

CHAPTER 15

Sheltering and Housing Recovery Following Disaster*

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Reestablishing housing is a critical factor for understanding recovery processes, whether one is addressing the phenomenon at the household or community level. Researchers examining household or family recovery, for example, have utilized a variety of measures or indicators to capture different dimensions of recovery including psychological or perceptual measures related to stress, and sense of loss and recovery to more objective indicators such as regaining income, employment, household amenities, and household assets (Bates, 1982; Bolin, 1976, 1982, 1993, 1994; Bolin & Bolton, 1983; Bolin & Trainer, 1978; Peacock, Killian, & Bates, 1987). However, this research also suggests that fundamental to an overall assessment of household recovery is reestablishing permanent housing, or in the vernacular, home, because without establishing home, the ability of a household to carry out normal activities and reestablish a routine is limited and hampered (Bates & Peacock, 1987, 1993; Bolin & Trainer, 1978; Quarantelli, 1982). In short, delays in reestablishing housing all too often delay all other dimensions of recovery (Bolin, 1986).

Communities, as complex networks of social systems, often require more of a multi-dimensional perspective when considering recovery (Bates & Pelanda, 1994; Dynes, 1970; Lindell & Prater, 2003; Lindell, Prater, & Perry, forthcoming; Wenger, 1978). An important complex element of community recovery is associated with infrastructure and lifelines that are fundamental for the operations of other systems dependent upon transportation, electricity, water, and waste disposal to carry out their normal activities. Getting business up and moving again is also critically important for resuscitating economic activities within communities that provide economic resources in the form of wages and salaries as well as goods and services. Communities without businesses providing economic opportunities, jobs, goods, and services will in short order lose their populations. Yet, if the population lacks housing would they stay or

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return in the first place? Without housing, the individuals necessary to populate the economy, fill the jobs, and restart and reopen businesses as well as consume the services and purchase the goods will be absent. Indeed, the ability to house, not just professionals, business owners, CEOs, and managers, but also line workers, service workers, and staff personnel is critical. In other words, housing recovery is critical and all types and forms of housing recovery including affordable housing are important. There is of course a chicken and egg element to this—which should come first, business recovery or housing recovery?

In 1975, Mileti, Drabek, and Haas noted that there was little in the way of research focusing on what was termed the post-event reconstruction phase of disaster. Two years later Haas, Kates, and Bowden (1977) published *Reconstruction Following Disaster*, beginning the process of redressing this shortfall by focusing directly on reconstruction issues, drawing on four case studies, two historical (the San Francisco and Anchorage Alaska earthquakes) and two more recent for that period (Managua earthquake and Rapid City flood). In tackling the problem of reconstruction, Kates (1977, p. 262) declared that “the reconstruction process is ordered, knowable and predictable,” suggesting that cities basically recover in four phases termed *emergency response*, *restoration of the restorable*, *reconstruction (I)* of the destroyed for functional replacement, and *reconstruction (II)* for commemoration, betterment and development with each period lasting approximately 10 times the previous period (Kates & Pijawka, 1977). Housing recovery issues relating to emergency sheltering, repairing, and restoring of homes only partially damaged, and ultimately rebuilding of severely damaged and destroyed structures were hypothesized to occur primarily during the first three periods, with the entire reconstruction lasting 100 times the emergency period (Kates & Pijawka, 1977, p. 20). While a number of graduate students in this work became key players and contributors to the growing literature throughout the next 30 years, the formulation of an ordered process of successive stages has not.

