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REPRESENTING CLIMATE: LOCAL TO GLOBAL

Histories of the Unprecedented: Climate Change, Environmental Transformations, and Displacement in the United States

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While the speed of current climatic changes is unprecedented, their ramifications are not. Floods and droughts, sea-level rise, advancing glaciers, and desertification do have a history, and the same is true for the social causes and aftermaths of such extreme natural events. Therefore, history provides a fertile field for the analysis of how societies have dealt with severe environmental changes, and the analysis of past extreme natural events yields interesting lessons for the current debate on 'environmental migration', even if they were not caused by climatic changes. This article examines historical case studies of a phenomenon that is arguably one of the greatest challenges of the future: migration and displacement triggered by environmental deterioration and destruction. While a wide range of studies focuses on the present and future of 'environmental migration', little research has been devoted to the long-term causes and effects of environmentally induced displacement. In other words: what is lacking is historical depth. Only by looking at the *longue durée* of environmental migration and displacement can we detect patterns of vulnerability and resilience, adequately describe the course and paths of displacement and fully acknowledge the aftermath of disaster diasporas.

Climate Change and Migration: The Current Discourse

Climate migration has occupied a prominent place in the debates about the effects of anthropogenic climate change. As early as 1988, a Worldwatch Institute study held that 'environmental refugees' had 'become the single largest class of displaced persons in the world' (Jacobson, 1988: 37). In 1997, one of the most influential scholars in the field, Norman Myers, counted 25 million environmental refugees in a 'cautious and conservative' estimate – a number that, he thought, 'may well double' by 2010. In the long run, Myers feared, up to 200 million people might face displacement (1997: 167–68; Myers and Kent, 1995; Castles, 2002; Tacoli, 2009). The British charity organization Christian Aid in a 2007 report even predicted that climate change induced displacement and migration will push the overall number of people forced to leave their homes to more than one billion by 2050.

While such high-counting scenarios, along with sensationalist media reports, have certainly contributed to raising awareness for an increasingly important problem (Hulme, 2011), they also mask the complexity of the debate by relying on a 'maximalist' interpretation of the relationship between climate change and migration. According to this view, severe environmental events and developments that are usually associated with climate change such as droughts, floods, desertification, etc., are the direct cause of the large-scale displacement of people from the affected regions, or, in other words, environmental migration. This rather linear view of environmentally induced migration has been criticized from scholars who emphasize the multi-faceted nature of migration and point to the importance of social, economic, military, and cultural factors (Morrissey, 2012; Lübken, 2012a). Thus, the current debate oscillates between the two extremes of denying the existence of environmental and climate change migration altogether, and neo-deterministic accounts of environmental mobilities. However, most scholars working in the field would probably locate themselves somewhere in the middle of this spectrum, i.e. accepting the impact of environmental forces on migration and displacement while at the same time acknowledging the importance of other factors.

History as a Guide?

The research on environmental migration over the last two decades has produced a wide body of literature on such topics as the governance and securitization of migration, the legal status of environmental migrants, and mobile strategies to adapt to and mitigate the impact of an environmental stressor. Still, the historical dimension of environmental migration has been by and large ignored (Piguet, 2013; Armiero and Tucker, 2017; Lübken, 2012a).

This article uses an historical approach to analyze the origins and forms of environmental displacement and migration after rapid natural extreme events. It will look at spatial trajectories of environmental displacement such as migration routes and disaster diasporas, the historical legacies of and connections with other forms of migration, and urban population dynamics caused by environmental stressors. Also, this article will shed light on *longue durée* notions of place attachment and place dependence and the culture and imagery of environmental migrants.

But why should history – of all disciplines – serve as a guide to lead us through this uncharted territory? The speed of and the challenges posed by current climatic changes are unprecedented, after all, so why look back? This article argues that it makes sense to look back because there are histories of the unprecedented. Floods and droughts, sea-level rise, advancing glaciers, and desertification do have a history, and the same is true for the social causes and aftermaths of such extreme natural events. Climate change will in all likelihood influence the number and intensity of such events in many parts of the world or has already done so. However, no single event can be traced back to climate change as its exclusive cause (yet). Thus, there is no substantial and categorical difference between current events that are partly caused by anthropogenic climate change and similar events of the past. This is not true for a possible change in the frequency and intensity of such events which might pose rather new challenges for the societies affected. But even in such cases, a look at how societies have dealt with ‘unprecedented’ extreme events in the past like a ‘Thousand Year Flood’ (Welky, 2011) and temporal clusters of disasters such as experiencing two

'floods of the centuries' in just two years (Lübken, 2014) might be insightful for the current debate on climate change.

