dig a bit deeper, you may also turn up images of major industrial "accidents," perhaps the devastating gas leak at Union Carbide's pesticide plant in Bhopal, India (in 1984), or the catastrophic failure of a tailings dam at BHP Billiton's iron mine in Bento Rodrigues, Brazil (in 2015). Or perhaps you or your loved ones have lived through one of these events, leaving you with a personal stream of images to recall. If so, please forgive me for calling up those memories. But I would like to invite you, too, to join me in thinking about this question: what *is* a disaster?

Whether we know them firsthand or only through the media, disasters shape all of our lives. Preventing, preparing for, and responding to disasters have become primary functions of our governments—and a key indicator of a government's (in)competence, as both George W. Bush and Noynoy Aquino learned the hard way. Indeed, disasters are a ubiquitous part of our everyday lives not just because of their iconic place in the news and popular culture, but also because of how they motivate, test, and at times thwart so many of the institutions and infrastructures we interact with and depend on.

We can see, then, that disasters are more than catastrophic events. As critical theorists have argued, managing the risk of disaster constitutes a central organizing principle of contemporary governance (Beck, 2010; Dean, 2010; Giddens, 1999; Oels, 2013). And this principle is only reinforced by the fact that, despite all of the institutions and infrastructures arrayed against them,

disasters continue to occur and continue to cause immense suffering. If, as some argue, the planet has entered a geologic epoch characterized by the cumulative impacts of (post)industrialism (Steffen et al., 2007; Zalasiewicz et al., 2015), then it should be no surprise that we also appear to be living in an age of disaster risk management. The same dynamics that have driven the global expansion of (post)industrial capitalism have impelled efforts to manage, securitize, and indeed profit from risk (Fletcher, 2012; Gunewardena & Schuller, 2008; Johnson, 2014).

Have we, then, gotten to the bottom of our question? Not yet. Disasters are catastrophic events that constitute an organizing principle of modern governance, to be sure. But even this broad view of disasters, I contend, is insufficient—or, rather, even this broad view of disasters points us toward too narrow a set of questions about what makes a disaster in a "disaster-prone" country like the Philippines.

What I hope to offer in this brief afterword is a provocation about the discursive work that the term "disaster" performs as a category for enframing lived experiences, ordering social relations, and interpreting the world. I draw the concept of enframing from political theorist Timothy Mitchell (2002), who has shown how certain concepts and categories come to "enframe" our reality—that is, how they are encoded in dominant epistemologies, codified in governing institutions, and ultimately imposed onto the material world. Mitchell has shown how the concept of "the economy" has come to enframe reality for a majority of the world's governments and societies, and I would argue (but here can only assert) that the same is true of "disaster" (ibid.). Echoing anthropologist Clifford Geertz's (1973) theory of religion, we can see how enframing concepts work not just as models of the world, but also as models *for* it.

So if you will allow me to stipulate that "disaster" is an enframing concept, then let us proceed with the provocation about its effects. What work does the concept of "disaster" do? Among the possible answers to this question, the most crucial, in my mind, concerns the patterns of ontogenesis, temporality, and spatiality that the concept of disaster enframes. Roberto Barrios (2017, p. 153) reminds us that "disaster" comes from the old Italian *diastro*, which "was used to convey the idea that the positions of stars and planets could have destructive effects on human beings." Citing Anthony Oliver-Smith (1999), Roberto Barrios adds that "this particular view of disasters remained in use into the twentieth century, when the calamitous effects of floods, earthquakes, and technological malfunctions continued to be seen as unavoidable events that societies could only respond to, but not prevent" (p. 153–154). This generalization would seem to overlook the tendency on the part of many past (and present) societies to see disasters as a form of divine punishment (Bankoff, 2018). Still, though, the point remains that the term

disaster enframes a world in which there are exceptional, destructive, potentially cosmogenic events that exceed human control.

As Barrios (2017, p. 54) also notes, mainstream Western perspectives on disasters have evolved as the physical and natural sciences have observed and sought to explain their ontogenesis and as the social sciences have sought to account for their uneven socio-spatial effects. Drawing on Verchik's concept of "disaster justice," Bankoff observes that scientific explanations of disasters have coincided with changing modes of governance, such that "the state is regarded as having a mandatory duty to shield people from physical harm through its laws and institutions" (2018, p. 364). Disasters are today one of the sources of harm that states are supposed to manage or even prevent. And even if states cannot always control the geophysical force of, say, an earthquake, the disaster-justice framework holds that societies (and states, in particular) should organize things in such a way as to mitigate the effects of such hazards on the population. That societies do this in systematically uneven ways has become the object of extensive research on vulnerability (Bankoff et al., 2004; Wisner et al., 2004).

