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Infrastructure

Delia Duong Ba Wendel

In the recovery efforts that followed the 2005 hurricanes in New Orleans, architecture and infrastructure were mobilized as strategies of political activism. For the Lower Ninth Ward neighbourhood in particular, long neglected by municipal government and severely damaged by the hurricanes, involving architecture and infrastructure in political negotiations was critical. In an especially vivid example, the neighbourhood's first responses to the disaster employed architecture as a defensive strategy. Confronted with municipal threats to condemn the neighbourhood as unfit for human habitation, neighbourhood activists initiated architectural projects to assert the neighbourhood's right to remain. This strategy was marked in its contrast to neighbourhood activism before the 2005 hurricanes, when infrastructure was the focus of negotiations with the city for improved living conditions. This shift from the transactional mode of infrastructure to the secessionist symbolism of architecture can be further distinguished from a second phase of post-hurricane interventions. In late 2006, the community merged these polarized approaches to incentivize financial and public support for the neighbourhood's reconstruction. Infrastructural mechanisms were integrated into architecture, such that architecture operated systemically (and infrastructurally) to address the neighbourhood's crisis. This incorporation of infrastructure in architecture has precedent in architectural history, and toward the end of this chapter, the themes of megastructure and micro-urbanism will be briefly explored to contextualize this third neighbourhood strategy. The following sections illustrate these Lower Ninth Ward strategies to consider the ways in which architecture and infrastructure affect the political empowerment of marginalized neighbourhoods.

Figure 30.1 (Below) Autonomous architecture, uprooted from infrastructural networks. Partial post-hurricane site plan of the Lower Ninth Ward, overlaid onto a 1951 Sanborn Fire Insurance Map. Dwellings (D), churches and commercial facilities (by name), building materials, and water infrastructure noted. Hatched footprints indicate buildings destroyed by the 2005 flooding; solid white footprints indicate buildings dislodged from their foundations. Asterisks locate buildings structurally assessed by the author, as part of Common Ground's counter property-seizure initiative. (Delia Wendel)

ARCHITECTURE AS A DEFENSIVE STRATEGY

The Lower Ninth Ward is located in eastern New Orleans, within four miles of the French Quarter. Before the hurricanes, the area was home to approximately 14,000 residents, the majority of whom were African-American and low- to middle-income homeowners.[1] Established in 1832 as a military outpost, the neighbourhood grew with an influx of freed slaves, rural migrants, jazz and blues musicians and shipping industry workers (Berry et al. 1986; Lewis 2003). One of the notable characteristics of the area is its rich history of community organization in churches (over seventy churches are located within the neighbourhood's two square miles), civil rights groups, and social aid and pleasure clubs that are known for organizing the jazz funerals and second line processions for which New Orleans is famous (DeVore, Dec 2007; Landphair 1999; Regis 1999). Despite this cultural capital, and the fact that African Americans comprised two-thirds of the population in the pre-hurricane city, the Lower Ninth Ward has been marginalized from city politics for decades. This long-term neglect and disinvestment limited the neighbourhood's economic opportunities and affected the quality of social services, housing and infrastructure (Landphair 1999; Sutton, Winter 2005; Wyman 1993).

During the 2005 hurricanes, the Lower Ninth Ward's perimeter levée walls were breached at several locations, causing floodwater levels of between four and twelve feet. This resulted in severe structural and flood damage in over three-quarters of buildings, and weakened both utilities and hazard protection infrastructure (Bates and Green, n.d.: 30; FEMA 2006; Smith and Rowland 2006). Early in the recovery period, the neighbourhood was declared an unviable space by the municipal government, and this impeded rebuilding efforts and infrastructural repairs.[2] However, a comparison of neighbourhoods in New Orleans with similar topographic profiles indicates that the Lower Ninth Ward was not inherently vulnerable to disaster. Rather, its damage was a consequence of a highly localized history of inadequate infrastructure and the construction of shipping channels at its western and northern edges.[3]

