

What's Next? Vulnerability and Post-Disaster Recovery

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When Katrina hit New Orleans there was no time for academic speculation. In the hospital where I'd taken refuge, attentions had become much more immediate. Following evacuation and return to the city, however, I found myself, like many others, wondering what would happen next. This curiosity led me to the field of vulnerability science and the types of insights reviewed by Hogan and Marandola in their background paper for this cyberseminar. For me, their review can be whittled to a few essential points.

First, knowing when and where hazards may occur is insufficient for preventing disaster. This is because disasters (and the vulnerabilities they represent) reflect social and political failures as much as biophysical hazards. Just look at Hurricane Katrina, whose devastation had been forecasted for years and for which residents received ample warning. Still, disaster "strikes." Second, the source of such failures lies not just in poor governance but in the social structures of regions themselves, which determine collective capacities to anticipate, weather and recover from environmental hazards. Again, just look at New Orleans, where Uptown jewelry stores and downtown casinos are thriving as entire neighborhoods struggle to recover. Third, demographic factors are essential pieces of this social structure and demand more informed attention. Chief among these factors is population concentration, which determines the scale that disasters will take if social and political failures continue. From this perspective, demography isn't destiny, but it does shape how large, or sweeping, such destinies become when environmental hazards occur, particularly along the earth's heavily populated coasts.

With these points firmly established, it's up to us to forge new insights into how to minimize future vulnerabilities to disaster. I'll advocate three ways in which this effort might proceed, at least among researchers. First, we need to stretch our conceptualization of vulnerability beyond seeing it as a mere historical precondition to be exposed by environmental hazards. We must also recognize that vulnerabilities (and the social structures they represent) have futures, which are often exacerbated, not remedied, by post-disaster recovery efforts. Second, we need larger, more comprehensive studies of the social and demographic realities of disasters and recoveries, beyond simple mortality counts and property costs. This means better funding for data collection and freer flows of information, however embarrassing these commitments might prove for the administrations involved. Third, we need to pay more attention to the neighborhoods (and villages) into which population concentrations are divided and socially constituted.

It is at this scale—between individuals and families, on the one hand, and larger regions and nation states on the other—that vulnerabilities are most salient and variable.

As an example of how these efforts might proceed, I'll share some research that Jeremy Pais and I have been conducting on recoveries from recent, large-scale hurricanes in the United States. This project began with the common observation that human risk to coastal hazards is increasing in the United States, as it is around the globe, not so much because of global climate change or aggregate population growth but because of continued demographic concentration in coastal regions. In the United States, for example, population densities in coastal counties are triple what they are in non-coastal counties. Similarly, eight of the ten largest cities in the world now perch on or near the ocean, as does half the world's population. Why is this concentration continuing in an era of such spectacularly evident coastal hazards?

In the United States (and we suspect elsewhere), a key reason lies with the political economy of place-making. While it's easy to assume that population concentrations on our coasts simply reflect aggregations of individual tastes for sun and surf, this is only part of the equation. In order for businesses, families, and individuals to act on these tastes, coastal settlements must grow, and this growth requires political and economic coalitions and institutions to promote ongoing development. From this perspective, the buildup of people and properties on our coasts is more than a matter of geographic advantage and personal choice. It is also the product of powerful local actors working together to intensify local land use and profits that come from it.

In the United States, local governments are instrumental in these efforts because they hold legal authority over zoning and land-use decisions and because they are well positioned to leverage capital investments that facilitate local growth. Municipal governments, for example, can disregard federal flood maps, facilitate drainage and landfill projects, create allowances for new shipping lanes and coastal ports, reduce taxes in locally defined enterprise zones, and generally shape where and to what extent development will occur. In hazard-prone areas, these pro-growth initiatives typically outstrip disaster mitigation and in the process erode wetlands, forests and other natural buffers to environmental hazards such as hurricanes. In this manner, coastal regions are becoming more dangerous not just quantitatively in terms of the growing number of people and properties concentrated there, but also qualitatively in terms of the increasingly outdated and receding protections from hazards generated by over-investment in growth and under-investment in environmental sustainability and disaster mitigation.

Inserting this perspective into disaster studies moves us beyond the simple recognition that some groups and communities are more vulnerable to environmental hazards than others. It illuminates how this vulnerability emerges through ongoing and unequal political struggles over local development. It also raises questions about how these struggles change after disaster happens, as competing interests respond to opportunities created by the damage, displacement and dollars that follow. Our hunch is that as recovery unfolds, resources funnel through institutions and coalitions that skew the local

balance of power even further in favor of developers, residential elites and their allies who exercise disproportionate control over private and public systems of recovery capital. One reason for this heightened political imbalance, at least in the United States, is that our system of disaster relief is designed primarily to respond financially when disasters destroy *property*, not when they destroy homes and communities. Another reason is that symbolically disasters open themselves to political mandates to (re)build bigger and better than ever as public testament to local resilience. Within this political climate, growth, not just recovery, becomes a moral prescription for the collective psyche, a way to put the disaster “behind us.” We suspect that these twin forces for growth—material and symbolic—dwarf pre-disaster sources of opposition to pro-growth development and blur differences between use and exchange values to the further advantage of local, pro-growth coalitions.

If our hunch is correct, two things are likely to happen after major (coastal) disasters. Affected regions will grow as developers take advantage of the new political and economic opportunities available to them, and this growth will be highly uneven as constituent communities experience unequal access to these opportunities and attendant resources. To test this idea, we overlay atmospheric data and social data for three “Billion Dollar” hurricanes that struck the United States during the early 1990s: Hurricane Bob (in New England), Hurricane Andrew (in South Florida, and then Southwest Louisiana), and Hurricane Opal (in Northwest Florida). We limited these analyses to local tracts that experienced winds of at least 50 miles per hour during the respective storm. (For full details, see Pais and Elliott 2008). In short, findings support our hunch.

First, analyses show that despite these devastating disasters, all four regions grew dramatically during the six-to-ten-year recovery period that followed, reaching an average growth rate of 11 percent. As a result, approximately 1.4 million *more* people and 600,000 *more* housing units were in place after the disaster than before it. Second, analyses show that this growth was highly uneven socially and spatially. As a result, existing enclaves of advantage and disadvantage solidified, leaving the social structures of these regions not only larger but more divided with respect to race, ethnicity, and class resources. Optimists might trumpet the first finding—continued concentration of people and property—as further proof of Americans’ resilience. Optimists might also contend that the business of disaster recovery is not to decide who lives where, at least not directly. This brings us back to the points raised earlier about vulnerability and disasters.

If knowing when and where hazards may occur is insufficient for preventing disaster, and if local social structures are critical for understanding the extent to which hazards become disasters, and for whom, then we need to pay more attention to what comes next. This is especially true in places where disaster recovery is promoting rather than reducing future vulnerabilities by expanding coastal targets and further dividing their social structures. The underlying point is that social vulnerabilities are not just pre-disaster conditions; they are also post-disaster processes in which resilience and vulnerability become not diametrically opposed but rather unwisely linked. What we do about this link in the United States, and elsewhere, deserves more informed debate that extends beyond

technical discussions of how local building codes should be improved. Hurricane Katrina opened the door for such debate in New Orleans, but local elections and political pandering soon closed it. What happens next, however, is up to us, if not in the new New Orleans, then in the new somewhere else. Oh, how I hope not to be in that number.

Reference

Pais, Jeremy and James R. Elliott. 2008. "Places as Recovery Machines: Vulnerability and Neighborhood Change after Major Hurricanes." *Social Forces* (Forthcoming/August).