I will have more to say on the social production of disasters below. For now, I want to draw our attention to what connects "modern" conceptions of disaster with earlier ones: disasters are above all framed as self-contained, exceptional, locatable *events* (see also Hewitt, 1983). They may intersect with gradually unfolding processes, they may have multiplex, diffuse, even global causality, and they may have far-reaching impacts. But they are, by definition, temporally and spatially circumscribed. Even as climate change and the prospect of the Anthropocene bring humans increasingly into the center of disaster causality narratives, we retain the concept of disasters as catastrophic *events* that exceed whatever measures are in place to prevent or control them. The entire cross-disciplinary field of disasters studies is organized around this concept, and as noted above it is one of the organizing principles of modern, technocratic governance.

So why does this matter? Why does this ontological, temporal, and spatial enframing of disaster concern me? The problem, I believe, lies in how this enframing undermines efforts to denaturalize disasters and pursue accountability for the systematic forms of violence and injustice they expose. As I hope to show below, the chapters in this volume offer an important but ambivalent set of insights with which we can think about these effects.

DENATURALIZING DISASTERS

In response to Hurricane Katrina, Marxist geographer Neil Smith famously wrote that "there's no such thing as a natural disaster" (Smith, 2006). This

statement was and is something of a truism, but it is worth pausing to reflect on what it means in relation to the people and places addressed in this volume. Invoking a well-established principle in critical disaster studies, Smith reminded us that what makes an event disastrous with respect to human lives and livelihoods is not just the physical force of the event in itself, but also how that force interacts with the infrastructures that mediate our interactions with our surroundings and produce our exposures to hazards therein. Katrina would not have been so devastating if the levees had been stronger and the neighborhoods beneath them better served by governing institutions. This is how many critical scholars of disaster understand vulnerability—as a socio-political artifact rather than an inevitable effect of geography or "nature."

But if disasters cannot be said to be natural, what about the hazards that co-produce them? Hazard here refers to the force or source of harm and risk to the capacity or likelihood of a hazard to cause harm in a particular context. When critical scholars like Smith say that there is no such thing as a natural disaster, part of what they are saying is that risk is socially produced. Many scholars of risk, including Anthony Giddens (1999) and Ulrich Beck (2009), have long made a conceptual distinction between "manufactured" and "external" risks. External risks exist in the space where "forces of nature" collide with our infrastructures, while manufactured risks originate from the social, technological, and infrastructural (dis)order of society itself. Think earthquakes, on the one hand, and chemical spills on the other. In his highly influential work on the "risk society," Beck (1992) called attention to how manufactured risks have become so systemic and trans-scalar that they pose a threat to the very social orders that produced them. But to the extent that "modern" societies also manufacture their systemic vulnerability to certain putatively external hazards (e.g., drug-resistant pathogens), it becomes difficult if not impossible to sustain any meaningful sense of risks that are external to the infrastructures, institutions, and social orders in which we live.

But it's not just that risks are socially and relationally produced. It's that so too are many of the hazards that we have often imagined as "natural" or "external." Industrial activities are causative factors in extreme weather (exacerbated by anthropogenic climate change), earthquake swarms (induced by the underground disposal of wastewater from hydraulic fracturing), catastrophic wildfires (in the wake of fire suppression), and so on. In a time of anthropogenic disruption at the planetary scale, it now seems obsolete at best to distinguish risks that originate without human society from those that originate within. Risks are neither external nor internal to human society—they are systemic, and the systems that produce them are hybrid assemblages that include humans and our technologies along with all of the organisms, substances, and forces with which we co-produce the world.