The community's first recovery strategies emerged in late 2005.[4] Pressed to act before evacuees could return, activists employed architecture to mark the ground with evidence of residence.[5] Grassroots groups such as Common Ground Collective initiated independent structural assessments to counter the 'eminent domain' seizure of properties by municipal government. The Association for Community Organizations for Reform Now (ACORN) started to rebuild

Figure 30.2 (Left) Spray-painted notice by ACORN in defence of eminent domain seizures and premature demolition by the city authorities. In June 2006 when this photo was taken, many residents had not returned because the city authorities prohibited entry to the neighbourhood until May. (Delia Wendel)

Figure 30.3 (Below left) One of two 'Steamboat Houses' built in the Lower Ninth Ward (1905, 1913). Design influenced in part by Mississippi River steamboats. Historically registered in 1977, the houses are often referred to in order to substantiate the neighbourhood's historic credentials. (Delia Wendel)

Figure 30.4 (Below right) One house remaining in a ten- block area that had been densely populated by residences and churches before the 2005 hurricanes. Spray-painted sign on the house reads: 'GUTTING IN PROCESS WILL REBUILD; DO NOT DAMAGE'. (Delia Wendel)

residences, and church groups began denomination-affiliated reconstruction – while the neighbourhood's municipal incorporation was still in question. The New Orleans Preservation Resource Center and the Holy Cross Neighbourhood Association proclaimed the neighbourhood's cultural value with examples of historically registered architecture. Consequently, this diverse range of activists 'untethered' architecture from the land. Characterizations of the neighbourhood's unviability were redirected to the ground, while architectural reconstruction rose above, defiantly under local control.

These reconstruction efforts were informed by the vernacular design logics of neighbourhood residents.[6] Foundations were raised to levels above the 2005 floodlines, water filtration systems were installed, electrical generators were used *in lieu* of functioning utilities, and ventilation continued to be regulated by architectural rather than mechanical means (by deploying a linear, or 'shot-gun', form that naturally drew air through the house). Activists demonstrated extraordinary resourcefulness by rebuilding the neighbourhood largely without functioning water, gas and electrical utilities. Certainly, these tactics were common in other neighbourhoods after the hurricanes. However, unlike the more 'desirable' areas of New Orleans, architecture's autonomy – that is, its disconnection from the infrastructural networks it relied upon – was pronounced in the Lower Ninth Ward. This condition was apparent in the severely damaged landscape, but infrastructural inadequacies had also come to be seen as directly related to the municipality's unwillingness to rebuild the area, and this reinforced the turn to architecture as a means to affirm neighbourhood autonomy.

As the recovery process evolved, it became evident that detaching architectural reconstruction from municipal infrastructure (and planning processes) would only offer short-term relief to threats of eviction and a diminished quality of life. Architecture, even as an embodiment of residents' will, self-sufficiency and history, was not sufficient to guarantee the necessary extension of infrastructural networks to the Lower Ninth Ward. Such was the fortitude of convictions that the neighbourhood was not worth rebuilding. In a context in which land management is critical to civil rights, architectural autonomy was ultimately a limited strategy for comprehensive social justice activism.

responsibility for these conditions. And certainly, the years that preceded the 2005 hurricanes did not indicate a change in position. In 2003, Lower Ninth Ward residents rallied against a backdrop of burned-out cars, malfunctioning streetlights and mounds of garbage (McFarley, 15 June 2003). Once again, the neighbourhood organized to protest its substandard infrastructure – this time linking it to high rates of crime in the area. After the 2005 hurricanes funding was hardly forthcoming for an unwanted area of the city that exhibited steady decline during decades of governmental neglect.[8]

Before the 2005 hurricanes, neighbourhood activists were more outwardly concerned with the condition of their infrastructure than with architectural issues such as housing. This was due in part to the implicit understanding that architecture was a matter of private concern.[9] By contrast, infrastructure was synonymous with the public domain. Clearly, infrastructural networks are not merely utilitarian foundations for the efficient operation of our built environments. Infrastructure is intimately intertwined with issues of social justice, in that it connects the conditions of dwelling to wider issues of equitable governance and public

