

Zombie Housing for the Displaced in the Aftermath of Disaster

Stephen Verderber

INTRODUCTION

Migratory persons and groups have long been of keen interest to social scientists and cultural historians. Often, they have been characterized as unfortunate, even pathetic characters in 20th century film and modern literature (Sarin and Sonam 2011). Recently, cultural geographers have begun to reappraise the mainstream societal stereotype of the postmodern, mobile, nomad as a bureaucratic nuisance, an anti-social being as if he or she were no more than a data point on a map or statistical chart. In the aggregate, they are misunderstood as an ultimately dismissible underclass, as, in socio-geographic terms, an undifferentiated underclass. A global migratory underclass has arisen comprised of growing numbers of post-disaster victims of natural and man made disasters, and of the growing ranks of post-disaster mitigation workers in the employ of private enterprise and/or government. The former component of this underclass is comprised of the direct victims of the event, be it a hurricane, earthquake, tsunami, tornado or an infrastructural breakdown such as a public health pandemic. The latter is typically comprised of mobile, nomadic individuals who for a litany of reasons relocate from one disaster site to the next in the hope of finding employment within a rapidly growing global post-disaster mitigation industrial complex. To this end, the work of immense for-profit disaster capitalist corporations consists of cleanup, infrastructural stabilization, and reconstruction after a disaster has struck (Fetterman 2006). This burgeoning industry and its underclass of nomadic workers has grown to become a statistically documentable population and is predicted to grow as global disasters increase in frequency in the coming decades.

Persons and groups uprooted either by choice or by default have been viewed as a threat to mainstream societies at least since the gypsies and nomads of the Middle Ages. Then, as now, their existence symbolized the dysfunctionality of a threatened societal order that assumed a *whole* person, i.e. moral, ethical, and contributory, should be rooted to a single particular place—with a home base of one's own and as a member of a sedentary community. Migratory persons and

groups caught in this trap include gypsies, prisoners of war, and most recently, large numbers of disaster victims. The latter are currently categorized for statistical purposes in the United States as Internally Displaced Persons, or *IDPs*, versus classification as *refugees* (Kirgis 2005). With the advent of global climate change, the 60,000 victims who had to permanently leave their homes in the massive floods in Bangladesh in 2011 are now being referred to for the first times as climate displaced persons—*CDPs* (Leckie 2011).

In the 20th century, wartime, post-war, and post-disaster internments of *IDPs* occurred with considerable frequency—some voluntarily, but most involuntarily. The tribal Bedouin of Libya, under Italian fascism, were subjected to neatly subdivided, newly built, barbed wire detention encampments beginning in 1930. These extreme places expressed the epitome of rational spatial planning, reductivist living quarters, and Spartan amenity. They were one kilometer-square enclosures arranged so that the many hundreds of detainees—inmates, in effect—were forced to live in tents set in a rigid encampment within broad unpaved street-paths. This allowed for maximum surveillance by authorities. It forced these Bedouin tribes to exist within a strictly bounded territory: a highly controlled, fixed space in stark contrast to their prior unfettered nomadic movement across their territories (Atkinson 2000).

Similarly, the migrant worker camps constructed in California in the 1930s under the auspices of the Farm Security Administration (FSA) during President F.D. Roosevelt's New Deal, in effect, incarcerated families and unaccompanied individuals (referred to as hobos) in newly constructed substandard non-place encampments, fenced in with barbed wire and armed sentries at the main gate. The grim yet heroic plight of these *IDPs* was depicted so dramatically in John Steinbeck's classic 1939 film *The Grapes of Wrath*. The Great Depression displaced tens of thousands in search of a better life. It is well documented how they were tempted to relocate from afar with the (false) enticement of good wages and plentiful work only to arrive to learn this was not to be the case.

The FSA sent out teams of photographers to capture the plight of these migrant families. These documentarians discovered the most appalling conditions: stuck in broken down vehicles overloaded high with whatever they could transport from their former life. In addition, bird's eye views' of these camps were photographed. Photographs of the migrant worker camp for *IDPs* at Schafter, California (1938) revealed a precise, newly built rectangular compound subdivided into a grid crisscrossed by broad circulation paths. Within each block of living space there was a laundry, toilets, and facilities for personal hygiene (Cresswell 2001). Paradoxically, these aerial views from high above depicted sanitized, prescriptive, rational space, in stark contrast to the disordered chaos and dehumanizing conditions experienced on the ground. Thousands of displaced migrants were forcibly amassed within the gates of these camps and in time they took on an eerie, zombie-like appearance. One FSA photograph taken by Dorothea Lange contained a message advocating for improved living conditions and for the establishment of a genuine sense of place. It read, "Constant movement does not favor the development of normal relationships between citizens and communities, and between employer and

employee for the proper functioning of democracy” (Phillips 1994). At the time, Lange’s editorialized comment served as a call for greater acceptance of transitory persons and groups (Cresswell 2006).

Governmental bureaucracies wield tremendous power and authority over migrant workers and involuntarily displaced persons in times of human hardship and suffering. The FSA sought to help American farmers but more often than not utterly failed. This government bureaucracy had aimed to provide new housing and job opportunities but the end result deteriorated into a mind-numbing existence where personal expression and individuality became subjugated, undermined, and often totally lost due to the forces of sheer bureaucratization (Baldwin 1968). Peterson et al (1995) argue that the hyper-controlling arm of government tends to engender in “care recipients” an attitude of learned helplessness, whereby people become consigned to their fate, as if whatever happens to them is inevitable, in the end. They come to expect less and less; they come to accept their highly subordinated role in determining and shaping their own fate, their own future. In effect, people in such situations become conditioned to merely passively await whatever is to come next.

Migratory individuals and groups generally relocate, whether voluntarily or forcibly, to a new landscape following a disaster. They may be viewed by society as “mobile” as if free to come and go but in reality they are migrants with few or no options. Typically, they suffer from a radical shift in class and status within the social structure within a matter of hours. New landscapes and housing provisions created under routine everyday (non-crisis) conditions on the normative side of this equation typically include the following variables: demographics of the population, past and recent patterns of migration, religious cycles and preferences, daily lifestyles, quality of life factors that contribute to satisfaction, relevant laws and polices, political affiliations, cultural traditions, attitudes towards local and state authorities, attitudes of hope versus apathy, the exchange of capital and goods, supply and demand patterns, the production and distribution of goods and services created by the population in question, and land values.