What of disasters, then, if we accept that the risks they unleash are always hybrid, systemic, and more-than-human? As noted above, critical scholars have long since dispatched with the concept of "natural" disasters, but we cannot simply then conclude that all disasters are manufactured. Grappling with this puzzle, historian Sara Pritchard (2012) has described the interlocking earthquake, tsunami, and nuclear meltdown that struck Japan in March 2011 as an "envirotechnical disaster." "It is precisely," she writes, "the complex, dynamic, porous, and inextricable configuration of nature, technology, and politics that together helps us understand all that the single word 'Fukushima' now signifies" (p. 233). Security theorist Simon Dalby (Dalby, 2017) has gone a step further, arguing that "social formations are very much geological formations too, and understanding geopolitics in these terms is now unavoidable" (p. 238). This leads him to conclude that "the disaster at present loose in the biosphere is industrial humanity wreaking havoc directly and indirectly on most other species" (p. 247). Dalby's problematic choice of words erases the varying degrees of responsibility and exposure within so-called "industrial humanity." Nevertheless, his work is a clear example of how changing (perceptions of) geopolitical and geophysical conditions are shaping the evolution of critical thought on the ontogenesis, temporality, and spatiality of disasters.

To the extent that anthropology provides a disciplinary common denominator for this volume, it is worth noting that anthropologists are also playing an important role in rethinking hazards, risks, and disasters. In his recent literature review, Barrios (2017) asserts that many anthropologists define disasters as "the diachronic processes in which human practices enhance the destructive and disruptive capacities of geophysical phenomena, technological malfunctions, and communicable diseases" (p. 155). In light of the concerns I raised about (about the spatially, temporally, and ontologically circumscribed conception of disasters that enframes our reality), I should perhaps be heartened to see fellow anthropologists defining disasters in this way. And, in a sense, I am. Then, however, I scan the headlines, and I see how entrenched the older, more circumscribed notion of disaster remains in society at large. I read about multibillion-dollar efforts to shore up Lower Manhattan from future storm surges even as millions across the United States lack adequate shelter. Worse still is the fact that an academic volume on the Philippines is viable for international publication in large part because of its focus on disasters, as if matters of inequality, governance, and environmental change in the Philippines are not significant enough in their own right. All of this suggests the extent to which disasters remain a hegemonic enframing of our reality and a category immensely generative of thought, policy, and action.

Implying his own discomfort with this reality, Barrios also uses his review takes on the common framing of disasters as "revelatory crises" that lay

bare the problems of (global) society. "Rather than being revelatory crises," he writes, "disasters are perhaps better described as contested arenas where hegemonic visions of societal advancement are challenged by the voices and experiences of those most impacted by catastrophes" (p. 157). Pivoting this point, I will in what follows endeavor to consider how this volume does (and does not) trouble the ontological, temporal, and spatial assumptions that underpin disaster as a hegemonic unit of analysis, governance, and experience.

INEQUALITY AND DISPOSSESSION IN AN AGE OF SYSTEMIC RISK

If any one theme unites critical scholarship on disasters, it has to be inequality—and for good reason. In a transnational capitalist system structured around inequalities of class, race, gender, nationality, ability, etc., risks of all kinds are distributed unevenly: as Beck succinctly put it, "wealth accumulates at the top, risks at the bottom" (1992, p. 35). This is more than a correlation. At the root of this reality are historical and ongoing processes of what David Harvey (2004) calls accumulation by dispossession. Recent work in critical disaster studies has helped to reveal how long-standing forms of colonialism, institutionalized racism, and capitalist accumulation systematically extract labor and value from the same bodies and lands that are then treated as disposable repositories for risk (Giroux, 2006; Pulido, 2016).

But this dynamic shapes more than the outcomes of disastrous events—it is an integral part of the systems that carry out disaster preparation and recovery. In their study of disaster risk management in Manila, Maria Khristine Alvarez and Kenneth Cardenas (2019) show how the forced relocation of informal settlements constitutes a form of "resiliency revanchism" that is deeply entangled with the broader spatial politics of class struggle. Similarly, for Hurricane Katrina and the 2010 Haiti earthquake respective, Vincanne Adams (2013) and Mark Schuller (2016) uncover the complex, often unintended ways in which recovery efforts create exceptional moments for the accumulation of wealth and power at the expense of marginalized survivors. Such studies speak to what journalist Naomi Klein (2007) famously called "disaster capitalism."

Crucially, though, it's not just that disaster recovery provides rent-seeking opportunities for the most powerful capitalists and humanitarian-aid agencies. Disaster recovery can actually serve to *increase* the wealth and power of relatively privileged survivors. In a longitudinal, quantitative study of disaster recovery in the United States, James Elliott and Junia Howell (2017) find that "populations that are privileged in terms of education, race or homeownership

gain wealth in the aftermath of natural disasters" (emphasis added; quote from Howell, 2018). While these findings do not speak directly to the specifics of post-disaster recovery in the Philippines, we can see similar dynamics at work in many of the chapters in this volume. Riosa and colleagues, for example, point to the inadequacy of international NGO services that target specific survivor groups, such as children, effectively commodifying them as objects of aid delivery. Cajilig likewise shows how Haiyan survivors' decisions not to evacuate are not "irrational," but rather based on detailed local knowledge and experience, including the reality that evacuation increases the likelihood of displacement and dispossession.