Figure 30.7 (Below) Axonometric drawing of Archigram's 'Plug-In City' project (1963–1964). The rendering presents a megastructure 'kit of parts' comprised of structural frames, 'capsule' housing units to be 'plugged in' to larger structures, and cranes for moving capsules and altering spaces. (Archigram Archives)

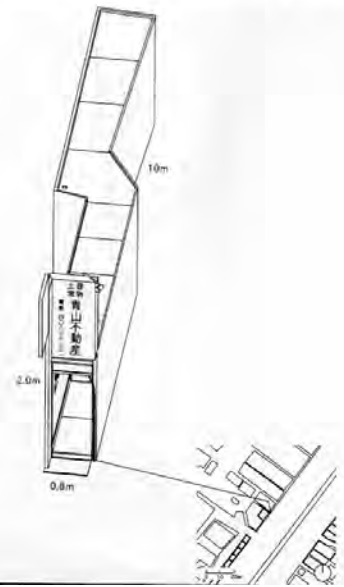
Figure 30.8 (Below right) Tokyo micro-urbanism: real estate agency built in the narrow interstitial space between two buildings. The space 'bends' around the shape of the adjacent stair, and occupies only one metre of street frontage. (Atelier Bow-Wow)

responsibility. And as the historical disputes over infrastructure in the Lower Ninth Ward show, in New Orleans high quality infrastructure represents firm socio-political connections to government.

MEGASTRUCTURES AND MICRO-URBANISM

Before I return to the 2005 recovery efforts in the Lower Ninth Ward, allow me to briefly discuss two types of architectural projects that integrate infrastructural mechanisms, as a way of framing the neighbourhood's third reconstruction strategy.

In mid-twentieth-century architectural discourse, megastructures were imagined as architectural frameworks that could override the urban problems of congestion, crime, and municipal and economic dysfunction. Such manic optimism, as illustrated by Archigram's 'Plug-In City' (1963–1964) and 'Walking City' (1963), developed hyper-forms in which architecture performed as infrastructure. The conceit and the dream was that architecture could abdicate from the city, and erect substitutes. Similarly, we could include Cedric Price's 'Fun Palace' (1962), Constant's 'New Babylon' (1962) and Yona Friedman's 'Infrastructures for New York and Los Angeles' (1965) as examples (Banham 1972; Friedman 1965). Megastructures created extensive environments of multiple levels and high complexity for the heightened interaction of people and traffic. Each of these projects imagined vast machinic architectures that were to be provisional and expandable in terms of structure, space and use. They implied a social vision for architecture, in which uninhibited individuals gained flexibility and fun. Despite these intentions, the total design of a seemingly inescapable environment was limiting. The disavowal of existing conditions only



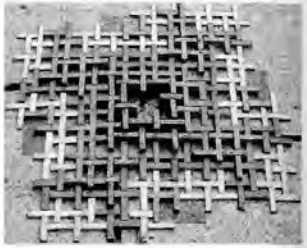


Figure 30.9 (Right) Piet Blom's 'Noah's Ark' thesis was presented by Aldo Van Eyck in 1962, to Team X at the Royaumont meeting on the 'Issue of Urban Infrastructure'. It was rejected by the group as an 'unlivable' and unbounded proposition (Smithson 1968, 679, 687). Nevertheless, the project would continue to be debated in architectural circles for its extreme integration of form (architecture), and 'counterform' (infrastructure). See D. Apon, February 1961. (Jaap Hengeveld Publicaties)

demonstrated irreverence to direct solutions for urban problems.