Therefore, history provides an empirically rich field for the analysis of how societies have dealt with severe environmental changes. Even if they were not caused by climatic fluctuations, the challenges posed by such events are similar and can thus be compared. Furthermore, only by looking at the *longue durée* of environmental migration and displacement can we detect patterns of vulnerability and resilience, adequately describe the course and paths of displacement, and fully acknowledge the social and cultural aftermath of disaster diasporas. And finally, an historical approach contributes to debunking the notion that environmental migration and displacement is largely a problem of the Global South. Greg Bankoff (2003: 13) has convincingly argued that, based on earlier notions of 'tropicality', vulnerability to natural hazards has replaced poverty as the new 'dangerous condition'. However, as an historical analysis shows, this vulnerability is not endemic to countries in the Global South but can be found in all parts of the world. Hence, this article foregrounds case studies from the United States in order to 'provincialize' the West (Chakrabarty, 2000). Furthermore, an historical analysis allows us to analyze case studies of the racialization of environmental migrants and displacees. While race has been identified as a crucial factor in the analysis of the current debate (Baldwin, 2017), there is hardly any *empirical* work within the framework of a biopolitical critique of environmental migration.

Disaster mobilities

Extreme natural forces not only set tectonic plates, volcanic ashes, and storm systems in motion; they also and quite literally move society. Take the description of a flood scene in the river town of Marietta, Ohio, for example. When in 1884 the Ohio River rose to what became the worst flood of the nineteenth century, the bustle in the streets of the town resembled that of a beehive, as the local newspaper, *The Register*, noted. Everyone, it seemed, was busy carrying their commercial and personal items to higher ground, 'dry good clerks carrying valuable bundles into upper stories, druggists trying to lessen their multifarious stock, grocery men lifting goods on to high boxes only to pack them higher yet a little later' (Anonymous B, 1884: n.p.).

Dire necessity and the lessons from the flood in the previous year also changed traffic patterns: 'In the inundated sections of the city, John boats emerged from hiding places where they had lain idle for a year and in some places men were busy building new ones' (Anonymous B 1884).

It didn't take long, however, until the citizens of Marietta themselves had to move. Fred Henking, a witness of the flood, noted that in 'many places the people are camped upon the hills. We saw them on the hills back of Pomeroy, and at several other places, and suppose that between here and there, there are not less, right now, than 5,000 people out in this terrible rain' (Vance, 1884: 25). In Pittsburgh, it was estimated that between 20,000 and 30,000 had to leave their homes because of the flood, i.e. about ten percent of the entire population (Vance, 1884: 25; *New York Times* (Anonymous A, 1884: n.p.)). Also, evacuations were not always voluntary. Further down the river, in Cincinnati, Ohio, many people had to be taken out of their apartments by 'some exercise of authority' because their buildings had been damaged by the water and were deemed unsafe (Cincinnati Chamber of Commerce, 1884: 13–14). But how are these immediate disaster mobilities – how is evacuation and flight – being transformed into long-term displacement and permanent migration?

Migration into hazardous areas

A history that wants to analyze how and why people have been displaced by extreme natural events has to answer the question why people have settled in or been relocated to hazardous regions in the first place. Thus, the history of 'environmental' displacement, resettlement, and migration is also the history of settlement.

Historically, the most important reason why people chose to settle in environmentally dangerous areas was certainly the expectation that the benefits derived from the location would by far outweigh its hazards, and quite often this was true. The ancient civilizations in Mesopotamia and Egypt were built on the unsolid but extremely fertile ground of the river floodplains of the Tigris, Euphrates, and Nile. In general, access to water bodies was crucial for the vast majority of settlements before the age of steam and modern transportation (Pisani, 2000). However, European migrants coming to the Americas to find a place to settle often found it difficult to ascertain the environmental characteristics of a locality.

Unlike the indigenous population, whose vast body of ecological knowledge was often ignored, European settlers lacked inter-generational environmental knowledge which could turn out to be devastating in judging the hydrological regime of a river, for instance (Lübken, 2012b).