On the natural or ecologic side of this equation, these variables are often taken into account under normative everyday conditions: the impact of global climate change, including temperature, solar path, winds, humidity, and precipitation levels, the influence of hydrological systems, perhaps that of shifting tectonics, the effects of topography, geology and soil conditions, ecological diversity and health of local species, interdependences among these species, the degree of resilience of humans relative to these species, and the ecological health of the physical environment. In post-disaster situations, in the construction of new landscapes for the displaced, the aforementioned set of variables become highly distended, fragmented, even shattered. Only a subset of concerns are accounted for and then only barely so. This fragmented landscape remains acutely lacking in so many respects that the victims of the disaster are then subjected to a second entirely new disaster—that of being required to live in substandard living conditions in a forlorn place—often, for months or years at a time.

The tragic scenario of the post-disaster victim plays out repeatedly around the world. The following discussion centers on the phenomenon of *zombie housing*, defined here as the provision of largely ad hoc, newly established *non-place landscapes* that consist of generic, minimalist living quarters. Such quarters are typically provided in the aftermath of natural and human-made disasters for evacuees who have no option but to blindly put their faith and trust in a faceless post-disaster governmental “provider.” Zombie housing, in this context, possesses four main architectural-spatial attributes: minimal aesthetic expression, minimal functional amenity, maximum replicability, and minimum adaptability options for personalization. The deployment of generic living accommodations for homeless constituencies following disasters remains controversial. Faceless, rigid, bureaucratic housing and their newly built encampment contexts are being called into question as a dismissive social act—yet it remains quixotic how such generic housing remains the option of first choice for uprooted individuals and families forcibly dislocated in the aftermath of natural and manmade disasters globally. The same holds for migratory persons seeking paid, post-disaster mitigation work opportunities in these post-disaster strike zones. Four recent post-disaster scenarios are examined in the order of their occurrence in the first decade of the 21st century: Hurricane Katrina (2005), the Haitian Earthquake (2010), the BP Deepwater Disaster (also 2010) and the Tohoku Earthquake and accompanying tsunami that occurred near Sendai in Northern Japan (2011). The aim is to examine the zombie-like landscapes and living quarters provided for the victims and for the small army of nomadic, migratory workers hired to procure, stabilize, and construct these new migratory landscapes. Their socio-cultural legitimacy is examined as much as why substantive, genuinely supportive architecture remains absent from first responder disaster mitigation response systems.

HURRICANE KATRINA—2005

Hurricane Katrina stands as the costliest natural disaster and one of the five deadliest hurricanes in the history of the United States, having inflicted the loss of 1,837 lives in subsequent massive floods in New Orleans and along the U.S. Gulf Coast, and incurring over \$200 billion in property damages. Among recorded Atlantic hurricanes, it was the sixth strongest overall. The most deaths occurred in New Orleans, which flooded up to 80 percent as the city’s federally built and maintained levee system catastrophically failed. Large tracts of neighboring parishes also became flooded, and the toxic floodwaters lingered for up to three weeks. The infamous hurricane surge protection failure in New Orleans is now widely viewed as the worst civil engineering disaster in U.S. history and it prompted a lawsuit against the U.S. Army Corps of Engineers (USACE), the designers and buildings (often through subcontractors) of the levee system as mandated by the federal *Flood Control Act of 1965* (Schwartz 2006). Total responsibility for the levee failures and subsequent flooding was laid squarely on the USACE but the federal agency could not be held financially liable due to sovereign immunity dating from the federal *Flood Control Act of 1928* (Berry

1998). Massive governmental incompetency characterized the entire response to the disaster, from top to bottom (Verderber 2009).

Verderber (2009) described how Federal Emergency Management Agency (FEMA) trailer encampments, some with as many as 300 units per site, sprang up across New Orleans in the days and months following Hurricane Katrina. Thousands of IDPs were housed in minimalist, faceless, zombie-like living quarters. However, this number represented only one-fifth of the trailers requested by disaster victims in Orleans Parish, resulting in an enormous housing shortage in the City of New Orleans. Many neighbors fought successfully to keep the trailers out, in a classic instance of NIMBYism at work (Quigley 2006). In the process, fellow citizens desperately in need of shelter had been made to feel like transitory nomads—unwelcome migrants in their own city. Adding insult to injury, New Orleanians are a deeply rooted population, a people strongly connected to place. At the time of the disaster in 2005, 78 percent of New Orleanians were native-born residents (Verderber 2009a). Kennedy (2008) and others have documented hundreds of sad stories of involuntary relocation from place to place after the hurricane. It was a tragic, nomadic existence that consisted of shifting between family, friends, and strangers across months and even years.

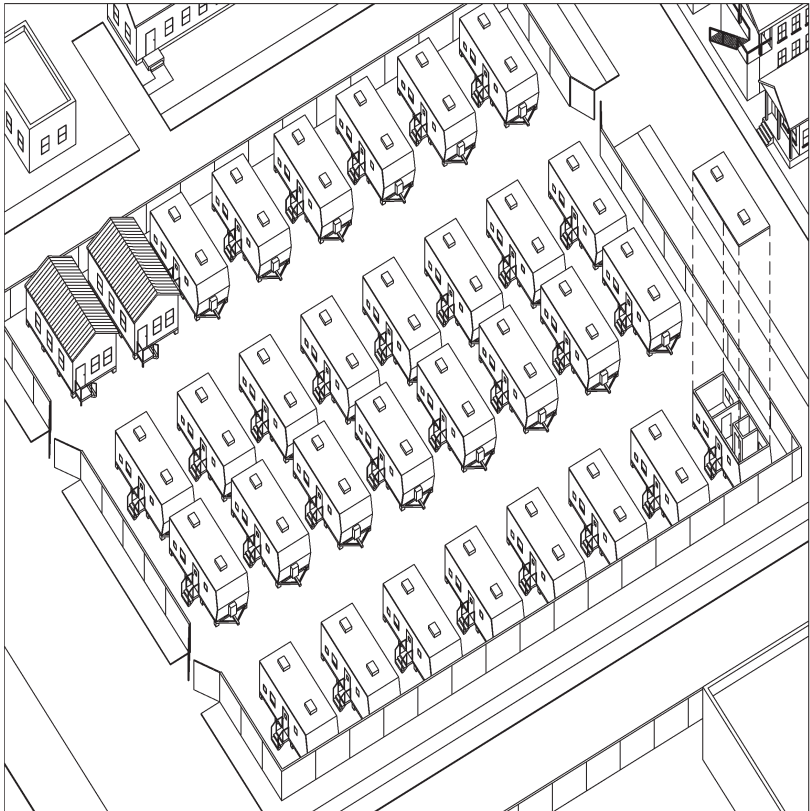
These zombie-like encampments sprang up all over New Orleans in Katrina's aftermath. Six months after the hurricane, 98,000 units were deployed across the New Orleans metro area. Encampments were constructed in neighborhood parks, in vacant school lots, shopping mall parking lots, outside flooded homes, and next to small businesses (Verderber 2009b). Private sector contractors and their subcontractors very flimsily built these trailers in far-off factories by the tens of thousands. Two encampments are depicted in accompanying axonometric illustrations: the encampment in Uptown on Claiborne Avenue (Figure 3.1 and Figure 3.2) and the encampment set up in City Park (Figure 3.3 and Figure 3.4). The zombie-like trailers provided scant amenity for their inhabitants, unfortunately, and were subsequently proven to be unhealthful—as unfit for human habitation. They caused respiratory sicknesses, nausea, and migraines. Verderber (2009a) described the U.S. Congress's hearings on this housing crisis, after the fact. In one case, an encampment of fifty units was actually set up *inside* a large bottling plant warehouse in a New Orleans suburb.