With similar aspirations, Team X, Christopher Alexander and Japanese Metabolists theorized architecture as networks (Alexander et al. 1977; Maki 1964; Smithson 1968). Urban networks of commodities and transactions revealed the significance of connectedness to the urban

Figure 30.10 (Below left and right) Maps of the Lower Ninth Ward, with buildings before and after the 2005 hurricanes. Data retrieved from the Lower Ninth Ward Neighbourhood Association. (Delia Wendel)

condition, the complexity of modern human relations, and the freedoms in mobile economies (Smithson, 1975). Networked architecture had surpassed the megastructure concept of infrastructure as framework. 'Mat buildings' simulated interconnected flows of money, goods, people and information by pushing the limits of architectural scale to rhizomatic tectonics. These projects organized territories in an anti-monumental manner, unlike the megastructure compression of infrastructure into highly visible mechanistic forms. Kenzo Tange's 'Tokyo Bay Project' (1960), Piet Blom's 'Noah's Ark' (1960), Candilis, Josic and Wood's Toulouse-le-Mirail development (1962), and even Le Corbusier's Venice Hospital (1964) produced architecture as connective tissue, linking programmatic use (transportation, dwelling, shopping, working, etc.) in the city through material and formal continuity (Banham 1976; Sarkis et al. 2001; Smithson 1975). While sensitive to the artifice of the city and the pertinence of technology to urban life, these architectonic networks remained unresolved at the scale of their units. Instead, they presented a vision for the 'maximum possibility' of architecture's transformation of urban infrastructure (and urban life).

Mega- and mat-buildings claimed to administer urban crises through complex formal strategies that assumed infrastructure was everywhere available. The Lower Ninth Ward had already been excluded from this ideal concept of the city. For decades activists unsuccessfully pursued mega-infrastructural development. Conversely, when architecture was employed as a defensive strategy immediately after the hurricanes, activists sought autonomy from municipal oversight and infrastructure. Although this was a statement of refusal rather than a proposed reinvention of the area, mega-projects provide comparable precedents for this desire to override existing conditions. By contrast, micro-urbanism provides a better comparison for an architecture

that has a contingent relation to its political environment.

In the 1990s, micro-urbanism rejected the earlier large-scale approaches to urban renewal. Micro-urbanism operated through ad-hoc and opportunist tactics in the city. In 2001, Japanese firm Atelier Bow-Wow catalogued eighty-one buildings in Tokyo – restaurants, shops, kiosks, dwellings – in their *Pet Architecture Guide Book* (Kaijima and Tsukamoto 2001). The book drew attention to micro-buildings that had 'wriggled' into spaces between larger structures, latching onto existing infrastructures, effectively taking advantage of building and lot mismatches that arose from inconsistent application of planning regulations. This form of city-making values a precise and tactical relationship with immediate contextual fabrics, and the possibilities of non-governed design. Elsewhere this approach has been politicized through agit-prop and anarchist re-uses of space.[10] At its most basic, however, micro-urbanist sites operate within infrastructural networks as 'switches' to initiate more liberating uses of a city's resources, and as 'resistors' to carve out spaces for undervalued urban residents.

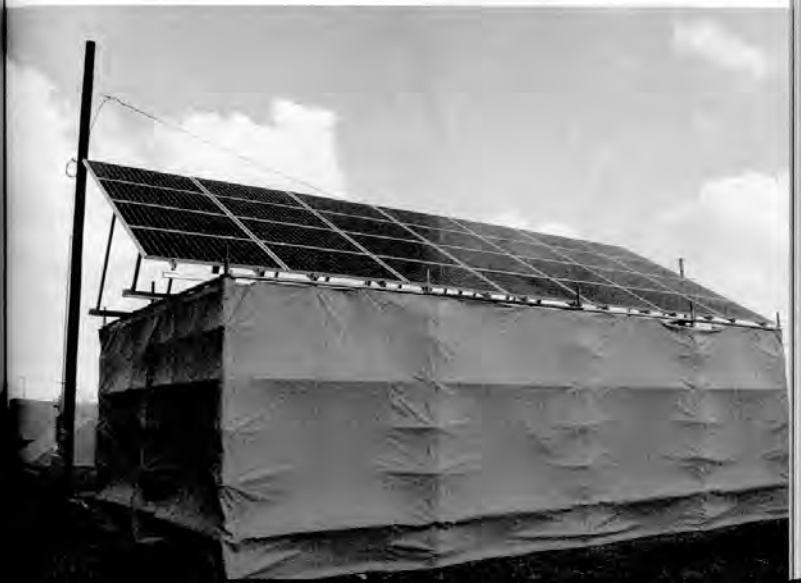
Within architectural discourse, the interest in infrastructure stems from the desire to design malleable frameworks that have wide urban effects while also facilitating autonomous activity. This potential has historically been obstructed in the Lower Ninth Ward by the lack of municipal support for neighbourhood development. Unlike the micro-urbanism and megastructure approaches, the area is too large to operate within urban interstices and too undervalued to incentivize mega-development. Compared to these precedents, the neighbourhood's own architecture-as-infrastructure strategy developed from similar aspirations. But as the following section demonstrates, significant differences exist in scale and stakes.

