

VULNERABILITY AND RESILIENCE: NOLA

Irene Klaver and Rachel May¹

Whereas vulnerability is usually seen as something to be overcome, we want to pursue its positive potential, its possibility to bolster resilience. Not to belittle its negative effects—we do not argue for enhancing vulnerability—we explore strategies of reducing vulnerability through foregrounding its inevitability, making the vulnerability explicit and thus facilitating resilience as ways to cope with it.

Vulnerability cannot be eliminated, and even if it could, we would argue, it *should* not. Only the unequal socio-economic distribution of vulnerability can and should be eradicated. Although social justice issues fall beyond the scope of this paper, we do see our approach of reducing vulnerability through an acknowledgment of its inevitability, as a strategy that might benefit disadvantaged people, precisely because it affords a learning strategy that makes people aware of the nature of the vulnerability they are exposed to. Focusing on the force of coping mechanism we shift the question from: How we can reduce vulnerability? To: How can we increase resilience? Humans have proven to be one of the most adaptable species on the planet by virtue of our cognitive abilities. Any effort to rebuild New Orleans in a less vulnerable, more resilient way should engage the intelligence of its residents. We have the capacity to anticipate problems, adjust our lifestyles, and respond to symbolic or abstract signals. Precondition for these processes, is an awareness of vulnerability, only if we know where and how and when we are vulnerable, we can begin to find ways of dealing with it, that is, we can begin with developing strategies to build our resilience.

There are various strategies. Here we sketch three. All three are based upon enhancing our ways of connectivity to a larger cultural-natural environment. The first one takes the river as a point of departure, the second the Gulf, and the last one the built environment. We deem this awareness of re-connection as the most important venue to regain and nurture resilience.

There are doubtlessly other strategies and tactics that will facilitate an enhanced resilience. We hope that our discussions at this workshop will fill up the toolbox.

Vulnerable and Resilient

Driving on “the loneliest highway of America,” Highway 50 through Nevada’s deserts, and finding your car coming to an involuntary halt means exposure, especially as a

¹ Dr. Rachel May is Director of the Office of Environment and Society at Syracuse University and SUNY College of Environmental Science and Forestry. enspire@syr.edu Dr. Irene Klaver is Director of the Philosophy of Water Project in the Department of Philosophy at the University of North Texas. klaver@unt.edu

woman traveling alone. Positioning oneself in a vulnerable position often triggers a strong response. In this case the few cars that came by went out of their way to help. “What are you doing there, sweetie, you could be raped, robbed, killed!” The very exposure, with the acute perception of possible danger, led to a flood of concern and turned into an occasion for care and resolute assistance.

We don’t have to go all the way to Nevada to experience vulnerability. We are relational beings and hence we are all vulnerable, always and everywhere. The defining aspect of being vulnerable is being open, and that means being exposed and thus in a position to be potentially hurt. We all have experienced situations where we opened up to a new relation—either professional or personal—and realized we were rebuffed, rejected. It is always painful, but it teaches us crucial things about one’s limits and/or the limits of the other, and the institution or society we are in. It gives one an occasion to learn how to deal with it, how and where to find resources to cope with it, “who one’s friends are,” who and what to trust or to respect and ultimately how to deal with these processes and situations in a gracious, generous or cautious and political manner that doesn’t destruct oneself or others and one’s commitments.

In general, vulnerability affords occasions of learning—learning to adapt, adjust, accommodate, or defend oneself. The same pertains to our relations with the non-human environment. We need to dress differently in a blazing heat than in a blizzard.

The art of vulnerability lies in our way of dealing with it, in our capacity of building resilience. There are clearly socio-economic, class and race related differences in basic resources for resilience. It makes a huge difference if one’s resilience resides in one’s bank account or in one’s extended family. Being evacuated and scattered all over in the wake of a hurricane makes it is harder to bounce back, especially when one’s main resort lay in a neighborhood of friends and family than in dollars to rebuild a structure. Resources of resilience that used to work in a pre-disaster situation—and maybe even better than money ever could—fail, when the core structure of neighborhood living has disappeared. It is also harder in terms of political structure to accommodate these often invisible resource mechanisms that people have built up over extended periods of time. For example, the most self-evident resource for one of the most vulnerable parts of any population, the elderly, is regularity and stability. The shock of a catastrophe, especially with a belated evacuation, is devastating for these subtle forms of resilience. The death rate of the elderly half a year after Katrina is substantially higher than before. It is hard, and in cases like these often impossible, to bounce back. A long and slow period of transition would have been necessary to nurture the resilience of these extremely vulnerable people.

