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Planning After Hurricane Katrina

Robert B. Olshansky

Hurricane Katrina was the greatest urban and regional disaster in U.S. history. The rebuilding of New Orleans and surrounding areas of Louisiana and Mississippi will require the largest and most complex planning effort in my lifetime. To succeed, we must learn from disasters of the past, while also applying the planning knowledge of the present. From past disasters, we know that successful reconstruction requires both outside funding and local citizen involvement. As planners, we know that the processes should be rich in data, imagination, communication, and participation. Optimistically, a new New Orleans will involve improved flood safety, revitalized neighborhoods, housing opportunities for all, and equitable treatment of all residents. Planners have an obligation to take an active role and advocate for the funding and full participation necessary to achieve these goals. The alternative would be a city that is poor, unsafe, and unequal. This is the greatest planning problem most of us have ever seen, and it warrants a correspondingly large response.

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Hurricane Katrina was the greatest urban and regional disaster in U.S. history. The rebuilding of New Orleans and surrounding areas of Louisiana and Mississippi will require the largest and most complex planning effort in my lifetime. It will require substantial analysis and public debate of the trade-offs between idealistic goals and expediency, and will confront some of the most difficult planning issues of our day, forcing choices among environmental justice, racial equity, restoration of natural systems, repairing levees and other public works, relocations, environmental cleanup, cultural heritage, hazard mitigation, economic development, and urban redevelopment, all at a scale never before seen.

It is easy to say that Hurricane Katrina reinforces well known planning lessons: cities do not belong on ephemeral coastal lands; the U.S. neglects racial minorities and the poor; and intelligent investments in human and environmental resources can lessen future disasters. But the reality is more complex. Rebuilding involves many actors, and present-day decisions will echo long into the future. Although as I write this in December Katrina is fading from the front pages of the nation's newspapers, the reconstruction of Gulf Coast cities and of people's lives will still be a major concern to hundreds of thousands of people when this goes to press and will continue to be so for many years to come. It should also be a major concern to all of us in the planning profession.

Victims will reconstruct their lives, whether or not planners participate. I believe, however, that planners have an obligation to take an active role, in order to make the recovery as successful as possible. To do so, we must learn from disasters of the past. More importantly, we should apply what we know about planning in this first decade of the 21st century. This is an opportunity to show what we can do, in building communities and cities that represent the best of humanity.

Other Great U.S. Disasters

The scale of this disaster has few equivalents. As of October 3, 2005, according to the Federal Emergency Management Agency (FEMA), 900,000 households had received assistance, and nearly 400,000 had applied for transitional housing (FEMA, 2005). At the peak of the displacement, 273,000 people were in emergency

shelters, and more than 1 month after the event over 83,000 were still in shelters. According to FEMA, as of September 23, victims had filed 1.36 million applications for individual assistance, with over 35% of them located outside of Louisiana or Mississippi (Ericson, Tse, & Wilgoren, 2005). Not only does the number of victims exceed previous U.S. disasters, but having over 470,000 people displaced from their home states is without precedent in our country.

The closest U.S. equivalents would be the 1871 Chicago fire, the 1927 Mississippi River flood, and the 1906 San Francisco earthquake and fire (see the cover of this issue). The great Chicago fire of October 1871 destroyed nearly three square miles in the center of the city, killed nearly 300 people, and left 100,000 people homeless (Cronon, 1991). Because of Chicago's vital position within the nation's economy at the time, however, the city rebuilt remarkably quickly; reconstructing the buildings and economy took only a little over two years (Miller, 1996) The 1906 San Francisco earthquake and fire burned over four square miles, killed 500 people, and destroyed more than half (about 25,000) of the city's housing units and two thirds of the jobs (Haas, Kates, & Bowden, 1977; Platt, 1999). After the disaster, authorities provided free transportation to encourage evacuation, and 300,000 left, with approximately 70,000 of them never returning. Tents provided temporary housing for about 40,000 through the summer. Emergency cottages housed 20,000 people through the next two winters (Haas et al., 1977). By 1910, however, the population of San Francisco was back to 417,000, a 22% increase over 1900 (Platt, 1999). The 1927 Mississippi River flood inundated 27 square miles, and covered land where 931,000 people lived (Barry, 1997). Approximately 330,000 people were rescued, and approximately 1,000, or possibly more, died. A total of 325,000 people (mostly African American) lived in Red Cross camps for up to four months, an additional 312,000 (mostly White) were fed and clothed by the Red Cross, and most of the remaining 300,000 residents left the area.