THE HAITIAN EARTHQUAKE—2010

The Haitian earthquake of January 2010 was a catastrophic magnitude 7.0 earthquake, with an epicenter near the town of Léogâne, approximately 25 km (16 miles) west of Port-au-Prince, Haiti's capital city. An estimated three million people were impacted by the quake, and 316,000 lives were lost, 300,000 were injured, and more than 1 million persons instantly became homeless IDPs (Anon 2010). The Haitian government also estimated that 250,000 residences and 30,000 commercial buildings had collapsed or were severely damaged (Figure 3.5). There remains some discrepancy however between the Haitian government's estimates



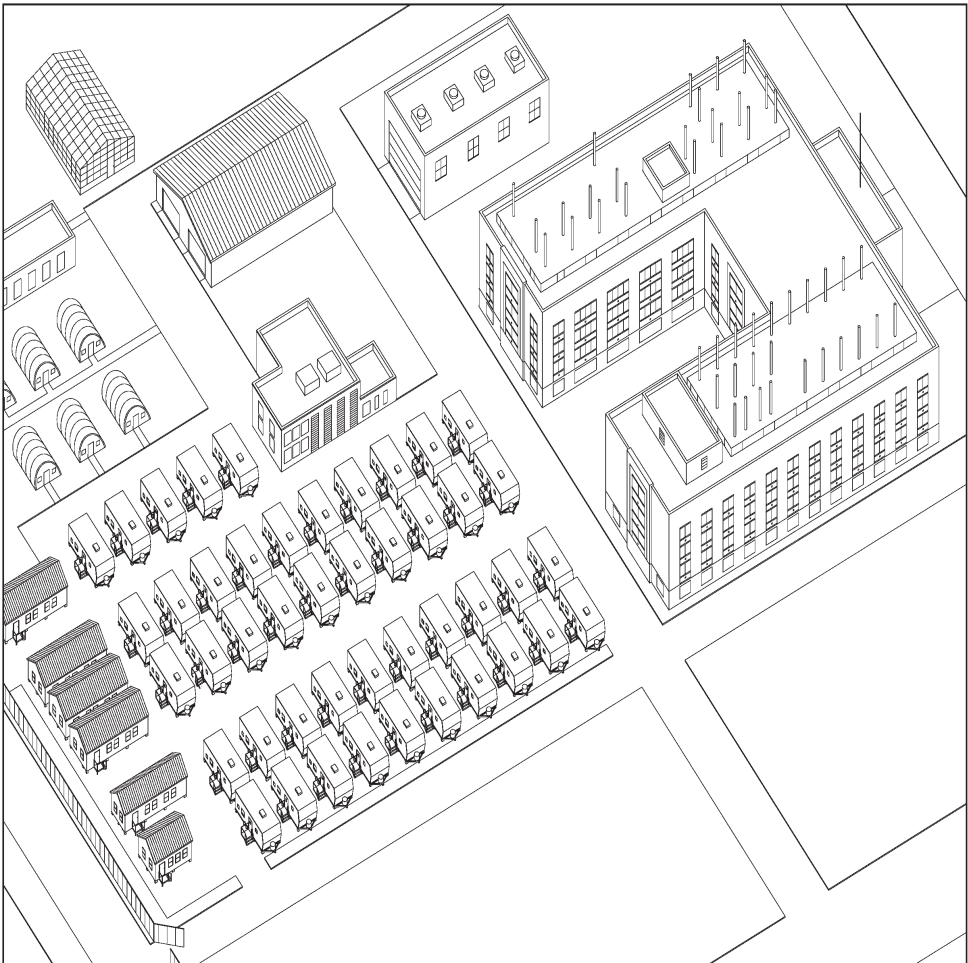
3.1 Katrina FEMA Trailer "Village," New Orleans, 2006. Photo: S. Verderber



3.2 Katrina FEMA Trailer "Village," New Orleans, 2006, Axonometric View. Drawing: S. Verderber



3.3 Katrina FEMA Trailer "Village," City Park, New Orleans, 2006. Photo: S. Verderber



3.4 Katrina FEMA Trailer "Village," City Park, New Orleans, Axonometric View, 2006. Drawing: S. Verderber

of losses as compared to the estimates of international agencies, including the U.S. Agency for International Development, which has suggested the death toll was between 46,000 and 92,000, with as many as 1.5 million to 1.8 million IDPs, according to research reported by C. Fraser (2010).

As in the case of Katrina, new, makeshift zombie-like tent cities sprang up literally everywhere in the days and weeks following the catastrophe (Figure 3.6). Golf courses, vacant lots, parking lots, in short, anyplace with open space, became encampments overnight (Reitman 2011). They each ranged in size from a few dozen families to thousands of families each. One of the hundreds of temporary-permanent encampments was set up in Corail, eight miles north of the center of Port-au-Prince. Within days of the earthquake, thousands of refugees had agreed to relocate to this formerly remote, barren place. The first group left the privately owned golf course (where the encampment was initially “set up”) in a caravan of buses, an exodus chaperoned by United Nation peacekeepers. Victims arrived, disembarking onto a dusty, cactus-strewn parcel of land in the shadow of a denuded mountain that turned out to be as vulnerable to the elements as was the golf course. The place looked not unlike the most barren parts of the Sudan, or Chad. Their “new homes” were no more than hundreds of bright white tents set up in long rows in the gravel. They were both extremely hot and flimsy in their quality of materials and construction. Three months after the IDPs arrived, hundreds of these tents blew away in a heavy windstorm. There were no schools, no place to buy anything, no jobs, poor transportation, and the closest hospital was many miles away. Going into the city required a long walk to a bus stop followed by a several-hour commute. They were stranded in this zombie-like tent city place/non-place called Camp Corail.