To be vulnerable is to be unshielded, exposed, open. That is also the condition for change. We want to focus on these positive possibilities of vulnerability. Precondition is a robust resilience, a capacity to bounce back, to adapt, to have enough elasticity, flexibility, pliability, to incorporate or instigate change. Crux to all resilience is relationship. We need to know how we are related to things, what our role is in a certain vulnerable situation, how and if we can change it or accommodate it. This all

entails a larger knowledge of how we are connected to our material and natural environments. In the following three sections we will lay out three realms that are in need of re-engagement and various ways in which we envision this re-engagement can be (or is already) facilitated in these domains.

1. Water Basin Mentality

Postel and Richter argue that we need a “fundamental shift in how society uses, manages, and values fresh water—one that recognizes from the outset the importance of healthy ecosystems and humanity’s dependence on them.” And they continue by invoking Einstein that “you cannot solve a problem within the mind-set that created it.” (Postel and Richter 2003, p. 37). The mind-set change they advocate sees human water economy as a subset of nature’s water economy and recognizes that human societies depend on healthy ecosystems. We generally agree with their overall direction. We do believe though that a mind-set change as they envision requires a larger social-political and cultural commitment and investment beyond scientific knowledge and economic interests. First of all people need to be open to it, to realize the urgency of it, to become aware of the vulnerability of the aquatic ecosystem.

The question is how to facilitate a larger connection that leads to an awareness of our vulnerability in terms of the vulnerability of the water bodies that sustain us. An important entry will be the fostering of what we call a watershed, or better, water basin mentality. A basin is a broad area of land that drains into a single river and its tributaries. We anticipate that to (experientially) learn about the intricate relations and connections of the ways water flows through a landscape, people will re-gain an interest in and awareness of the strength and fragility of the system and their own vulnerabilities vis-à-vis the ones of the aqua-eco-system. “Water can enlarge perception and challenge the mind” (Blatter and Ingram 2001, p.3). We see fostering capacity-building through awareness and engagement raising, as first possible steps in creating resilience. There are many initiatives in this direction such as the River Keepers <http://www.riverkeeper.org>. Also specifically towards the Mississippi there are fascinating Mississippi re-engagement projects, such as, www.riversphere.org and www.OneRiverMississippi.org.

It is also to develop a water basin mentality on a political level. John Wesley Powell already expressed this necessity in the nineteenth century when he saw the new immigrants of the east flooding the west without any notion of the water situation in their new homestead country. In one of his diaries he holds a passionate plea: “In the West, where the one thing that really mattered was water, states should logically be formed around watersheds. Each major river, from the glacial drip at its headwaters to the delta at its mouth, should be a state or a semistate.” He imagined a politics with a representative of “the great state of Upper Platte River” and a House of Representatives that wonders “Will the senator from the state of Rio Grande yield?” (Reissner 1993, p. 47).

How would a senator of the Mississippi have dealt with the always-imminent hurricane threats? He or she would doubtlessly have paid attention years ago to the loss of wetlands. Spokespeople who defend the capacity of the rivers (and all their sustaining land base) implicitly harbor a resilience for those rivers based upon a sound water basin. We need an aqua-political equivalent to geo-political analyses. Besides a senator for the Mississippi we might in fact need a senator of the Gulf.