These disasters, however, provide only limited lessons for the current situation, because they occurred at a time when the economic, technological, and governmental systems differed significantly from those of today. The same is true of the rebuilding of Europe and Japan after World War II, because during post-War reconstruction, many cities were rebuilt simultaneously, and political and economic systems were completely reinvented.

Lessons from Other Disasters

Past disasters, both large and small, in the U.S. and abroad have common lessons (Comerio, 1998; Haas et al., 1977; Johnson, 1999; Rubin, Saperstein, & Barbee, 1985; Schwab, 1998). One of the most important is that urban systems generally re-emerge, with some improvements, in the same locations. Second, recovery is not a final, identifiable state, but evolves from decisions made over time and is achieved most readily when local organizations are free to respond to their specific circumstances. Third, external funding is crucial to recovery, but is most effective when it allows for local flexibility. It is also important to remember that loans are different from grants, and have long-term effects that ripple through the community. Fourth, households and businesses at higher socioeconomic levels are more likely to recover to pre-disaster levels, and those who are better integrated into economic and social networks will recover faster. Conversely, those with the fewest resources get less attention from aid organizations, and get it later in time. Small-business owners are often neglected in the first months following a disaster, even though they are unlikely to survive a business interruption. Lower income groups always have a weaker voice in recovery decisions, unless explicitly integrated into the decision processes. Fifth, the national political context is often crucial. In numerous cases the ruling political party has allocated aid based on the importance of the affected region in upcoming elections. In addition, if mayors or local representatives are well connected to the national party in power, they can influence both the speed and quantity of financial assistance.

Every post-disaster recovery manifests tension between speed and deliberation. Speed of recovery is important in order to keep businesses alive, rebuild infrastructure, and provide temporary and permanent housing for disaster victims. If official agencies do not act quickly, many victims will begin to rebuild on their own in ways and at locations that they determine. Social and economic networks are what make a city, and it is these networks that rebuild the city. They make it possible to retain the functions and the soul of the pre-disaster city even while building something new. The links in the networks, however, will weaken over time as the physical city recovers. Although there is little research on this topic, Comerio (1998) suggests that basic functions should be restored within 2 years to ensure a successful recovery.

Although speed is necessary, it is also vital to take the time to plan the post-disaster reconstruction, in order to make the new permanent city the best it can be. Planning can maximize the opportunities for coordination of land uses and infrastructure, ensure safety, promote design to improve the quality of residents' lives, account for the concerns of all citizens, and seek cost-effective solutions. But if planning takes too long, it will be ineffective. The window of opportunity for accomplishing post-disaster

improvements is short, lasting at most for several months following the disaster.

Previously existing plans can help to improve both the speed and quality of post-disaster decisions. By *existing plans* I mean much more than land use maps. I mean an active planning process, including well established community organizations, lines of communication, a variety of planning documents and tools, and some degree of community consensus. In addition, information is a valuable resource, because it provides the basis for strategic planning decisions. Information systems that include inventories of parcels, structures, and hazards can greatly facilitate the recovery process.