In the aftermath of its construction, no one seemed willing in the U.S. State Department or within the Haitian government to take responsibility for its creation. It remained a dubious decision to take them away from the golf course in the first place, although Corail was rationalized at the time as being a safer place. All it actually had represented was someone’s view that these people had been “saved” from a worse fate had they remained on the golf course. In reality, the landowner had strong political ties and was able to leverage his influence to get them off of his property just as soon as possible. A year after the initial move, at Camp Corail, crude plywood shelters were built. But collectively conditions were no better than the tents. And they collectively looked no more personalized or in any way more humane or more dignified than the bulbous white tents. But by the one-year anniversary of the earthquake, the population of this once-deserted territory had ballooned to more than 100,000 IDPs. What had happened was a false “land rush” occurred to take advantage of that turned out to be a mirage—the promise of jobs—most of which will never materialize. Dubbed “Canaan” after the biblical Promised Land, the Corail region is now one of Haiti’s ten largest cities, and also its largest and most squalid zombie-housing encampment. It is a temporal state lacking safe shelter, infrastructure, and water, for a population who does not know what the future holds for them. This tragic scenario is replayed on a daily basis across Haiti.



3.5 Earthquake Destruction in Port-au-Prince, Haiti, 2010. Photo: Charles Hansen



3.6 Makeshift tent city, Port-au-Prince, Haiti, 2010. Photo: Google Earth Images

In the words of Janet Reitman (2011):

It wasn't supposed to be this way... American and international officials gave their plan for Haiti a simple and compelling name: Building Back Better, a term that came into vogue after the tsunami that struck Asia in 2004, and that has since become something of a mantra in the development world. In a radical shift away from traditional approaches to foreign aid, "building back better" attempts to go beyond simple relief and not only to rebuild shattered structures, but to restructure, in a sense, shattered societies. At the forefront of this effort is private sector investment being leveraged to build the kind of infrastructure needed to promote economic development and attract foreign corporations: roads, power lines, factories, markets... but despite all that has been promised, almost nothing has been built back in Haiti, better or otherwise. Within Port-au-Prince, some three million people languish in permanent misery, subject to myriad experiments at "fixing" a nation that, to those who are attempting to fit it, stubbornly refuses to be fixed. Mountains of rubble remain in the streets, hundreds of thousands of people continue to live in weather-beaten tents, and cholera, a disease that hadn't been seen in Haiti for 60 years, has swept over the land, infecting more than a quarter million people. In the midst of such suffering, only a fraction of the money devoted to Haiti has actually been spent... as the relief effort has dragged on... virtually every actor involved has blamed the others.

The finger pointing has reached the level of an epidemic in its own right. Aid workers and bureaucrats in describing the situation on the ground in Haiti most frequently cite mistrust, apprehension, and graft. Meanwhile, some 1,000 zombie encampments, or what are officially referred to as "informal settlements" have sprung up seemingly everywhere on any available space—along roadsides, vacant lots, basketball courts, soccer fields, road medians, in the large ungated plaza in front of the Prime Minister's residence, even in the Champs de Mars park, across from the national palace, now home to more than 10,000 IDPs. Filth and refuse is everywhere. More than 680,000 Haitians remain stranded in zombie encampments overall as of mid-2011 and the cost of maintaining temporal zombie "cities" such as Corail is 1.2 billion per year. Worse, there appear to be no alternative housing options on the horizon. Suffice to say, people hate being in these encampments and desperately want to leave. As millions are diverted to "other" housing solutions, very few actual "permanent" housing units have been built in the two years since the earthquake. The harsh reality remains that Haitians view any such "outsider" efforts with deep skepticism. This is the main dilemma that the dozens of international non-government organizations (NGOs) are up against (Preston and Wallace 2010). The many for-profit disaster capitalist corporations that have set down stakes in post-earthquake Haiti are equally frustrated with the ongoing situation. And in cases where something actually occurs in the way of the construction of "permanent" housing, too often, little effort is devoted to actually conferring with community/inhabitants in any meaningful way.

In the meantime, it is estimated that up to 85 percent of Haiti's damaged housing units, including those deemed irreparable, have been reinhabited by people who either returned to them from the failed zombie encampments, or

those who never bothered to abandon their home in the first place. It is ironic that no funds have been earmarked to repair repairable structures to return them to “permanent” housing. It remains even more sad that no one really took the time to find out what Haitians considered to be “building back better” than before. The Clinton-Bush reconstruction funds were supposed to be a major source of aid to enable the construction of permanent housing. But this has not occurred. The so-called “permanent” tiny wooden boxes with tin roofs built in Camp Corail are a perpetuation of the same zombie housing mentality. It is *déjà vu*. They look like no more than rows and rows of backyard garden sheds. They are slums of the future, on the order of the long-notorious Cité Soleil slum in Port-au-Prince. There, USAID workers have also built numerous plywood shacks with tin roofs, with blue tarps having become necessary in order to cover over the leaky tin roofs. Occupants are charged \$10 per month to live in these newly built “quasi-permanent” shelters (Reitman 2011). More than one million continue to live in extremely substandard conditions two years after the disaster.

THE BP DEEPWATER HORIZON DISASTER—2010

On the evening of April 20, 2010 a massive explosion occurred in the Gulf of Mexico 60 miles off the coast of Louisiana. An immense ball of flames erupted high into the clear night sky as eleven men lost their lives. An over budget, problem plagued deepwater oil exploration platform had imploded—the BP Deepwater Horizon (Batty 2010). The limitations of extreme engineering technology were laid bare for the entire world to witness as this rig fell 5,000 feet to the ocean floor, in ruins. For three months thereafter its ruptured wellbore spewed more than 200 million barrels of crude oil directly into the ocean. The unprecedented damage inflicted upon the region’s delicate aquatic ecosystems, its seafood industry, tourism, and the communities directly impacted, garnered extensive media attention and scrutiny by global environmental advocacy organizations. Governmental agencies with supposed regulatory oversight of the U.S. deepwater drilling industry were caught wholly unprepared. Unfortunately, the government’s dysfunctional response was nothing new to residents of the U.S. Gulf Coast.

Hurricane Katrina slammed into this same region five years earlier. Then, as now, a lethargic governmental response, plagued by dysfunction at virtually all levels—federal, state, and local—resulted in a tedious period of recovery fraught with innumerable setbacks and false promises. This time, however, the disaster was *caused* by private industry. Yet once again, displaced individuals, families, and businesses were forced to rely, ultimately, upon their own resources, their intense inner determination, and resiliency. Widespread skepticism prevailed among those impacted, understandably, due to the highly flawed governmental response to Katrina. One thing would differ radically between Katrina and the BP Horizon Disaster: in this case the perpetrator of the disaster would be held accountable for all cleanup costs. This would include the provision of temporary housing for all migrant-nomadic cleanup workers brought in, from near and afar, to assist in mitigation efforts. The “on-site” post-disaster accommodations provided for BP-

contracted cleanup workers took the form of a so-called floating hotel—*floatel*—actually a vessel capable of housing a sizeable number of cleanup workers, many of whom were itinerant seafood industry workers and fishermen who had become IDPs due to the massive oil spill (Figure 3.7 and Figure 3.8).