Some scholars of risk have proposed that conventional ways of analyzing difference—namely class, race, ethnicity, and gender—are insufficient for thinking about inequality in an age of global climate change and ecological crisis. Beck went so far as to suggest that such concepts were too "soft" to capture the "explosiveness of inequality" we face in the twenty-first century (Beck, 2010). As part of a broader critical conversation, this volume leaves no doubt about the central role of 'explosive' global inequality in producing disasters in the contemporary Philippines. And particularly in light of the neoliberal policies that have reshaped governance in the Philippines over the past generation, it is safe to say that the insights of Neil Smith, Naomi Klein, and Henry Giroux find traction here. But the contributors do more than reinforce established theories of global risk, accumulation by dispossession, and disaster capitalism. They also nuance and complicate our understanding of these phenomena.

DIFFERENCE AND AGENCY AMID THE DISASTERS OF EVERYDAY LIFE

Against this a backdrop of explosive global inequality, the contributors to this volume never lose sight of the highly localized material and cultural contexts in which people live out their daily lives and come to terms with the risks they face. This is significant, in part, because it reminds that class, gender, race, ethnicity, age, ability, and other intersecting structures of difference remain central to the production and experience of risk. More important still, the volume reminds us that experiences of risk are uneven not just across social groups but also within them. Across the chapters, we encounter varying experiences *within* communities of indigenous farmers (as seen in the chapters by Webb and Smith), ethnically diverse fishers (Regionel et al. and Membrebe et al.), displaced survivors (Cajilig, Luna et al., and Riosa), and urban slum residents (Alejandria and Ancheta et al.). We encounter these communities as they actually exist: internally differentiated and dynamic collections of

actors with uneven access to resources, conflicting knowledges, and divergent desires.

Disasters in particular tend to efface such complexity—they help to reveal inequality but they are also, we are told, moments in which people unite, work together, and transcend difference. What we learn from the accounts in this volume is that, even and perhaps especially in the midst of disaster, differences matter. Not only are social differences at the core of what produce uneven levels of risk, differences powerfully influence how people respond to risks when they are realized. Disasters may demand cooperation, but they do not produce solidarity or altruism from thin air. The form of *bayanihan* cooperation described, for example, by Luna and colleagues occurs within not despite local, class-based solidarities and patronage networks.

This attention to context helps us see that, just as there is no such thing as a natural disaster, there is likewise no such thing as a disaster in the singular. Any event officially deemed a disaster, such as a typhoon, drought, or flood, is constituted by its relation with other hazardous forces—forces that are routinized despite the widespread harms they inflict. What made Typhoon Haiyan so disastrous was not just the storm's strength, but its collision with the social and environmental depredations of a disastrously unequal political-economic system. Cajilig's analysis suggests that many of those who refused to evacuate did so because typhoons are only one of the hazards they must negotiate at any given time, and these include the very institutions ordering them to evacuate.

The same can be said for slum communities in Manila, where recurrent floods are a harmful but by no means uncomplicated obstacle in residents' constant search for food and money. Manila's slum communities live with the everyday disaster of extreme inequality and precarity. But the accounts in this volume aim to break the mold of victimhood, which too often serves as the only template for representing the lives of marginalized communities. In the complementary chapters by Alejandria and Ancheta and colleagues, we learn how both elders and children perform vital, but frequently overlooked forms of labor that both ensure their survival and expose them to risk. We are reminded of their agency and "*diskarte*" (skill, resourcefulness, attraction of good fortune) as they develop ways to subsist and endure. These acts should not console us—the structural violence these people experience every day is an unconscionable tragedy. Rather, what these chapters offer is a concrete illustration of lives that endure *in spite of* that violence. Such insights are vital to challenging the erasure of groups usually imagined to be dependent or otherwise passive participants in social reproduction.

But these accounts show us the flipside of disaster capitalism: just as capital seeks "investment" opportunities in the wake of acute disasters, those who live most precariously in the aftermath of dispossession may look to floods as an "opportunity" to gather saleable or edible items in the runoff. Alejandria recounts the story of Aling Mary, an elder who died not in a flood but from heat stroke after years of struggling to feed herself and her disabled son. After Aling Mary was "buried in an unmarked grave in the city cemetery," her son was taken by state and her home "demolished by the neighbors who proceeded in claiming the land as an extension of their undocumented property."