The 1995 Kobe Earthquake

The New Orleans flood was an unusual event in that it destroyed most of a large, modern, industrialized city within one of the world's great economic powers. However, this was not unprecedented. In fact, in terms of economic and housing loss, it was remarkably similar in scale to the January 17, 1995 earthquake in Kobe, Japan (Olshansky, Johnson, & Topping, 2005). This earthquake caused 6,394 deaths and destroyed about 150,000 housing units in Kobe and surrounding cities in Hyogo Prefecture. It damaged another 250,000 housing units severely. As many as 316,000 people lived in temporary shelters. The earthquake disrupted the lives of residents and affected the economy in innumerable ways. It damaged 85% of the region's schools, many hospitals, and other public facilities. Extensive damage to rail, road, and port facilities took up to 7 months to repair.

Of the thousands of families displaced by the Kobe earthquake, some found shelter with relatives or moved into rental housing elsewhere. For about a third of the displaced households, however, the only option was government-supplied temporary housing. By August 1995, 48,300 prefabricated units had been constructed at the edge of the city. Some residents stayed in temporary housing for up to 4 years. The widespread destruction required a reconstruction effort more massive than experienced in any other post–World War II industrialized society up to that time. Japan's central government provided most of the funds, allocating over $58 billion in the first 3 years to reconstruct basic infrastructure, public facilities, and housing.

To most visitors today, Kobe appears to be a vibrant city, completely recovered from the disastrous earthquake. The infrastructure and central business district were rebuilt within a few years, downtown is once again a thriving commercial center with few vacancies, and most neighborhoods have also been rebuilt. All the lost housing units were replaced within 3 to 4 years after the earthquake, using a mixture of public and private funding. The earthquake also created many community-level opportunities for improvement: parks, greater safety, multicore development, and road widening. Kobe and nearby cities experienced basic physical, social, and economic changes.

The rebuilding of Kobe was not easy, however. Nor was it successful in all respects. Japanese planners learned much from the Kobe experience, and they expect to apply these lessons someday to another huge urban earthquake, perhaps affecting Tokyo. We can also benefit from the Kobe experience as we rebuild New Orleans, and as we ponder other urban disasters in our future.

First, Kobe reminds us that reconstruction will be long, costly, contentious, and often confusing. This is true of all major disasters. The good news is that cities rebuild, but the bad news is that it always involves a long and difficult path. New Orleans residents will need patience.

Second, replacing lost housing units involves more than numbers. Kobe ended up building more housing units than were lost. But these units did not meet the needs of all the victims, especially those in lower income groups. Furthermore, many residents lost their neighborhoods and their social networks. Kobe planners only later came to appreciate that the process of housing reconstruction, which involved a variety of public and private initiatives, should have been more systematic and better coordinated, and should have addressed economic, social, and design concerns.

Third, temporary housing is important to recovery. Although it did not provide ideal living conditions, temporary housing was the only way to provide safe places for many area residents to live until permanent housing could be completed. But the needs of residents went beyond merely having a roof over their heads. In Kobe, many residents of temporary housing felt isolated, because they were separated from their neighbors, and many were located several miles away from their previous homes. This led to depression and sometimes suicide. The city surveyed temporary housing residents during the first year, which provided them with information both on how to improve housing conditions and how to refine their long-term recovery programs to better address victims' needs.

Fourth, small businesses and low- and middle-income tenants were not well served, particularly in the first few years. Small businesses cannot survive without income, and many closed or left the area. Kobe planners now recognize that low- and middle-income tenants would have benefited from a greater variety of affordable housing programs, as well as from more assistance in making choices. Housing reconstruction programs should focus on individuals, and on presenting them with sufficient information to make appropriate rebuilding decisions.

Fifth, local governments needed more funding from the national government in order to meet their recovery needs. Programs to finance recovery were limited, and local governments often felt restricted by the conditions of central government funding.

Finally, Kobe hired planning consultants to work with neighborhood groups, and this was a great success. These planners fostered agreement among citizens on action, gained consent for completed plans, shaped ideas, and brought government and ordinary people together. Consultants played an important role as intermediaries, explained city policies to residents, made citizens aware of resources, and advocated changes in the official plans on behalf of citizens. Although their specialized knowledge was sometimes important, their main role was to help government and citizens understand each other. This helped give citizens a role in rebuilding their lives.