In the weeks following the explosion that ruptured of the oil well's blowout preventer, BP scrambled to assemble a small army of cleanup workers and staged them in a tiny encampment at the southernmost tip of Louisiana's bayou. These hourly contacted workers were trained in one day and then sent out the next to scour beaches, marshes, and to operate boats deploying hundreds of miles of oil boom skimmers across the open waters of the Louisiana Gulf Coast. The strike zone would eventually extend far to Mississippi to Florida. For months, thousands of workers scraped the beaches of thick concentrations of accumulated crude oil.

Oil companies often have to house exploration crews in remote locations for extended periods of time. Over time they became "expert" in such no-frills accommodations. After the Deepwater Horizon explosion, BP subcontracted to construct two new "from the ground up" colonies of modular units that could float directly on the water. The plan was for these adapted barge installations to be relocated as needs change later in the cleanup operation in the event significant amounts of crude oil wash up elsewhere. These floating hotels—*floatels*—were constructed on the decks of standard oil industry service supply barges. One such colony was built at Grand Isle and a second at Port Fouchon, Louisiana, fifteen miles away. The Port Fouchon installation was the larger of the two colonies and is therefore examined in detail here. A small, extremely remote settlement

3.7 BP Floatel,
Port Fouchon,
Louisiana, 2010.
Photo: S. Verderber



itself, Port Fouchon is the oil and gas industry's hub-port on the Gulf. There, an aggregation of nearly 100 modular units was placed atop five separate barges that sat side by side in the water along one dock, in a high security section of the port.

Port Fouchon is literally at the end of the road, but feels more like the end of the earth. It is reached only by a single two-lane road (Louisiana Highway 1) that snakes its way through bayous and small towns with names such as Cut Off and Golden Meadow and a bridge across a long span of nearly open water. The port is not so much a conventional town as a purely functional switching station, not unlike a railyard for ships, workers, equipment, and cargo. All the buildings are elevated 12–15 feet on pilotis' and there are few signs of any real community, or *genius loci*, in any traditional sense. There are no permanent residents. It is a 1,300-acre parcel easily accessed by ship yet barely accessible via land. As for coastal land loss, a tremendous amount of the surrounding wetlands have vanished and subsidence of the remaining dry land is occurring at a rapid rate. It is a rough and tumble place.

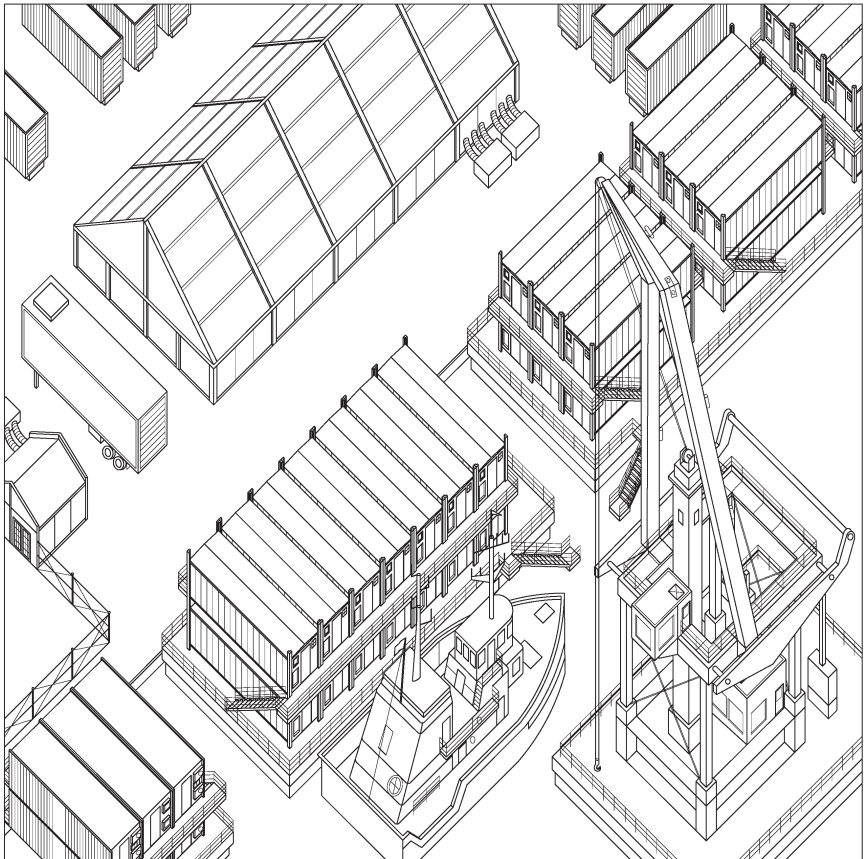
Each modular unit provided by BP was 40-foot long by 12' by 10' corrugated steel box. They resembled oversized white shipping containers, stacked two high and from three to seven units across, stacked atop the barges. The words 'Martin Quarters' were painted in black letters on the side, offering the only clue that they were stuffed with people instead of cargo. There is only one door to each zombie-module and a steel walkway doubles as circulation access and smoking gallery. The barge floatel at Port Fouchon housed more than 700 workers in 2010 to assist in the largest oil spill cleanup operation in U.S. history. These accommodations were viewed by BP to be the best, i.e. cheapest and most expedient, means to deploy

3.8 BP Floatel,
Port Fouchon,
Louisiana, 2010.
Photo: S. Verderber



a large number of workers close to the main “theaters of operation” within the oil spill’s strike zone. Generators pumped in cool air to the modules and provided electricity. Four additional tents on dry land housed up to 500 additional workers. An infirmary was located on site (in a tent) and a helipad was created for emergency airlifts to hospitals in nearby towns. Most workers were trucked in and out of the encampment to buy food or to go to the few local bars for entertainment. Few owned their own vehicles (Figure 3.9).

The accommodations were Spartan, at best, and windowless. Each pod contained twelve bunks, with a bathroom for every four. As per Coast Guard standards, each occupant got thirty square feet of space in his (there were few women) own module. The barge had ten washers and dryers, a kitchen, and an infirmary. Food was served in an adjacent tent, on land. This type of module typically has been used on small barges to float alongside an oil platform rig to supplement onboard living accommodations, but never before at this scale. Cleanup operation vessels stationed at the floatel dock ferried workers to work each day and usually returned them by 6:00PM. BP had planned initially to build more than two floatel encampments but only three were actually built. The buzzing sounds of helicopters flying overhead are omnipresent. The axonometric view illustrates the precise arrangement of the



3.9 BP Floatel and Encampment, 2010, Axonometric View. Drawing: S. Verderber

floating modular units and adjacent support facilities on the land, in a scene eerily reminiscent of the aerial photos taken of the FSA encampments in California in the 1930s, i.e. the Schafter FSA Camp for migratory agricultural workers. Similarly, the makeshift scene on the dry ground is quite different from how it looks from the air. From above, just like at Schafter, it appears as a rational, neat, tidy, ordered compound that provides “benevolent” accommodations for a nomadic population in need of work in rough economic times.