Figure 30.11 (Below) Two advertisements depict houses and residents in the Lower Ninth Ward to promote the neighbourhood's sustainable building practices and assert its cultural vibrancy and history. One of several examples of community organization employed to reinvent the neighbourhood as a 'beacon for sustainable development for New Orleans and the world'. (Historic Green New Orleans)

ARCHITECTURAL NODES AND INFRASTRUCTURAL NETWORKS

In late 2006, Lower Ninth Ward activists merged earlier strategies to employ architecture to manage infrastructure and public support more broadly. The neighbourhood turned to ecological design. Like megastructures and micro-urbanism, architecture reconfigured infrastructure. Rain-water collection, biologically treated waste systems, brise soleils, weather seals, elevated ground floors, permeable ground treatments for increased water drainage and solar panels for energy collection exemplify the integration of infrastructural mechanisms in architectural form. Two non-governmental foundations initiated this shift by organizing sustainable design competitions and building residential prototypes in the area (Eggler, 16 Apr 2007; Hales, 15 Jul 2006; Krupa, 29 Sep 2007). By integrating what had been exclusively

Figure 30.12 (Below) Brad Pitt's 'PinkProject' installation occupied several razed residential blocks in the Lower Ninth Ward, and inaugurated the 'Make It Right' Foundation's sustainable development initiative. The solar panels lit the area at night, symbolizing a reinvented 'green' iconicity for the neighbourhood. (Delia Wendel)



publicly maintained infrastructure within the private dwelling, at the scale of 150 new residential units, this approach left the previously polarized infrastructure and architecture strategies behind.

The community's interest in this architectural strategy followed seemingly divergent motivations. From an oppositional standpoint, ecological architecture facilitated the local management of infrastructure. The mechanisms architecture employed to capture natural resources and protect against future flooding provided the means to secede from municipal infrastructural networks. This sensibility parallels the 1970s development of 'local' and 'appropriate' practices to counter harmful industrial by-products in marginalized spaces (Carson 1962; Schumacher 1973; and United Church of Christ 1987). Similarly, the vulnerability and governmental neglect experienced after the 2005 hurricanes prompted consideration of ecological models. Although sustainability generally refers to homeostatic systems engineered to protect nature, in this neighbourhood, sustainability refers primarily to the community's survival.[1] Residents were amenable to an unfamiliar architecture that could provide them with self-sufficient systems. With this sensibility under the surface, local oppositional politics connected subtly to a globally popular ecological aesthetic.

From a conciliatory standpoint, ecological architecture primed the neighbourhood's political spokesmanship. The merger of architecture and infrastructure promised to

Figure 30.13 (Below) House on Jourdan Street, Lower Ninth Ward, retrofitted with solar panels. One of ten installations by Sharp Corporation's 'Sola' in 'NOLA' initiative, supported by the Preservation Resource Center and the Louisiana Department of Natural Resources. (enerG Magazine)

reinvent the neighbourhood as a place of value; as 'a beacon for sustainable development for New Orleans and the world' (Global Green 2007). This aphorism aligned the neighbourhood with both regional action against climate change and national environmental concerns. Presciently, in the 1960s, Buckminster Fuller and John McHale introduced this transactional capability, suggesting that systematizing architecture with 'models of flow, distribution and reuse' could efface oppositional politics (Wigley 1996, 3, 5). While the total erasure of decades of discriminatory policies is arguable, in the Lower Ninth Ward ecological architecture was conceived as a positive deception. As a representational strategy, it did not engage directly with the neighbourhood's contentious history of injustice and disinvestment. Instead, it looked beyond these intractable issues to stimulate municipal support via association with celebrity and a popular attitude toward the built environment.