Temporary Housing: A Particular Challenge

Temporary housing is always critical to long-term recovery following disasters. It is even more important given the unprecedented diaspora of New Orleans residents. Because no other natural disaster in U.S. history has spread so many people so far from their homes, it is difficult to predict how many of them will return to New Orleans. America is a uniquely mobile society, and it is relatively easy to settle in a new place. But if too many residents and workers stay even temporarily at great distances from the city, it is difficult to imagine how New Orleans will rebuild.

Temporary housing has two important attributes. First, it is temporary. This means that there should be adequate support services aimed at moving residents out of the settlements and into permanent homes, jobs, and communities. Second, despite this, temporary housing will be home to many people for 2 to 4 years. This means that temporary housing units and their neighborhoods must be as livable as possible, with sufficient amenities to maintain people's mental health and spirits.

For those who want to return to New Orleans, it is critical that they be housed as close to their old homes as possible. As jobs reappear (which has already begun), they will be in a position to take those jobs. For those who do not want to return, cash payments or vouchers would allow them to find housing elsewhere. If evacuees can be housed near their neighbors they can retain their social ties, conduct community planning processes, and share information and resources to help rebuild their homes and lives. In addition to housing, job placement and training services would further facilitate recovery.

Planning for the Future of New Orleans

With or without pre-existing plans, the best way to trade off speed and deliberation following a disaster is to do 21st-century planning involving municipal, regional, state, and federal planning institutions, modern technologies, and participatory processes. Use existing data and plans and include mechanisms for sharing of data resources among agencies. Focus data collection and analysis on gaps in existing knowledge. Hire adequate staff, supported by external funding when local financial resources are unavailable. Make technical materials and training programs available to support and enhance local and regional capacity to engage in informed deliberations. Use a range of communication media so that a full range of constituencies, including displaced residents and small-business owners, can participate. Provide public funding to hire neighborhood and community planners to assist residents in planning and financing their reconstruction. Provide an opportunity to develop creative strategies for neighborhood improvement and communication among diaspora populations. Increase communication between residents, local governments, and state and federal agencies. Consider investments and policy changes that would create higher quality, more equitable, and less vulnerable human settlements.

Such processes should be rich in data, imagination, communication, and participation. There should not be a single, hierarchical planning structure. Rather, many parallel planning activities should proceed simultaneously, as existing agencies, nongovernmental organizations, private firms, and individuals attempt to solve the myriad problems they face, while recognizing their relationships and interactions with others. We have the tools and knowledge to accomplish this.

Many have suggested that rebuilding New Orleans is economically foolish, because nature will reclaim even more of this land in the future. They say that now is the sensible time to abandon all or most of it, taking advantage of this opportunity to redirect our resources in more sustainable directions. Such reasoning is rational, but unrealistic. The City of New Orleans is more than a physical entity. It is a long-time home to many people and many generations. It represents their sense of themselves, their families, and their community. Furthermore, it is a national cultural icon. We will not be able to relocate or abandon the entire city.

Alternative Futures

It is possible to envision immediate and long-term futures for New Orleans that account for competing views. It is likely that the new New Orleans will be smaller than before. Some previous residents will find employment and homes elsewhere. New residents will migrate to New Orleans, but not in sufficient numbers to restore it to its previous size. Some people have predicted that lower-income and African American residents will be left out of the new city, as happened in Homestead, Florida, following Hurricane Andrew. It is difficult to envision such a complete change in the socioeconomic and ethnic mix of New Orleans. Many families of different ethnicities and income groups have deep roots in New Orleans, and the region's economy will need workers at all income levels. Thus, although changed in many ways, the new city is likely to remain diverse.