2. Gulf Coast Consciousness

Talking in terms of senators from the state of the Rio Grande and the state of the Gulf of Mexico in terms of catchment or basin area means leaving the concept of the nation state behind in favor of trans-national aqua-political entities. We are far removed from this situation. Although..., in a fascinating book, *Ambassadors of Culture: The Transamerican Origins of Latino Writing*, Kirsten Silva Gruesz argues that this sense of coastal connection was in fact driving nineteenth century Gulf culture. (Gruesz 2002)² New Orleans was (and maybe still, partly, is) more similar, ethnographically speaking, to various other cities around the Gulf than to, say, Boston or Minneapolis St Paul. In fact, Veracruz competed heavily with New Orleans about harbor dominance. Only because the US was an emerging power and its hinterland offered more passages to other places did Veracruz faded away. We mostly forget these basic interconnections of the Gulf as a liminal zone, a border zone, where many nationalities meet. In our contemporary cultural representation mainly the US part of the Gulf is high-lighted. This was most poignant again in the 2005 hurricane season. The devastation in the Yucatan and other places barely made the news.

A hurricane is not an isolated North American phenomenon—it is part of a dynamic of a whole region. In fact, the etymology of the word hurricane does not lead to Latin as many words shared by English and Spanish, but to an old Caribbean word of the Taino Indians³ *hurákan*; akin to Arawak *kulakani*, thunder; the Spanish *huracán* saves some of that association (The American Heritage® Dictionary 2000).⁴

² Thanks to Priscilla Solis Ybarra for pointing us in the direction of this body of work.

³ Taíno Indians were a subgroup of the Arawakan Indians (a group of American Indians in northeastern South America). They inhabited the Greater Antilles (comprising Cuba, Jamaica, Hispaniola [Haiti and the Dominican Republic], and Puerto Rico) in the Caribbean Sea at the time of Christopher Columbus. At the time Juan Ponce de León took possession of the Island, there were about twenty villages or *yucayeques*. When the Spanish settlers first came in 1508, since there is no reliable documentation, anthropologists estimate their numbers to have been between 20,000 and 50,000, but maltreatment, disease, flight, and unsuccessful rebellion had diminished their number to 4,000 by 1515; in 1544 a bishop counted only 60, but these too were soon lost. See: <http://welcome.topuertorico.org/reference/taino.shtml>

⁴ See also www.dictionary.oed.com Second edition 1989 [a. Sp. huracan, OSp. *furacan, Pg. furacão, from the Carib word given by Oviedo as huracan, by Peter Martyr (as transl. by R. Eden) as furacan. Thence also It. uracano (Diez), F. ouragan, Du. orkaan, Ger., Da., Sw. orkan. The first found reference is from 1555 EDEN Decades 21 These tempestes of the ayer (which the Grecians caule Tiphones..) they caule Furacanes..violent and furious Furacanes, that plucked vppe greate trees.

Again, it is on the level of natural urgency that culture is reminded, if not admonished, to regain a larger engagement and connection. The similarities between the various regions along the Gulf coast become most pronounced when one considers their similar wealth of bio-diversity and the various threats to which they are all subject as coastal ecosystems (Gruesz 2006). Vulnerabilities and ways to retain or regain resilience are very similar based as all of them are in the coastal ecotones of the same body of water. We would like to see Gruesz's work extended in bio-cultural connective research, which would enhance our relational knowledge and concern. This would lead to a cross-cultural imagination (Appadurai 1996) and relation that transcends the nation-state by valuing and revealing the needs and capacities of the aqua-eco-region. Only this kind of mind-set will give us a base to develop a resilience that takes its extended vulnerability seriously.

3. Eco-Revelatory Design

One source of vulnerability in cities is that the built environment often obscures natural processes from view and makes it very difficult to "read" the landscape. The artificiality of our surroundings, the straight lines and right angles, the relentlessly hard and impervious surfaces, the artificial light and indoor climate control, the speeds at which we move all detach us from the kinds of self-protective cues that motivated our species as it evolved through previous millennia. Massive structures like the levees of New Orleans or the World Trade Center towers in New York project such a convincing sense of permanence and invulnerability that even when we know it is illusory, we act as if it were true. The remaining or returning residents of New Orleans will carry with them a consciousness of ever-present threat, and the temptation will be to lull them back into complacency with comfortingly enlarged levees and strengthened public safety systems. For us the ideal design project would, instead, shore up the protective barriers while providing constant and easily-readable cues about vulnerability and self protection.