Through both of these rationales, infrastructural networks were drawn into residential architecture and re-politicized, allowing the politics of brinkmanship and negotiation to co-exist. By bridging the architectural divide between micro-urbanist isolationism and totalizing megastructures, this second phase of activism successfully merged the politics of micro-intervention with a vision of maximum possibility. Accordingly, Lower Ninth Ward architecture brandishes the socio-political promise of a recalibrated infrastructural network.

CONCLUSION

As reflected in its struggle over architecture and infrastructure, the Lower Ninth Ward has been teetering somewhere between connectedness and secession for several decades. Historically, publicly provided infrastructural networks were considered a civic right, and the primary means for connecting (physically and politically) with the municipality. To protest the municipality's exclusive control over urban infrastructure, architectural activism fueled the standoff between the neighbourhood and the municipality immediately after the 2005 hurricanes. In the second phase of the neighbourhood's post-hurricane activism, infrastructure was re-tooled at the architectural scale. The integration of infrastructural mechanisms in architectural form provided the Lower Ninth Ward with an increased degree of self-sufficiency. Through the transactional capability of ecological architecture, negotiations with the city were kept open. In this way, architecture acted as a political catalyst to solicit support and funding for the neighbourhood. Megastructures and micro-urbanism provide comparative points for architectural projects that attempt to act systemically, like infrastructure, to address urban problems. But these precedents are limited in that they tend to reinforce a politics of brinkmanship, and are not designed to negotiate with oppositional forces in the city. Through recognition of and engagement with the thickened ground on which it stands, Lower Ninth Ward architectural nodes work in concert with infrastructural networks of reconciliation and empowerment.

NOTES

1 Of the 14,000 residents surveyed in the 2000 U.S. Census, 98.3% were African American, 59% were homeowners (compared to the 46.5% city-wide average), and a third lived at or below the poverty line (GNODC, n.d.; Logan, January 2006).

2 Municipal directives and media representations cited chronic poverty, crime and flooding as reasons not to rebuild the neighborhood. The first municipal rebuilding plan, coordinated with the Urban Land Institute, proposed to shrink the city to provide a safer and cheaper city "for returning residents in the higher neighborhoods" (John McIlwain of ULI, quoted in *The Economist*, 22 Apr 2006). Together with four other neighborhoods, the Lower-Ninth-Ward was to be converted to wetlands and green

spaces using forced buyouts if necessary (Cobb, 23 Jan 2006; Calmes, 15 Sep 2005). The notion of increased safety was interpreted in two ways: first, the lower neighborhoods would physically protect the 'new' New Orleans; and second, by 'neutralizing' these neighborhoods as green space, problems of poverty and crime would be removed. Although no longer under consideration in its entirety, the lack of municipal rebuilding programs and funding for the Lower Ninth Ward suggest that remnants of the proposal remain.

3 Several experts have argued that the Lower Ninth Ward's vulnerability to flooding is not a natural proclivity. Historian John M. Barry has written: "to say you can't re-inhabit the Ninth Ward because of safety is a bit of a phony argument ... If you build a good flood-control system, the entire city is safe. If we don't the entire city is dangerous" (1998, 222). Furthermore, as Lauria and Soll demonstrate, locating the Industrial Canal on the western edge of the Lower Ninth Ward purposefully separated this low-income African American neighborhood from the central city and increased its vulnerability to disaster (1996). Similarly, the manmade Mississippi River Gulf Outlet at the neighborhood's northern edge has been called a 'hurricane superhighway', a conduit for storm surges that have plagued the area (Breunlin and Regis, Dec 2006). After the 2005 hurricanes, Geologist Roy Dokka compared the neighborhood's topography with less devastated neighborhoods Metairie and Kenner to argue that low land elevation was not the primary cause of damage (Filosa, 1 May 2006). Dr. Mashinqui supported this, blaming flawed engineering in the Lower Ninth Ward's levee protections (Schwartz, 25 Apr 2006).