So, what might the new version of New Orleans be like? Although a complete transformation is unlikely, we can optimistically envision the following:

1. An investment in ecological restoration of coastal wetlands, coupled with strengthening the levees and improving the stormwater management system. Any strengthening of the levees would be an improvement, even if it did not fully protect the city from a category 5 storm.
2. Elevation of thousands of homes to dramatically decrease the risks of flood damage in future events. Some neighborhoods would look substantially different from before, creating a new New Orleans look, such as has happened in many other cities following devastating earthquakes, fires, and floods.
3. Reconstructed neighborhoods with opportunities for lower-income housing dispersed throughout the city, perhaps in Hope VI developments.
4. Neighborhoods emerging from the disaster with a new sense of organization and purpose. Neighborhood organizations can help residents share information to speed reconstruction, and they can incubate new ideas for community design.
5. Creative schemes that allow residents to relocate their property rights in order to maximize their remaining value and improve neighborhoods. For example, these might include joint housing[1] to allow flood victims to pool their remaining resources. On a larger scale, transfers of development rights or land trusts could buy out those who chose not to return, permitting remaining owners to take advantage of higher ground, and creating usable open space. (See Dewar, in this issue, for a discussion of maximizing the beneficial reuse of property after it reverts to public ownership.)
6. Better evacuation plans, and more hospitable shelters of last resort than the Superdome. For example, neighborhood schools could be reconstructed as wind-resistant, elevated safe places for those left behind in future disasters.
7. An energized environment for planning, taking advantage of a new sense of purpose and civic pride following the disaster. With the attention of citizens and hundreds of experts focused on rebuilding New Orleans, both enthusiasm and information will be available to bring it into a new era of informed, participatory planning.

Less optimistically, another possible future looms: one involving four cities, separate and unequal. The first city is the tourist city, consisting of the waterfront entertainments, Warehouse District, and the French Quarter. Residents have already returned to this city, its restaurants are adding employees to serve their growing clientele, and the hotels will soon be back to business as usual. The rapid recovery of this area is inevitable, even without outside assistance. The second city is the downtown corporate offices, which will soon again headquarter the various industries and financial enterprises of the region. Although the downtown area may end up smaller and less influential than before, it will survive and recover using its own resources. The third city consists of neighborhoods housing primarily middle-class homeowners with insurance, as well as neighborhoods that escaped flood damage. These owners will take several months to 2 years to obtain funds, hire contractors, and repair or rebuild their homes. Some will sell out and leave, but most will stay. Some small businesses in these areas will fail, but they will be replaced by new businesses providing local support services. These neighborhoods will recover, but they will be less vibrant places than before. The fourth city consists of those who will lose the most following the disaster. This includes areas occupied by low-income renters and lower- to middle-class homeowners with inadequate insurance. Without sufficient outside aid, these areas will remain vacant for years, their residents scattered throughout the country, their businesses gone, their property valueless, with no one willing to invest in new development. Low-income workers will eventually sparsely reinhabit some parts of this city. In the long run, the failure of the fourth city will undermine the future success of the other three, and will also undermine the recovery of the city's medical and educational institutions.

Benchmarks for Success

How will we know which of these scenarios is most likely? What have other cities looked like six months after huge disasters? Six months after the 1906 San Francisco earthquake, streetcars and retail trade had resumed, victims were beginning to vacate temporary camps, and reconstruction was just beginning; by the 12-month mark a building boom had begun (Haas et al., 1977). Following the 1995 Kobe earthquake, most government aid packages and the first phase of framework planning were completed within 2 months and all utilities were restored within 3 months. After 6 months 48,000 units of temporary housing were in place, an ambitious 3-year housing reconstruction plan was approved, over 11,000 new housing units had begun construction within the city of Kobe alone, and neighborhood planning processes had begun (Olshansky et al., 2005). Some major highways and port facilities took 1 year or longer to repair. Following the less devastating 1994 Northridge earthquake, reconstruction was well underway at the 6-month mark, and approximately one third of all post-disaster reconstruction permits had been issued (Olshansky et al., 2005).