On the landside, the entire newly built encampment was enclosed in a 6-foot wire mesh fence. Armed guards with rifles were stationed at the main checkpoint. It was a military-like atmosphere, with strict departure/arrival policies, and a strict curfew (Emergency Committee to Stop the Gulf Oil Disaster 2010). There was virtually nothing to do within the encampment during non-working hours—no place to watch a film, hang out, to get away, and above all, no contact with loved ones, families, nor any opportunity for place-attachment. These transient nomads had little in common with one another, as they were a racially and ethnically disparate cohort. As in the case of the Katrina trailers and Haiti’s tent encampments, the floatels were a zone for existing, not *living*. Mac McClelland, reporting for *Mother Jones*, wrote of a rash of violent attacks and arrests (2010) that occurred on weekends “in town.” Nearly every incident involved floatel occupants. The workers actually went on strike (in summer 2010) at one point to protest their substandard living and working conditions (Boyd 2010). Immediately, national worker rights activist groups injected themselves to protest alleged human rights violations being perpetrated onboard the floatels (Cardinale 2010). Meanwhile, unbelievably, a parallel effort was underway by BP to place many hundreds more cleanup workers in purchased/used toxic Katrina FEMA trailers, in an ironic *redux* of the aforementioned post-Katrina fiasco (Urbina 2010). As it was, the floatel’s living modules were eerily reminiscent of nearby racks containing propane tanks (Figure 3.10).

Perhaps the BP mitigation workers are a 21st century nomadic equivalent to the medieval journeymen laborers who traveled across Europe building the majestic Gothic cathedrals. The Church-State (substitute BP), for its part, managed their construction, solicited workers, created divisions of labor between classes of manual workers, paid them, and proceeded to control them. The consequences of the BP Deepwater Horizon Disaster will be felt for decades as the terms of engagement regarding deepwater oil and gas drilling in U.S. waters have changed. The stories of families suddenly out of work were well documented (Thompson 2010). The losses sustained by the seafood industry, tourism, and throughout the entire regional economy will be felt for years to come (Stillman 2010). Meanwhile, environmental advocacy groups continue to mobilize to track the conflicting information provided by BP and the government (DeBerry 2010). As in any disaster, there will be winners and there will be losers (Schneider 2010).



3.10 Propane
Tank Rack,
BP Floatel
Encampment,
2010. Photo:
S. Verderber

THE TOHOKU EARTHQUAKE, JAPAN—2011

The 2011 earthquake off the Pacific coast of Tohoku, known as the Tohoku Earthquake, was a magnitude 9.0 undersea megathrust event. It was the most powerful known earthquake to have ever hit Japan, and one of the five most powerful earthquakes in the world overall since modern record keeping began in 1900. It triggered powerful tsunami waves which reached heights of 40.5 meters in Iwate Prefecture and which traveled 10 km (six miles) inland in the Sendai Region. The NHK News Service in Japan, in 2011, reported that in addition to the loss of 15,800 lives, 5,900 injuries, 3,600 missing persons, and the total destruction of 45,000 buildings, damage to an additional 144,000 buildings, and massive destruction of infrastructural amenities, the tsunami itself inflicted multiple nuclear accidents (Figure 3.11). These accidents centered on an ongoing Level 7 meltdown at three reactors within the Fukushima 1 Nuclear Power Plant complex, with associated evacuation zones profoundly affecting the immediate lives of 300,000 IDPs (Branigan 2011). The overall cost of remediation and reconstruction could top \$300 billion (US), making it the most costly global disaster ever on record (National Public Radio 2011).

A Japanese architectural firm, Yasutaka Yoshimura Architects, with Nowhere Resort, in 2011, right after the earthquake, developed a prototype container-shelter, the *Ex-Container Project*, for persons and families displaced by the disaster. These modular units were extremely generic and minimalist in appearance (Miner 2011). Their proportions were virtually identical to standard intermodal shipping

containers (Figure 3.12). They are all white on the exterior, with windows and openings sparingly carved out from their shoebox shape. These shoeboxes can be stacked on top on one another up to four levels in height. They are currently in mass production and a total of 50,000 have been purchased by the Japanese government, to date, for deployment to the post-disaster strike zone for installation on newly acquired land parcels. This housing solution is touted by its designers and by its government sponsor as neat, attractive, efficient, easily transportable via truck or rail, more structurally sound than conventional housing, earthquake-resistant, cost effective, redeployable, and adaptable to diverse site topography



3.11 Earthquake and Tsunami Devastation, Tohoku Prefecture, Japan, 2011. Photo: Yasutaka Yoshimura Architects



3.12 Pre-manufactured Modular Housing Units, Japan, 2011. Photo: Yasutaka Yoshimura Architects

and soil conditions. It remains to be seen, however, if this solution will be accepted by their inhabitants in the short and/or the long term as a humane, non-zombie-like housing alternative (compared to what they had before the earthquake).

WHERE ARE THE ARCHITECTS?

In the aftermath of these four recent catastrophes, the global need for sustainable, humane, dignified, and ecologically sustainable and health promoting post-disaster emergency housing has perhaps *never* been greater. What do these four post-disaster housing response case studies share in common? They share a top-down bureaucratic attitude. None are about providing the inhabitants with any meaningful degree of choice or control. None are tailored to any degree to a family's or mitigation worker's functional needs because a one size fits all solution (the unit) is the sole available option. In the case of the Haitian open-air tarp housing, not even *this* standard of basic provision is met: rough "structures" are flimsily fashioned in a highly random manner by the occupants themselves. The only government or NGO (non-governmental organization) intervention consists of providing the blue tarp and maybe some drainage improvements.

Some architects are answering the call, but glib responses alone will not suffice. One recent competition, the Zombie Safe House Competition, glaringly stands out in this regard. It occurred in 2011 and was sponsored by Wordpress.com, and published online on the blog *Bustler*. It read, "In the end, who will save mankind from the zombie apocalypse?" The so-called designers' challenge, as stated on its website, was "It is our belief that artists, designers, and architects will need to weigh in heavily to provide Safe Houses that can stand an assault on civilization. Don't be caught unprepared, sign up today and register for the 2011 Zombie Safe House Competition, you may be our last hope." (Anon 2011). The majority of design responses submitted by architects were (predictably) whimsical, unfortunately, although a few showed a glimmer of hope as transcending the realm of tongue-in-cheek to perhaps become an actual, tangible solution to a very real problem. The winning schemes ranged from a "Vagabond Mobile Safe House Device" consisting of a massive reused tire that served as an emergency escape enclosure for one occupant. Another published scheme was the "Oil Silo Home"—a recycled oil reservoir in the shape of a sphere. Another was a lookout house, equipped with an underground bunker. One honorable mention submittal consisted of architectural interventions showing how just about anyone anywhere could "zombie-proof" their existing home.