Quarantelli (1982), noting that housing victims in the aftermath of major disasters involves complex social processes made even more difficult to study in light of the conceptual confusion in the literature, offered a typology of distinctive forms of sheltering and housing. Drawing from three case studies in the Disaster Research Center archive, he suggested that there were four more or less distinct forms of sheltering and housing that are of particular relevance: emergency sheltering, temporary sheltering, temporary housing, and permanent housing. Emergency sheltering “refers to actual or potential disaster victims seeking quarters outside their own permanent homes for short periods: hours in many cases, overnight at most” (Quarantelli, 1982, p. 2). Temporary shelter “refers to peoples’ displacement into other quarters, with an expected short or temporary stay” (Quarantelli, 1982, p. 2). The critical element for establishing temporary housing is not simply occupying some form of housing with an at least initial expectation that it will be temporary, but also reestablishing normal household routines, responsibilities, and activities to the extent possible. Finally, permanent housing “involves disaster victims returning either to their rebuilt homes or moving into new quarters . . . occupying permanent, residential facilities” (Quarantelli, 1982, p. 3). This typology is not without its problems, particularly if viewed as phases in which households are expected to progress. The latter does of course happen, but even Quarantelli (1982, 1995) noted that there can be many repetitive steps and jumps in the process. Further, the distinctions are not always clear as when, again noted by Quarantelli (1982, 1995), temporary housing becomes permanent or when emergency shelters transition into temporary shelters out of necessity. In addition, in any disaster, members of a community’s population of households may be found in every form of shelter or housing simultaneously. Despite these problems, the typology has often been employed in subsequent research.

While Quarantelli's typology might have proven to be useful, the paucity of research noted in 1975 by Mileti et al., has remained. In 1986, for example, Drabek noted that long-term household recovery issues, of which housing recovery is so central, is one of the least studied and understood by disaster researchers. Further, as late as 2001, Tierney, Lindell, and Perry noted that much of what is known about post-disaster sheltering and housing was undertaken in the last 15 years and that the entire "process remains significantly understudied, and little research has looked at post disaster housing patterns across social classes, racial/ethnic groups, and family types" (Tierney, Lindell, & Perry, 2001, p. 100). This chapter pulls together the strands of research that has been undertaken focusing on shelter and housing following disaster, with particular attention to permanent housing recovery and to research focusing on these issues in the United States. Indeed, not only has there been little overall research focusing on housing and sheltering, but with the exception of a few studies there also has been little integration of international and U.S.-based research. We will structure our discussions of the literature utilizing Quarantelli's shelter and housing typology. While our focus is on the process of reestablishing permanent housing, the discussion must, at times, focus on how households negotiate the different steps along the way. This is followed by a discussion of issues related to linking this typology together to better understand the processes of housing recovery following disaster and with comments regarding linking international and U.S.-based research. The final section addresses the future of research on these topics, where it might lead, and some potential issues that should be addressed.

SHELTERING AND TEMPORARY HOUSING

Understanding the phenomena of emergency sheltering as Quarantelli (1982, 1995) defines it focuses on the immediate response disaster victims take to shelter themselves for short periods of time either before a hazard (in the case of a tornado or hurricane) or immediately after impact (such as after an earthquake). The period of time ranges from a few hours to overnight depending on specific hazard conditions. Emergency sheltering is often spontaneous and focused on locational convenience and immediacy of need (Alexander, 2002b; Bolin, 1993; Bolin & Stanford, 1998b; Tierney et al., 2001). Pre-impact emergency sheltering is particularly common during wind events, especially hurricanes, where a period of warning accompanies the hazard threat. Research has found that those who perceive their risk are more likely to take emergency shelter even if taking protective measures is accompanied by inconvenience (Dash & Morrow, 2001). However, it is important to realize that it is not limited to pre-impact needs. Emergency sheltering also includes locations of refuge after all types of disasters particularly as a result of damage, fear of further damage, and utility outage (Bolin, 1993; Morrow, 1997; Phillips, 1993). After earthquakes, for example, emergency shelter may include individuals sleeping in their yards, parks, or cars for fear of additional aftershocks or undetected damage (Bolin, 1993; Bolin & Stanford, 1991, 1998b; Phillips, 1993).