The multiplicity of disaster also comes through clearly in the chapters by Smith and Webb, who explore how indigenous farmers in Pala'wan experience food insecurity amid rapid deforestation, dispossession, and frenzied commodification of the landscape. In Webb's account, indigenous Tagbanua honey gatherers attribute the ebbs and flows of wild forest honey to the intermittent blossoming of certain trees, which in turn reflects events like distant volcanic eruptions. But there is a more immediate disaster at work in Webb's analysis, that of honey's gradual decline—a phenomenon remarked upon by elder Tagbanua but difficult to independently quantify. Like honey, rice is symbolically ubiquitous in the lives of indigenous communities in Pala'wan even though materially it is quite often absent. Smith relates how rice, although long central to Pala'wan cosmology, has only recently become central to their diets. As rice has displaced other starches throughout island Southeast Asia, Pala'wan too have come to experience its scarcity as a manifestation of hunger and hardship. By using these key foods as ciphers for indigenous loss and persistence amid large-scale, often disastrous forces of change, these accounts show that disasters are produced not just socially but also culturally—that they ramify not just through social structures and class struggles, but also through collective memories and cosmologies.

Reflecting on the highly localized, co-constitution of disaster, several chapters suggest concrete changes in how the Philippine state and other institutions seek to prepare for and respond to hazards. Both Regionel et al. and Membrebe et al. indicate the need for democratic governance at the local level so that communities can address their needs in light of micro-level histories and conditions. This may mean taking specific technical or engineering measures to prepare for disasters, but it may also mean resisting land grabbing by developers, fostering alternative livelihoods, expanding education access, and providing better sanitation. Theirs is a vital reminder that basic principles of sustainable human development and political empowerment are often the best protection that communities have against hazards, whether those come from a spiraling global climate or a predatory global elite. And no less vital is Mangada et al.'s caution against uncritical visions of community "resilience." Examining the many systemic failures of accountability in the state's response to Haiyan, they suggest that focusing on local capacities for resilience is willfully naïve at best. Corrupt, unaccountable governance in the

hands of predatory elites is, in some ways, the greatest hazard that the world faces today.

CONFRONTING RESURGENT AUTHORITARIANISM

What are the valences of disaster research in an age of resurgent right-wing authoritarianism? I have suggested that all of us—whether in the Philippines, the United States, or elsewhere—live amid multiple, overlapping disasters unfolding at different temporal and spatial scales and that our experiences of these disasters reflect structural inequalities and, in some cases, differing ontologies. When we organize our institutions—and our research—around conventional concepts of "disaster," we enframe reality in a way that obscures the temporal and spatial continuity of the multiple, overlapping disasters that characterize life on earth.

In seeing "disasters" everywhere I look, I risk sounding as if I have taken a page from the January 2017 inauguration speech of a certain aspiring authoritarian. That resonance is not a coincidence, but it's not because I agree with Trump's white-nationalist agenda. My aim is to amplify this volume's attention to the disasters of creative destruction, dispossession, and structural violence that surround us but that many of us are privileged enough not to notice. The mystification of these disasters is what makes it possible for demagogues to emerge and consolidate power. And these are the disasters that scholarship on disaster too often overlooks. As the contributions to this volume suggest, disaster research has the potential to contribute to the (re) making of worlds that are more conducive to what Anna Tsing calls "collaborative survival" (Tsing, 2015). But as long as we continue to treat "disasters" as discrete objects of governance and scholarly inquiry, we may unintentionally undermine parallel efforts to address uneven exposure to risk as part of larger historical processes and structures of inequality.

REFERENCES

Adams, V. (2013). *Markets of Sorrow, Labors of Faith: New Orleans in the Wake of Katrina*. Duke University Press.

Alvarez, M. K., & Cardenas, K. (2019). Evicting slums, 'Building Back Better': Resiliency revanchism and disaster risk management in Manila. *International Journal of Urban and Regional Research, 43*(2), 227–249.

Bankoff, G. (2018). Blame, responsibility and agency: 'Disaster justice' and the state in the Philippines. *Environment and Planning E: Nature and Space, 1*(3), 363–381.

Bankoff, G., Frerks, G., & Hilhorst, D. (2004). *Mapping Vulnerability: Disasters, Development and People*. New York: Earthscan.