But the natural endowment of a certain place was not just a factor in luring prospective settlers into a region: it could also slow down in-migration and development. Charles Town (Charleston, SC), for example, was repeatedly hit by hurricanes in its early history, and, as Walter J. Fraser has pointed out, '[s]ome who might have considered migrating to the lowcountry did not because they were wary of settling in a region beset by diseases, heat, and hurricanes' (2006: 3; Steinberg, 2000). Recurrent floods and hurricanes, etc. quite often also delayed or stalled in-migration. Cairo, Illinois, for example, was once regarded as an inevitable future metropolis due to its location at the confluence of the Ohio and Mississippi Rivers. It was exactly this location, however, that also functioned as a significant barrier to development. Cairo suffered from the waters of the two major rivers flowing into the city either over the top of the (constantly heightened) levees or by penetrating the groundwater. All attempts at stabilizing this peculiar environment turned out to be too costly so that the city never developed into the metropolis its boosters had hoped it would become (Lansden, 1910: 1972). In a similar fashion, the enormous Black Swamp of Ohio and Indiana contributed to the latter state's image 'as a haven for dangerous diseases' and thus 'retarded settlement' (Pisani, 2000: 475).

In the long run, however, such displacement effects are hidden behind other, bigger population movements. Charleston has developed into a sizable and prosperous harbor city despite the constant threat of hurricanes, and although more than 20,000 people left Miami-Dade County for good after Hurricane Andrew in 1992, the net loss 'was soon outstripped by people whose desire to move to Florida was not deterred by the hurricane' (Oliver-Smith, 2006).

Marginal lands, marginalized populations

One of the most important aspects in explaining environmental migration and displacement is the relationship between marginal environments and marginalized populations. Jennifer Bonnell has pointed out that only a few studies in the field of

environmental inequality 'investigate the congregation of marginalized populations in already degraded spaces or in urban borderlands. Even fewer explore the link between homeless people and degraded environments' (2014: 78). While this connection is at the heart of the literature on environmental injustice, its historical dimension has so far mostly been neglected in the disaster risk reduction (DRR) community as well as in the analysis of environmentally induced migration.

Often, marginal environments such as swamps, bayous, river floodplains, and ravines served as a refuge for disadvantaged and unwanted parts of the population. Toronto's Don Valley, for example, was as a place for squatters in the 1830s, a camp site for Roma families in the 1910s and 1920s, and a 'Hobo jungle' during the depression years of 1930/31. All of these groups were extremely mobile (or mobilized, for that matter) and rather poor (Bonnell, 2014: 75–112). In the nineteenth century, poor people from Kentucky and Tennessee moved west to the swampy lands of Missouri's Bootheel region – an area ignored by more prosperous settlers because of its bad environmental reputation (Pisani, 2000: 477). The Dismal Swamp in North Carolina 'became a haven for runaway slaves and poor whites who lived on the fringes of plantation society' (Pisani, 2000: 475).

Like river floodplains and swamps, (dry) flood control reservoirs and spillways have often been settled in uncontrolled ways, putting not only the migrants at danger but also undermining the flood control purposes of these areas. In Missouri's 131,000 acre Bird's Point Floodway, about 3,500 tenant farmers were affected by the 1937 flood:

Many of these rootless, transitory people had arrived the previous fall to harvest cotton, then stayed because they had nowhere else to go during the fallow season. Now they needed to get out fast or be washed away when engineers detonated the levee restraining the Mississippi (Welky, 2011: 71).

In Florida, many of the almost 2,000 victims of the 1928 hurricane were migrants from the Caribbean and other places who had just come to the Lake Okeechobee region to work as field laborers in the recently drained area (Pfof, 2003). When the next severe hurricane rushed through Southern Florida seven years later, a high percentage of

the 400 people who died in the storm were Army veterans. These unemployed men had been sent south by the Federal Emergency Relief Administration to work on the highway that connects Key West to the mainland and they had been housed in flimsy structures not designed to withstand hurricane-strength winds (Steinberg, 2000). Thus, while marginal environments often serve as a refuge and safe haven for marginalized communities, they also constitute a hazardous space in which these groups are trapped and in which death and displacement is a constant menace. (UK Foresight, 2011; Black and Collyer, 2014).