The field of eco-revelatory design concerns itself with precisely these sorts of cues. Though it is applied mostly to brownfield redevelopment and wastewater treatment, it can also inform grand urban interventions of the sort required in New Orleans.

In his useful summary of eco-revelatory design, William Eisenstein (2001) writes, "ecologically designed urban landscapes should communicate cultural 'cues' for sustainable behavior; these landscapes should be implemented in partnership with ecological education efforts; and the cultural meanings and ecological place values created over time will be fundamentally local." Examples of such design include rain gardens and treatment wetlands, the use of native plants, local building materials and energy-efficient architecture, as well as sculptural interventions in the landscape that call attention to the water cycle, to plant growth and decay, or to wind patterns. It is not sufficient to make use of natural processes in the design; it should also draw people's attention, instruct or remind them about those natural processes, and highlight their own role in the processes.

The primary natural processes that are relevant to daily life in New Orleans relate, of course, to the threat of flooding, as well as to issues of water contamination and high

winds. There has been much discussion of zoning or identifying certain areas of the city where the threat of floods is too great to allow rebuilding, though this meets with fierce resistance from those whose neighborhoods would be eliminated. As a constant reminder of the flood threat, such zoning would be a coarse (and rather callous) form of ecological urban design. More sensitive and creative forms of ecological design can surely be devised, such as eye-catching drainage and storm water systems, beautiful detention basins and constructed wetlands, homes and walkways designed with flooding in mind (submersible ground floors, elevated access routes, lifeboats), and handsome platforms above flood stage where people can congregate in a crisis. A memorial to those who lost their lives in Hurricane Katrina might take the form of a landscape of colorful flags showing peak water levels, which would also alert people to possible refuge sites in times of crisis.

Any rebuilding in New Orleans is also predicated, of course, on controlling floods. The levees are a necessity, but they need not simply stand in mute defiance against the elements. They can also engage the intelligence of residents and teach about the cultural and ecological dynamics of the Mississippi Delta, on the theory that citizens who understand their context are better equipped to respond to change. There are many examples around the world of teaching waterfronts, including educational museums, interpretive walkways, and partnerships between waterfront design groups and local schools (May 2006).

Unfortunately, any such creative interventions are unlikely in the face of the enormous difficulty of responding to basic needs after the hurricane. In part, this is because of the conflicting political interests at stake and the general resistance in the U.S. to any sort of comprehensive urban planning. Our emphasis on individualism and private property often precludes planning altogether, and when planning does happen, "short-term gains outweigh long-term, coherent plans," as John Hall of ASU's Resilience Solutions Group puts it (Knowledge @ W.P. Carey, 2005). Thomas Campanella, author of *The Resilient City* (Oxford, 2005), indicates, furthermore, that cities rarely avail themselves of opportunities for "progressive resilience," or rebuilding to correct old mistakes:

Even if a city's buildings are toppled, foundations are often reusable and property lines remain. Insurance claims and simple inertia help push landowners to rebuild more or less what they lost. There is also a deep psychological need to see things put quickly back the way they were. While a disaster can trigger a host of long-term innovations, these tend not to surface in the immediate wake of a catastrophe. Visionary schemes are the stuff of good times, when people can afford the luxury of debating possible futures. The last thing people want to do in the middle of a disaster is wait around for the minutiae of a brave new plan to be refined for implementation.

There are examples of catastrophes that led to positive changes, but this is not the norm. The fact that ecological design can provide significant cost savings and reduce future risk, together with the aesthetic and education benefits it offers, may seem compelling in

the abstract, but those solid foundations and mental maps of the former city do not yield easily to change.

Nevertheless, New Orleans has always prided itself on resilience and the extemporaneous inspiration of its citizens. Let us hope that the process of rebuilding the city will engage that very powerful energy and extend it to the three domains of resilient relevance we sketched above, a basin mentality, a gulf consciousness and a building with eco-revelatory designs.

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