Barrios, R. E. (2017). What does catastrophe reveal for whom? The anthropology of crises and disasters at the onset of the anthropocene. *Annual Review of Anthropology, 46*, 151–166.

Beck, U. (1992). *Risk Society: Towards a New Modernity*. London: Sage.

Beck, U. (2009). *World Risk Society and Manufactured Uncertainties*. Paper presented at the Iris.

Beck, U. (2010). Remapping social inequalities in an age of climate change: For a cosmopolitan renewal of sociology. *Global Networks, 10*(2), 165–181.

Dalby, S. (2017). Anthropocene formations: Environmental security, geopolitics and disaster. *Theory, Culture & Society, 34*(2–3), 233–252.

Dean, M. (2010). *Governmentality: Power and Rule in Modern Society*. Sage Publications.

Elliott, J. R., & Howell, J. (2017). Beyond disasters: A longitudinal analysis of natural hazards' unequal impacts on residential instability. *Social Forces, 95*(3), 1181–1207.

Fletcher, R. (2012). Capitalizing on Chaos: Climate change and disaster capitalism. *Ephemera: Theory & Politics in Organization, 12*.

Geertz, C. (1973). *The Interpretation of Cultures*. New York: Basic Books.

Giddens, A. (1999). Risk and responsibility. *The Modern Law Review, 62*(1), 1–10.

Giroux, H. A. (2006). *Stormy Weather: Katrina and the Politics of Disposability*. Routledge.

Gunewardena, N., & Schuller, M. (2008). *Capitalizing on Catastrophe: Neoliberal Strategies in Disaster Reconstruction*. Rowman Altamira.

Harvey, D. (2004). The "New Imperialism": Accumulation by dispossession. *Actuel Marx*, (1), 71–90.

Hewitt, K. (1983). The idea of calamity in a technocratic age. In K. Hewitt (Ed.), *Interpretation of Calamity: From the Viewpoint of Human Ecology* (pp. 3–32). Boston: Allen & Unwin.

Howell, J. (2018). Hurricane season not only brings destruction and death but rising inequality too. *The Conversation*. Retrieved from https://theconversation.com/hurricane-season-not-only-brings-destruction-and-death-but-rising-inequality-too-102085

Johnson, L. (2014). Geographies of securitized catastrophe risk and the implications of climate change. *Economic Geography, 90*(2), 155–185.

Klein, N. (2007). *The Shock Doctrine: The Rise of Disaster Capitalism*. Macmillan.

Mitchell, T. (2002). *Rule of Experts*. Berkeley: University of California Press.

Oels, A. (2013). Rendering climate change governable by risk: From probability to contingency. *Geoforum, 45*, 17–29.

Oliver-Smith, A. (1999). What is a disaster? Anthropological perspectives on a persistent question. In A. Oliver-Smith & S. Hoffman (Eds.), *The Angry Earth: Disaster in Anthropological Perspective* (pp. 18–34). Routledge.

Pritchard, S. B. (2012). An envirotechnical disaster: Nature, technology, and politics at Fukushima. *Environmental History, 17*(2), 219–243.

Pulido, L. (2016). Flint, environmental racism, and racial capitalism. *Capitalism Nature Socialism, 27*(3), 1–16.

Schuller, M. (2016). *Humanitarian Aftershocks in Haiti*. Rutgers University Press.

Smith, N. (2006). There's no such thing as a natural disaster. Retrieved from http://forums.ssrc.org/understandingkatrina/theres-no-such-thing-as-a-natural-disaster/

Steffen, W., Crutzen, P. J., & McNeill, J. R. (2007). The Anthropocene: Are humans now overwhelming the great forces of nature. *AMBIO: A Journal of the Human Environment, 36*(8), 614–622.

Tsing, A. L. (2015). *The Mushroom at the End of the World: On the Possibility of Life in Capitalist Ruins*. Princeton University Press.

Wisner, B., Blaikie, P. M., Blaikie, P., Cannon, T., & Davis, I. (2004). *At Risk: Natural Hazards, People's Vulnerability and Disasters*. New York: Routledge.

Zalasiewicz, J., Waters, C. N., Williams, M., Barnosky, A. D., Cearreta, A., Crutzen, P., . . . Grinevald, J. (2015). When did the Anthropocene begin? A mid-twentieth century boundary level is stratigraphically optimal. *Quaternary International, 383*, 196–203.

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