Migration corridors

Historical trajectories and legacies not only influence settlement patterns, they also play an important role in the unfolding of a disastrous event. The 1927 Mississippi Flood, for example, clearly illustrates that migration and displacement after a natural catastrophe is in most cases not chaotic and spontaneous but follows historically established paths and routes.

The 1927 flood forced about 700,000 people out of their homes, about half of them African Americans (Barry, 1997). Many plantation owners feared that the farm workers would use the occasion of the flood to leave the South for good and seek better employment opportunities in the industrial cities of the North and West. As a result, many African Americans were forced to stay and work on the levees, and unload incoming ships with relief material – often at gun-point. Unlike the white population, African Americans only received food and clothing from the Red Cross if they agreed to stay within one of the 154 tent cities the relief organization erected in the flooded areas (Mizelle, 2014).

Hence, it is not surprising that those who could leave did. For thousands of African Americans, the 1927 flood provided not merely another reason but also a good opportunity to escape the South.¹ From this perspective, the 1927 flood refugees and migrants were not just helpless victims forced by society to leave. Much rather, as Richard M. Mizelle Jr. (2014: 101) has pointed out, ‘mobility is also

¹ It is unclear, though, how many people exactly left the flood-stricken areas in the South. Barry (1997: 417) mentions ‘tens of thousands’. See also Mizelle, 2014: 101.

akin to freedom, and the decision to migrate after the 1927 flood represented powerful acts of individual and group expression’.

Leaving the region affected by the flood was facilitated by the fact that potential migrants could make use of an already existing infrastructure that had been created by the Great Migration, i.e. the movement of millions of African Americans from slavery-like conditions in the southern states to the metropolises in the Northeast, the Midwest, and the West. Migrants benefitted from, for example, established routes and destinations, kin relationships, and networks of information and communication.

On a smaller scale, but within a larger time frame, such a ‘migration within a migration’ can be detected between Louisiana and Houston, too. After the first huge oil field was discovered in Texas in 1901, Houston turned into a magnet for people from the entire region. For ‘Creoles of Color’² the neighborhood Frenchtown became a popular destination and served as a refuge for many flood refugees from Louisiana. Interestingly, this route was reactivated after Hurricane Katrina hit the Gulf region in 2005 (Mizelle, 2014: 22–23).

Place attachment

Just as it is important to know why people have moved into hazard in the first place, it is significant why they don’t leave those dangerous places even if they have been affected by catastrophic events (Adams, 2016). The attachment to a certain place is influenced by many factors such as the proximity to family networks, childhood memories, and the environmental characteristics of a locality. The fate of Shawneetown, Illinois illustrates how the citizens of a small town have stuck to that place for over a century although several generations have been exposed to violent outbursts of the Ohio River.

As early as 1817, an English author who traveled through the town took note of its vulnerable location. In his popular *Notes on a Journey in America*, Morris Birkbeck wrote:

² *Creoles of Color* was the self-description of mostly free people of African descent who were born in the New World (Mizelle, 2014: 101).

This place I account as a phenomenon evincing the pertinacious adhesion of the human animal to the spot where it has once fixed itself. As the lava of Mount Etna cannot dislodge this strange being from the cities which have been repeatedly ravaged by its eruptions, so the Ohio with its annual overflowings is unable to wash away the inhabitants of Shawnee Town (1818: 122–23).

The small town has indeed been ravaged by devastating floods almost every decade in the nineteenth century. But each time the Ohio River created destruction, the height of the levee was increased. In the end, however, history proved Birkbeck wrong – Shawneetown *was* relocated three miles up the hill over a ten-year period after the 1937 flood. But the 1937 disaster also revealed the adherence of many inhabitants to the place where they grew up and used to live. Although the American Red Cross had organized a shelter in a high school in the outskirts of town. A relief worker complained (Welky, 2011: 162):

Nurses had to waste time and energy visiting rural refugees who refused to come in. Their attachment to the land, deep mistrust of outsiders, and sense that the high school was falling into anarchy caused them to hold tight to their farms. 'Why can't we get these people to leave?'

In 2016, 176 citizens still lived in Old Shawneetown Village whereas 1,156 resided in Shawneetown City (United States Census Bureau, 2016).