By March 2006, a successful recovery of New Orleans and surrounding areas should show evidence of a series of feasible visions and plans produced by neighborhood, city, state, regional, and federal agencies, based on previously existing plans. Frequent forums for exchanging ideas among these plans should have begun. Local governments and community organizations should have begun to articulate visions and strategies addressing affordable housing, reconstruction financing, investment incentives, neighborhood renewal, and flood risk reduction. Some initial decisions on levee repair and restoration timing and budget should have been made. This will be important in order to spur private investments. There should be temporary housing, located within and adjacent to New Orleans and other affected communities so that those who want to return home can live in or near their neighborhoods, in trailers, tents, or safe places within existing structures. Most of these residents should be employed, either in their previous occupations or in cleanup, repair, or reconstruction. A network of community organizations should exist, as should a system of communicating with those who have temporarily resettled elsewhere but still desire to return home. There should be a planning clearinghouse to allow data exchange, provide a forum for regional planning, incubate planning ideas, and test planning ideas and strategies. Congress, FEMA, and the Department of Housing and Urban Development (HUD) should be providing financial support for long-term planning efforts, for job creation and job training, and to fill critical gaps in affordable housing for low-income renters and underinsured homeowners. Finally, there should be some reason for hope among those with fewer resources, such as the working poor, retirees, or owners of small businesses.

It is unlikely that significant visible reconstruction will have begun by March 2006, but the above actions are critical first steps in order to ensure a timely start on rebuilding and repopulating an economically viable, safer, and more equitable region.

Planners as Leaders

The planning this disaster calls for will not occur on its own. It is up to planners to lead, participate, volunteer resources, and advocate for funding and technical support. As of November 2005, the APA had linked volunteer planners to local agency needs, presented a recovery planning workshop for Louisiana planners, participated with American Institute of Architects in a forum organized by the State of Louisiana, and distributed free copies of recovery planning publications. Several academic planners initiated contacts with local organizations, including sponsorship of a community rebuilding forum held by the Association of Community Organizations for Reform (ACORN) in Baton Rouge. These are useful starting points, but much more is needed, and I hope that such efforts will soon be in evidence. These might include consortia of university planning programs to assist local communities and existing planning organizations with data, communications, and meeting facilitation support. The APA should seek alliances with community-based organizations to establish an ongoing technical support function in the affected area to support local planners.

Most importantly, post-Katrina planning requires funding. Though money for planning need not be more than a small proportion of federal recovery funds, it would help to ensure a rebuilding process that is well informed, locally supported, and efficient in its use of scarce resources. In addition, replacing affordable housing requires money, as do programs for job training, small-business retention, and all the extraordinary social services required for this unprecedented disaster. The planning profession should use its knowledge to advocate for these.

Finally, this is an appropriate time to look ahead. Other catastrophic urban disasters lurk in our future: the Miami hurricane, the earthquake in Los Angeles, San Francisco, Portland, Seattle, Salt Lake City, or Memphis. An earthquake on California's Hayward Fault, for example, could destroy over 150,000 homes (Association of Bay Area Governments, 1999). A large earthquake would also result in considerably more casualties than did Katrina. In preparing

for the next disaster, Federal leadership is crucial. FEMA, HUD, and other federal agencies must have a clear and coherent strategy for post-disaster recovery, and this strategy should encompass the largest urban disasters we can expect. It should address management responsibilities, relationships between federal and state agencies, expectations of local government, and appropriate sources of financing.

Post-disaster recovery is all about urban planning. This is not an area that we can leave to emergency managers, engineers, architects, the military, insurers, or bankers. Recovery, like planning, is all about creating livable, sustainable places for people to live and work. The fact that it takes place under extreme circumstances, and demands rapid action with severely constrained resources, requires the expertise that planners have to offer. This is the greatest planning problem most of us have ever seen, and it warrants a correspondingly large response.

Notes

1. Joint housing might, for example, consist of condominiums occupied by relocated property owners. They could sell their land to a public agency or development corporation, which would in turn provide them the opportunity to purchase space in a new condominium building in the same area. Entire streets or blocks could move together and participate in the design of the new building. Such a system might also include some additional subsidies to partially compensate owners for the loss of their damaged structures.

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