4 For additional detail on these defensive architectural strategies, see Wendel 2009. These observations were made during field research in the Lower Ninth Ward, during June-July 2006 and December 2007.

5 There are approximately 3500 residential lots in the Lower Ninth Ward. The neighborhood was the last to be re-opened to residents after the hurricanes under the city's 'Look and Leave' (allowing inspection of properties but with an imposed curfew) and 'Look and Stay' (allowing reoccupation of the neighborhood) decrees.

6 Although vernacular architecture is the focus of this analysis, it is not upheld as universally valuable. The benefits of architectural invention should be weighed alongside those of architectural memory, especially in highly political situations. These debates have a history, of course. For notable examples, see Bernard Rudofsky (1964) who romanticized the vernacular as a counterpoint to modern urban 'mess'; and Kenneth Frampton's (1998) reaction to the homogeneity of Modern architecture by privileging architectural responses to local contexts (defined by sun exposure, climate, topography, etc).

7 The infrastructural protections that mediate the tensions between humans and nature in New Orleans constitute an extreme example of a familiar urban condition. When effective, infrastructure facilitates progress. From the First World War, a veritable 'technological society' developed from an unprecedented scale of transformation in the landscape (dams, electrification, land drainage), transportation infrastructure (automobiles, railroads, highways, bridges), communications (radio, television and the Internet), and military and Space innovations. But when infrastructure is substandard, spaces are disconnected from sociopolitical and economic possibility, and more vulnerable to natural hazard. Even in highly developed urban environments the exclusionary effects of infrastructural networks are apparent (Castells 2004; Graham and Marvin 2001). Infrastructural networks are material indicators of a naturalized paradox in our contemporary urban conditions, locating contiguous ascendancy and disadvantage in the landscape.

8 In December 2006, Mayor Nagin vowed that the city would be rebuilt in its entirety, but stated that recovery would be phased to prioritize recovery efforts in the unflooded areas before moving east of the Industrial Canal, to the Lower Ninth and New Orleans East neighborhoods (Filosa, 18 Dec 2006). Nagin declared "market forces" would drive the prioritization of recovery efforts, thereby shifting financial responsibility for recovery to private bodies and residents with means. Nagin acknowledged: "The Lower 9th Ward will probably be the last area. That's just the way citizen investment has gone" (*ibid*). The Mayor's Office of Recovery Management has since identified the Lower Ninth as one of 17 'target recovery zones' in the city, but both the extent of municipal involvement in the rebuilding process and the timeline for reconstruction remain unclear (Mayor's Office, 29 Mar 2007). $136 million has been allocated to this 'target zone', but actions to follow these allocations have been stalled by City Council disputes, federal delays, and fund mismanagement (Eggler, 8 Jan 2009; Guillet, 25 Jun 2007). The situation suggests a high reliance on laissez faire redevelopment strategies, particularly for areas in need of substantial recovery.

9 Although the majority of Lower Ninth Ward residents owned their homes, relegating housing to the private domain, the city was responsible for limiting economic opportunities and social services in this area. Certainly these factors have had impact on the resources of residents to rebuild and maintain their homes. Furthermore, homeownership in this area is not a recent acquisition; the majority of homes were deeded from previous generations.

10 For the founder of the Urban Flash movements in China, microurbanism creates spaces for 'urban nomads', such as merchants in informal economies, the homeless, migrant workers and politically minded youth (Chi, Nov 2003). Urban Flash tactics draw inspiration from Parent and Virilio's (1996) 'Oblique Architecture' and the Situationists 'detournement' for a guerrilla architecture that operates in the interstices of government-sanctioned capitalist enterprises.

11 Pam Dashiell, president of the Holy Cross Neighborhood Association, reacted to the neighborhood's vulnerability: "[after the hurricanes] it was apparent we needed to be as resourceful and resilient and *sustain* ourselves as best as possible " (Italics mine. Quoted in Russell, 11 Mar 2007).

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