This seemingly strange attachment to a hazardous place is not limited to flood-prone sites, of course. In an article about urban relocation after earthquakes Dennis S. Mileti and Eve Passerini (1996: 97) have pointed out that from antiquity to the present the 'choice to remain in the same risky location has so often been selected throughout history that it almost seems to be a universal element of the social character of life in urban centers'. Reconstruction along the Gulf Coast after Katrina also highlighted the importance of place. According to Douglas Brinkley (2006: xvii), none of the more than 300 people he interviewed for his book on the 2005 disaster wanted to rebuild and live anywhere else: 'They were born in Pascagoula or Ocean Springs or Belle Chasse, and they plan on dying there'.

Evacuation resistance and place dependence

In addition to the emotional and cultural attachment to a specific place, there are other important barriers that keep people from fleeing a dangerous situation. The widely held belief among African American residents of New Orleans that the US Army Corps of Engineers had intentionally breached levees and flooded black neighborhoods to save white residential quarters during the course of Hurricane Betsy in 1965, for example, had a terrible effect when Katrina made landfall by creating a kind of 'evacuation resistance' (Colten and Sumpter, 2009: 360; Cordasco et al., 2007). A displaced middle school student interviewed after the 2005 hurricane noted:

I knew it all would happen. Katrina did none of that stuff. I'm talking about people doing that. Katrina [in the] Gulf, she was a Category 6. When Katrina hit New Orleans, it was a Category 1. The day Hurricane Katrina came, I mean, water and rain and everything. Next day, sunny and pretty outside. Next day water rising. Ain't nobody stupid? Come on! Next day sunny, next day water. *They blew the levees* (Fothergill and Peek, 2012: 129, emphasis original).

Craig E. Colten and Amy R. Sumpter (2009: 360) have pointed out that the 'fundamental distrust of authorities undermined public calls for evacuation. Despite knowledge of these attitudes among Corps professionals, they neglected to incorporate this historical resistance into their evacuation preparations'.

Finally, the availability or lack of disaster mobility is crucial when victims are faced with the decision whether or not they can evacuate or flee the affected region. Societies hit by a disaster are not static but (literally) in constant flux. How a society reacts to the shock of an extreme natural event depends a lot on how these 'normal' mobilities can be transformed into emergency mobilities, for example when highways are designated as hurricane evacuation routes, when bridges are used as mounds, and when school buses turn into rescue vehicles or are stranded on flooded parking lots (Cresswell, 2008: 134). Mobility is both forced upon and withheld from victims of natural disasters who have to escape imminent danger or have to persevere in situations from which they would much rather like to escape.

Thus, the modification of evacuation plans for New Orleans in the 1990s with an increased emphasis on private automobiles rather than public transportation seemed to be a logical measure given the high percentage of car-ownership in the United States and the vast interstate highway system (Colten and Sumpter, 2009: 360). In New Orleans, however, the situation was different. Only two thirds of all households in the city owned a car (Cresswell, 2008: 134–35), and so thousands of people were left without access to disaster mobility when Katrina hit the Gulf coast – a fact well-known but largely ignored by disaster managers (Colten and Sumpter, 2009: 360). This affected most of all the ‘low mobility population’, i.e. the poor, the elderly, and the disabled. Cresswell (2008: 136) notes that ‘some of the worst scenes from New Orleans were of elderly hospital patients abandoned as the waters rose’.

Old Towns, New Towns: Reconstruction and Displacement

Even if a community decides to rebuild in the same spot (which often is impossible because of the destruction wrought on that location by natural forces) the result differs in many respects from the pre-disaster situation. First of all, rebuilding can be a very long and demanding endeavor. Communities hit by earthquakes, landslides, or volcanic eruptions are especially prone to a long process of reconstruction. Around Herculaneum and Pompeii, two cities completely destroyed by the eruption of Mount Vesuvius in the year 79 AD, it took about 300 years for the soil to recover and before it could be used again for agricultural purposes. Between the third and the sixth centuries, the region was slowly reclaimed, yet it was settled and utilized with a significantly lower intensity than before the outbreak of the volcano (Meier, 2009: 36).