On a more serious note, Michael Daniel, of *Frog Design*, proposed in 2011 "Reaction-Housing", a line of pre-manufactured modular shelters that are redeployable and supposedly ready-made for implementation as first-responder housing. These units also appear zombie-like, appearing as sugar cubes, with a large block number on each module, i.e. 'A' for all units lined up cheek by jowl in Row A, and 00314, 00315, 00316 directly beneath in bold letters, and so on, with the unintended effect of making their occupants feel as if this demarcation had

also been branded on their forearms. They are being touted to FEMA as costing only \$5,000 per unit, versus \$65,000 for the typical post-Katrina travel trailer, and able to house up to four persons each, they come furnished, and can be erected by a few people each (supposedly) in a matter of minutes (Meinhold 2008). A site plan accompanying the rendering published online of one long rather dismal row of units depicts hundreds lined up in long rows, in a pattern virtually identical to the Dust Bowl encampments of the 1930s. They are clustered as a zombie “village” around a large domed sports stadium. The units are Spartan, and their recommended encampment configuration would most likely be no less than harsh, inhumane, and depersonalizing. Why are not more architects engaged in responding to this challenge? Why are few off-the-shelf prototypes of genuine architectural integrity readily available for first-responder implementation? Where is private sector industry with respect to this challenge? What antecedents have given rise to this underwhelming response on the part of architects? Reasons abound as to why so little has occurred up to now. The following are but a few possible factors that continue to hinder significant progress:

Dominance of the Engineers—The engineering profession dominates the industry as the provider of first choice in emergency and offshore housing. An emphasis on bare bones functionality and logistical expediency has usurped any attention to anything that might be equated with the broader, classically based Vitruvian principles of architecture (commodity, firmness, and delight). The largest U.S. federal contracts are held by a relatively small handful of very large engineering corporations (Klein 2008). These well-connected corporate interests are dismissive of “housing” that aspires to anything beyond bare minimum standards—especially if it is to house easily dismissible nomads. The typical attitude is “We don’t have time for architects, and they are just an extra expense anyway.”

Architects’ Traditional Disdain for Bureaucracy—Most architects are disinclined to communicate with engineers and politicians in a genuinely collaborative manner. It is this lack of assertive leadership and engagement that holds the profession back from making further inroads into elevating the design quality of post-disaster emergency housing. This also, in large part, accounts for the continued reliance on residential accommodations that appear placeless, unrooted, and wholly generic. On the other hand, some architects wish to merely replicate permanent housing such as in the case the “Katrina Cottage” prototypes built in post-Katrina Mississippi. This initiative was widely lauded for standing out in stark contrast to the sidelines stance displayed by the mainstream architectural profession (Miller 2006). This advocacy effort was extended by these same designers in Port-au-Prince in the aftermath of the Haitian earthquake (Langdon 2010). But it too misses the mark.

Lack of Professional Training and Preparation—Schools of architecture continue to do relatively little to foster a genuine attitude of social engagement among their students—in terms of inculcating the personal initiative, motivation, and the perseverance necessary to respond quickly and adroitly to a community’s dire needs in the aftermath of a disaster. It is no overstatement to say that architects are not trained to communicate well (if at all) with teams of inpatient engineers, the internal cultures of large post-disaster megacorporations, nor with large multi-

tiered government bureaucracies in such contexts. Sad to say but this dilemma is rooted in students' earliest architectural design studio experiences. Social engagement is often pushed aside as being irrelevant in the hierarchy of so-called "immediate" concerns. Schools of architecture in North America are somewhat improving in this regard but far more significant innovation is in order (Verderber 2003). In the case of New Orleans alone, its reconstruction has been slow and tedious and would have benefitted from far more direct social engagement of this type.

TERMS OF ESTRANGEMENT

Negative stereotypes of nomads, migrants, and involuntarily displaced persons are nothing new. History is filled with examples of individuals' and groups' search for something better. The denial of any meaningful connection to a place—especially if a new, unfamiliar place—remains unacceptable (Verderber 2010). The aftermath of the four disasters discussed above underscores the need for more place-centered post-disaster housing for diverse types of occupants. This remains largely the fault of government and its private sector subcontractors and therefore they must rightly and collectively shoulder the main responsibility. One-size solutions to complex housing needs do not fit all those in need. As for the public sector, the near-glacial pace of evolving policies on the part of HUD and FEMA in the U.S.—the current controlling agencies of the post-disaster housing industry—remain entirely unacceptable. The ability to personalize and hence humanize one's otherwise zombie-like living quarters must be of high priority in the provision of post-disaster housing accommodations (Miller 2006). There is no legitimate reason why high quality architecture can't be an integral part of a humane first response. It should not matter whether the housing provision is provided by the private sector or the public sector. Too often the architect continues to sit on the side of the road as a passive bystander when direct intervention is clearly in order (Verderber et al 2011). For the architect, the choice is whether to become a part of the solution or to continue to sit on the sidelines.

The transient nature of the small army of disaster mitigation workers that typically converge in the strike zone after a disaster makes it too convenient to perpetuate deep-rooted cultural biases toward this presumed "underclass." Nomads are viewed as conveyors of 'vague essences' where the use of this term is equivalent to *vagabond*. Yet a migrant is in a certain respect strikingly different from a nomad. Tim Cresswell (2006) writes:

...The nomad is constituted by lines of flight rather than by points or nodes. While the migrant goes from place to place, moving with a resting place in mind, the nomad uses points and locations to define paths. While sedentary people use roads to 'parcel out a closed space to people,' nomadic trajectories distribute people in open space. The nomad is never reterritorialized, unlike the migrant who slips back into the ordered space of arrival. The metaphorical space of the nomad is the desert...shifting across this tactile space making the most of

circumstance. The State, on the other hand, is the metaphorical enemy of the nomad, attempting to take the tactile space and enclose and bound it. It is not that the State opposes mobility, but that it wishes to control flows... (via) directed paths of movement.