When displaced victims of a disaster do come back and try to rebuild, they often find their neighborhoods and cities vastly transformed, both in terms of the physical destruction and with regard to the social, ethnic, and cultural composition of the community. ‘Forcible displacement may become permanent in the aftermath of disasters of smaller magnitude as well, if they destroy or seriously alter the environment or ruin a local economic base’, as Gregory Button (2009: 256) has stated. In Yungay, Peru, only a few hundred out of a pre-disaster population of 4,500 inhabitants survived an earthquake-triggered avalanche of rocks, mud, and debris in 1970. The survivors of the disaster successfully resisted plans to relocate Yungay to a

new site and instead rebuilt their city in the immediate vicinity of the old location. However, '[j]ust as the appearance of new Yungay bore little resemblance to the old city, the people of the new settlement had also changed radically', as Anthony Oliver-Smith has noted:

The disaster had decimated the upper and middle classes of the district of Yungay. The little group of urban elites who survived formed the nucleus around which a new urban population, composed primarily of urbanizing rural people, began to form. Peasants, although escaping the horrors of the avalanche, saw their homes disintegrate in the quake (1986: 116).

The problems of rebuilding have also been a constant theme in post-Katrina New Orleans. Ever since mayor Ray Nagin's remark that New Orleans always has been and always will be a 'chocolate city',³ the displacement and replacement effects of the hurricane have been an important part of the debates about Katrina's impact on the city. In fact, 'both the city and metropolitan area showed a substantial decline in their black populations and proportions over the course of a single year, even after the return of many evacuees', a report by the Brookings Institution held in 2007 (Frey et al., 2007: 7).

While it is certainly true that in most cases a very high percentage of those who had to leave their houses, their cities, and even their countries because of natural disasters return home after a while, this is not always the case. Quite often, villages, towns, and neighborhoods are (partly) relocated or their inhabitants resettled – with or without consent of those affected. Yet again, there is a wide variety of movements. Regarding earthquakes, Mileti and Passerini (1996: 98) have noted that this spectrum ranges 'from moving an entire quake damaged city to a new site, to altering or moving different prequake activities to new locations within the city's boundaries, and finally to rebuilding the city as, and where, it was before the quake'.

³ This term has been used since the 1970s to refer to cities with a majority of African American residents. It was coined in Washington, DC, and popularized by the Funk band Parliament's 1975 album of the same title (Hackenesch, 2017: 146–55).

The complete relocation of a city after a natural disaster is a rare occurrence in present times but has happened relatively often in historical perspective. Antigua in Guatemala has been relocated three times before it was rebuilt at its present site. The first location was attacked by indigenous people in 1717, the second destroyed by a volcanic eruption in 1751, and the third one by an earthquake in 1773. In Sicily, the towns of Noto and Ávola Vecchia were abandoned and relocated after an earthquake in 1693. Seismic shocks in 1783 were also the spark to the relocation of Castelmonardo in Calabria. The town was moved a few miles by the Bourbons, redesigned into an ideal community, and renamed into Filadelfia (Tobriner, 1999: 57, 67; Lutz, 1994). In many cases, old towns (or what was left of them) and new towns coexisted for quite a while. This was the case in Santa Fé on the Paraná River in Argentina where it took an entire decade to transplant the town to a new site after the town council had finally asked the Spanish Crown for permission to do so in 1649 (Rosario Prieto, 2009: 296–97).

More recently, the relocation of entire communities after a natural disaster seems to have affected predominantly small places. This is especially true for western countries like the United States. Valdez, Alaska, a small town of several hundred people, was moved to more solid ground by the Federal government after the 1964 earthquake (Coulter and Migliaccio, 1966). Similarly, the Illinois communities of Shawneetown and Valmeyer, and several other small towns, were rebuilt on higher ground after the devastating floods of the Ohio River in 1937 and the Mississippi in 1993 respectively (Lübken, 2014: 269–277; Kuhlicke, 2008: 311–323). Much more common than the transplanting of whole towns or villages, though, are intra-urban relocations and the slow erosion of places that have been hit by disaster.

Several communities along the Ohio River have witnessed these processes after the 'Thousand-Year Flood' of 1937 (Welky, 2011). In Cincinnati, the residential areas in the bottoms where people were living 'in the worst possible conditions' were basically given up (Eisenman, 1937: 119). The population within the 'Central Riverfront' district declined from about 6,000 inhabitants at the turn of the century to 2,900 in 1940 down to a mere 120 in the early 1960s (Eisenman, 1937: 119). The decline happened so fast that the Army Corps of Engineers could no longer

justify the erection of a floodwall (Cincinnati City Planning Commission, 1961). In 1974 Thomas C. Pierson, vice president of the *First National Bank of Cincinnati*, warned the city to be patient with urban renewal in 'areas that look as though they have been bombed' (1974: n.p.). The flood, of course, was not the only reason for this development but the intentional neglect of this area by city planners after 1937 certainly played an important role.

Ernest P. Goodrich (1937: 4), for example, a New York City engineer who had been hired as an advisor to the Cincinnati City Planning Commission, viewed this disaster as 'a unique opportunity [...] to reappraise the whole city plan, to amend and improve it where such is found desirable, and thus to provide for an even better future Cincinnati'. This reappraisal served most of all to make the waterfront area and the Mill Creek Valley car-friendly. The flood was used by city planners to neglect and, in the long-term, clear the slums (Cincinnati Chamber of Commerce, undated). Residents of the *bottoms* lived 'on borrowed time', the *Cincinnati Times-Star* noted on 16 April 1952. Sooner or later they would have to leave.

Environmental Migration and Culture

The history of environmentally induced migration and displacement is still a fragmented field that lacks comprehensive syntheses. While valuable bits of information can be pieced together from historical and anthropological analyses of natural hazards and catastrophes and from the vast field of disaster management, preparedness, and mitigation studies, so far, not a single monograph is dedicated to the history of environmentally induced migration.

Furthermore, some topics have not been dealt with at all, yet. The most striking deficit is probably the lack of acknowledgment of the importance of cultural issues, both in terms of the (often distorted and stereotyped) perception of migrants as well as with regard to their own cultural production. There are exceptions, however, most notably Richard Mizelle's *Backwater Blues* (2014: 12, italics original), 'a study of [...] the racial *flood diaspora* of black protest, charity, environmental displacement, structures of labor, and cultural critique that informed the most significant environmental disaster of the twentieth century', i.e. the 1927 Mississippi flood. Mizelle elegantly

weaves together the social and spatial history of environmental displacement on the one hand, and the cultural productions resulting from and accompanying these processes on the other, including the work of blues musicians like Bessie Smith and Blind Lemon Jeffries and novelists like Richard Wright.

In a similar, yet different way, the Dust Bowl migration lends itself to the cultural analysis of environmental displacement. The 'Okies' or Southwesterners, i.e. the people who left the Dust Bowl states in the Southern Plains in the 1930s left a cultural mark in California – not just by sheer volume but also by creating their own culture in the West. Maybe the most important item in their cultural baggage was country music, or hillbilly music as it was called at that time. 'Southwesterners became its primary agents of dispersion, dominating it as performers and claiming it as consumers' (Gregory, 1989: 223). The experience of displacement and migration played a central role in some key recordings of this subculture – from Woody Guthrie's *Dust Bowl Ballads*, recorded in New Jersey in 1940 but performed in California over the previous years, to Merle Haggard's retrospective songs of the late 1960s and early 1970s like 'Hungry Eyes' or 'Tulare Dust' (Gregory, 1989: 229–30, 244).

In addition to the migrants' own cultural production, the perception of people on the move is crucial in understanding the larger social significance of forced mobilities after such events as the Dust Bowl, the 1927 flood, and Hurricane Katrina. Donald Worster (1979: 45) has pointed out that it was not just not the catastrophic, dust-filled landscape of the Southern Plains that symbolized the end of the Jeffersonian ideal of small-scale and independent agriculture. The Dust Bowl imagery was also visible in the 'the worried faces of its people, especially the outward-bound refugees' (Worster, 1979: 45) whose plight was communicated to the American public by thousands of New Deal photographs. Thus, the environmental migrants of the 1930s 'became the archetypical victims of hard times; observers read in their eyes the defeat of poor people everywhere. But they were also a warning to the rest of the nation that man's relation with the earth had gone awry' (Worster, 1979: 45).