As for the role of race and the media's use of the controversial term *refugee* to describe Katrina's displaced, Cresswell adds:

The use of a term such as refugee highlights the entanglement of mobility with meaning and power... nomads, travelers, tourists, and exiles... each (term) tells us something about mobility, each also tells us something about the social baggage that accompanies those on the move. The word refugee is no exception... the history of the term is loaded with subversive meanings and is often used with the word crisis, as are the words foreign and immigrant... (refuges) are often seen as taking advantage of the state's generosity... as not entitled to the rights of citizenship. They are people without place who need to be regulated... indeed, it is often the case that those who need the most help are those who cannot (afford to) move. An event such as a hurricane... effectively immobilizes the most vulnerable... mobility is more than just getting from point A to B... It is about meaning and power. It is about mobilities rubbing up against each other and causing friction. (Cresswell 2006)

The term *mobile poor* was widely used to describe Katrina's victims. A quasi-militaristic policy towards temporary living accommodations robs people of connecting with one another and with a particular place. This pattern was repeated throughout the 20th century and continues in the 21st century. Robert Kronenburg, a British architect and educator who has written extensively on transportable architecture, believes (1995) that esoteric and inventive architectural speculations might well be of intellectual value within the academy, yet such explorations are of little value with respect to the day to day lives of post-disaster cleanup workers and evacuees returning to their former communities. In personally speaking with a number of the workers living on the BP floatel barges at Port Fouchon, and five years earlier, in speaking with persons who had traveled from afar to work with FEMA in the reconstruction of New Orleans in Katrina's aftermath (being one myself, as my home in uptown New Orleans was too flooded to re-occupy), it became apparent that most had traveled merely in search of a job, a paycheck. In other cases, many had left their families back home to temporarily work in the latest contested battleground of post-disaster capitalism (Klein 2008). Many were from many hundreds of miles away while others were former residents of the immediate community prior to the disaster (as in my case). Occupational nomads, in this new era of disaster capitalism, habitually move from Point A to Point B and beyond. Their plight and their zombie-like exploitation by controlling interests is a stark reminder of the uncontested world of corporate meaning and power in America and increasingly in many other parts of the world. Their plight of the displaced remains tethered to misconstrued stereotypes of what it means to be on the move in a highly mobile society.

Beyond the immediate scope of this discussion, ample evidence suggests that we are currently in the midst of cultural zombie-mania (Wilson 2009). The zombie, cast as a victim that is easily manipulated by some other force or agency, is appearing widely not only in film but also in comic books, video games, novels, and popular literature. Major cities across North America have become the scene of zombie walks where hundreds of people gather, dressed as the risen dead and they proceed to wander en masse in rather gruesome-looking flash mobs (Moreman 2010). In popular music, the songs of massively popular acts such as Lady Gaga are equated with zombie music—a musical idiom where arena-sized crowds mindlessly swoon and sway in a highly pre-orchestrated manner, all while under the spell of a “musical” event unfolding on the stage. On the so-called Black Friday, the day after the Thanksgiving holiday in the U.S., millions of zombie-like consumers answer the siren call to invade their nearest shopping mall and Wal-Mart *en masse* as if pre-programmed to shop, shop, and shop still more. The fast food industry in the U.S. and increasingly, globally, has created millions of food zombies who mindlessly eat its unhealthy food offerings. Flash mob “zombie criminals” now suddenly descend upon an unsuspecting convenience store, Gap clothing outlet and the like, clean the place out in a matter of minutes, silently, with no words spoken among the ad hoc band of shoplifters, and leave (Downs 2011).

Millions of workers who once required an office away from home in a centralized workplace are now able to telecommute from home and from anyplace, for that matter. Worker-nomads are now based out of their homes, that now function as “first places,” their office, i.e. second places, and in public spaces that serve as neutral stages for social interaction, i.e. third places (Oldenburg 1989). People connected to their mobile devices, i.e. iPads, smartphones, laptops, populate a national network of no-man’s land third places that include cafes, bookstores, bars and other social hangouts. These places really belong to no one but their owner. Cyber-zombie nomads by the millions are engaging in a daisy chain mobility pattern. These are nomads by choice as much as of necessity: first drop the kids off at school and then spend all day hopping from one third place to another, with stops at the gym, the post office and so on. Throughout the day they remain constantly connected to colleagues and family members who are elsewhere, and increasingly their movements may in fact form no discernable normative pattern at all. But is this not just another form of manipulation by some external force, be it a governmental agency, or a mega-corporation that just wants you to be their compliant consumer?

Zombie capitalism is flourishing. Myriad corporations and banks vie to create zombie consumers out of all of us. A “zombie bank” is one recent phenomenon—it is defined by economists as any bank or related financial institution with a negative net worth (Sherter 2011). Yet it continues to operate and flourish, all the while wholly dependent upon prop-up governmental intervention, i.e. bailouts. The large percentage of nonperforming assets on the books of these institutions makes it impossible for them to function normatively—this is a main underlying cause of the ongoing stress in global financial markets, and it is no small coincidence that most of the largest banks in the U.S. and Europe now fall squarely within this

category (Harman 2010). In Giroux's (2010) recent book *"Zombie Capitalism"* it is argued that capitalism is simply an insatiable government-abetted phenomenon that feeds upon itself, creating controlled, mind-numbed consumers. Ultimately, it is the inevitable outcome of excessive and relentless mass marketing. A "zombie economy" is now known as any broadly based financial calamity that willingly puts a powerless individual's personal financial stability and future in jeopardy. There is a pervading sense of fear and uncertainty. Doom is a highly probable concomitant net outcome, or the feeling that there is ultimately no positive solution and nothing one can do: it is the sense that the disease cannot be abated, corrected, or eliminated and the perpetrator(s) remain unstoppable. Most troubling to the average citizen is a fear that those in command have no clue as to how to fix things (Desjardins and Emerson 2011). This is precisely the same condition that often exists after a disaster has struck. The individual is completely at the mercy of some immense, multi-headed monster that will do as it wishes and to hell with the victims of the disaster itself.

Zombie housing in the aftermath of disaster basically requires a blank slate, is subject to easy manipulability, almost as if pre-programmed to be set up and operated in a completely preordained manner. The occupants lack free will, it seems. Mindless servitude of the 99 percent to another entity has been at the root of the nascent Occupy Wall Street movement in the United States, a movement which began in October of 2011 in New York City and quickly spread to dozens of American cities and to cities around the globe (Hallward 2011). Protestors have taken to the streets costumed as zombies as if to scream out that we must no longer allow ourselves (the 99 percent) to remain unaware, somehow immune from, uncaring, or oblivious of events in the world around us while trapped in a day to day existence that does not allow for any reflection or meaningful questioning of our values or the values of the society within which we live (Potter 2011 and Addley 2011). Zombieism, whether manifest in a person, or the newly built and highly contrived artificial landscapes where one merely struggles to exist (versus *live*, in any normative sense) following a disaster, feeds off of blithely trusting some real or imaginary yet omnipotent external force in the hope that somehow things will work out better in the end. The Occupy Wall Street movement rejects this core assumption of zombieism and in fact makes a mockery of it and so too should we reject its manifestation in our post-disaster housing landscapes.

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