Sarah D. Wald (2016) has argued that one crucial element in the depiction of Dust Bowl migrants in novels, photographs, and other cultural forms was their loss of whiteness. Having been driven from their land and forced onto the highways towards

the West, the imagery of displaced people from the Southern Plains highlighted their transition from farmers to farmworkers. Only by distinguishing the Dust Bowl migrants from other marginalized groups of American society – for example by the sharing of racist anecdotes in *The Grapes of Wrath* (Wald, 2016: 58) and by reinstating them to their land, could their whiteness be re-established. However, one has to keep in mind that not all who left the Southern Plains were farmers. In fact, according to a Department of Agriculture analysis (Gregory, 1989: 15), only 36 percent of the migrants were working their own farm before they left the Great Plains. James N. Gregory (1989: 15) reminds us that the ‘fact that nearly one migrant in six was a professional, a proprietor, or a white collar employee should qualify the destitute dirt-farmer image of the migration’. Furthermore, it has been pointed out that quite a large number of farmers chose to stay, and that the effects of the dust storms were often rather localized (Hurt, 1981; Riney-Kehrberg, 1994).

But race and the racialization of (not just environmental) migrants is a key component in the categorization of people who are on the move, especially when they are labeled as refugees, as many African American disaster victims were in the aftermath of Hurricane Katrina. The very term carries connotations of foreignness and placelessness. Refugees are often seen as a financial burden to society and a potential security hazard: ‘as threateningly mobile’ (Cresswell, 2008: 138; Weber and Peek, 2012: 15). Thus, it is not surprising that Africans Americans forcefully protested against this categorization (Cresswell, 2008: 137).

Conclusion

It has often been pointed out that ‘pure’ cases of environmental migration are hard to find. In probably all instances in which people have to leave their homes, their region, or their country after severe changes in the environment there are other factors at work, too. But isn’t this true as well for all other forms of migration? Vice versa one might argue that in every politically, militarily, or economically induced migration, there is always a strong social, cultural, and, for that matter, environmental component. Viewed from this perspective, the task is not so much to find these seemingly clear cases of environmental migration but rather to delineate the complexities involved in the process.

One of the greatest difficulties in the analysis of the long-term effects of disaster-induced displacements is their entanglement with other population flows. The 1927 Mississippi flood, for example, without a doubt allowed many African Americans to flee slavery-like Jim Crow conditions in the American South forever. But how many would have and could have gone North if they hadn't been able to literally jump on the trains of the Great Migration? Likewise, the migration routes of the 1908 earthquake victims who left Sicily for northern Italy or the United States dovetailed with many itineraries produced by the broader trends of urbanization and transatlantic migration (Parrinello, 2012).

History can certainly help illuminating the different factors and forces at work in disaster-induced migrations, yet so far we know very little about these processes except for a few prominent and often cited 'iconic' disasters such as the 1927 Mississippi flood, the South East Asian tsunami in 2004, and Hurricane Katrina in 2005. However, to focus just on these mega events obscures the fact that all forms of displacement described above, including the mobility triggered by rebuilding and reconstruction, can result in disaster displacement and migration. It is highly unlikely, for example, that all of the 1.5 million people affected by the 1937 Ohio River flood (a flood hardly remembered by most Americans), did return to their homes. It is much more probable that hundreds, if not thousands of flood victims, especially of the lower social strata, never returned. These include the inhabitants of Shawneetown, Illinois, Leavenworth, Indiana, and Uniontown, Kentucky, cities that have either been relocated or left to their own devices after the flood. These also include the migrant workers who had settled in the New Madrid Floodway as well as the residents and squatters in the neglected riverfront neighborhoods of Pittsburgh, Cincinnati, Louisville, Evansville, and other big cities along the river. Is this environmental *migration*? Maybe not in the strictest sense, but these processes certainly can be labeled as environmental *displacement*. Why should we be more concerned about the former than the latter?

Finally, history can also provide a link between local, regional, and global threats. While natural catastrophes used to be looked at as spatially contained events (contained for instance in the frame of a floodplain), anthropogenic climate change has transformed floods, droughts, hurricanes, etc. into integral parts and

markers of global environmental deterioration. Thus, the current discourse on climate change and migration is more interested in global scenarios and theoretical considerations than in actual cases of 'climate migration' (if only for a lack of reliable data). An historical analysis, however, can show that the unfolding of an extreme natural event and its social and cultural implications are place and time specific. So, even when considered as part of a larger development (global climate change), it is important in the analysis of environmentally induced displacements to keep track of the local and regional cultural context. From this perspective, looking at empirically rich case studies of environmental migrations and displacements of the past might serve to ground the rather theoretical and global current discourse on climate migration.

Competing Interests

The author has no competing interests to declare.

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