In fact, where pre-impact sheltering fits into Quarantelli's topology is not very clear. While Quarantelli (1982, 1995) argues that emergency sheltering usually happens spontaneously by victims themselves for their immediate safety, some confusion exists as to what types of sheltering belong in this category. If we assume, as Quarantelli does, that emergency sheltering is spontaneous individual or household protective measures, then it is consistent that planning would be challenging and rarely involve organizational activities. On the other hand, emergency sheltering also includes planned activities particularly related to wind events. The State of Florida and Texas, for example, focuses a significant part of their evacuation planning to the

provision of emergency sheltering for those who flee their homes before a tropical system makes landfall. While such evacuation sites may also be used for longer term sheltering (Bolin, 1994), until a hurricane makes landfall with known damage, such sheltering is clearly planned emergency sheltering. Planned tornado shelters, such as designated areas in airports, government building, or schools, are also examples of emergency sheltering.

Using the airport as an example, those who take protective action by following signs designating shelter location are taking emergency shelter, even though it is at least partially organized and planned. When the threat passes, the need for the shelter is gone, and people resume their normal activities. The process is dynamic. As conditions pre- and post-disaster change, emergency sheltering also changes rapidly (Tierney, Lindell, & Perry, 2001). Indeed, individuals may return to their undamaged permanent homes shortly after the threat has passed. On the other hand, emergency sheltering may transition to temporary sheltering when the hazard event creates temporarily uninhabitable housing (Bolin, 1994).

Temporary shelters are places victims can stay for a longer period of time before it is safe to return to permanent residences. Unlike emergency sheltering, daily necessities such as food, water, sleeping arrangement, and other needed services (i.e., security) must be provided in temporary shelters, and thus requires more significant preparedness by nonprofit and governmental agencies. However, temporary sheltering is never intended to replace primary housing. Quarantelli (1982, 1995) argues that households in temporary shelters make little attempt to reestablish their normal household routines.

While considerable attention by emergency responders is given to public sheltering such as the use of the Superdome in Hurricane Katrina or public schools during other types of events, the majority of those seeking temporary shelter use public sheltering as a refuge of last resort (Drabek, 1986; Perry, Lindell, & Greene, 1981; Quarantelli, 1982). Research has found that less than a quarter of those seeking sheltering use large-scale public facilities (Bolin & Stanford, 1990; Lindell et al., 1985), and those who do, are more likely to have lower socioeconomic status, live in rental housing, own homes in disrepair (prior to the hazard), and have few familial resources (Drabek & Boggs, 1968; Morrow, 1997; Tierney, Lindell, & Perry, 2001). One complication with temporary sheltering is that often disaster victims compete with disaster responders and even the homeless for housing (FEMA, 1994; Phillips, 1993; Yelvington, 1997), or as Hurricane Andrew emphasizes, extended family members in the area may also experience damage (Morrow, 1997). Those with more resources, both socially and financially, are more likely to shelter with friends and family or in hotels/motels (Whitehead et al., 2000). For those whose homes are damaged or whose utilities are out for an extended period of time, the same location of emergency sheltering may become temporary sheltering. The physical location does not change; rather, its purpose shifts to focus on longer term, but not permanent, needs.

The pre- and immediate post-impact of Hurricane Katrina in the New Orleans area in 2005 illustrates the tenuous differences between emergency sheltering and temporary sheltering. For many, particularly the poor, emergency sheltering can extend in time to temporary sheltering (Bolin, 1994). As Hurricane Katrina approached New Orleans, many residents took refuge in locations outside of the city, but a significant number, including those with special needs, took emergency shelter at the Superdome. These early evacuees sought emergency shelter—safe space to ride out the storm. If the levees protecting New Orleans and surrounding areas remained intact, the majority of individuals would have simply returned home when the winds were over.

However, no one can forget the images from the city where hundreds of people remained in their homes during the storm for a variety of reasons, including lack of transportation to safer locations, responsibility for ill or disabled family members, or because they themselves

were infirmed or disabled. While their homes survived with little damage from the wind, the subsequent flooding from breaches in protective levees surrounding the city required households to find safer sheltering. Using a variety of mechanisms such as walking through flood waters, traveling by boat, or rescue by helicopters, thousands of individuals found themselves sheltered at the Superdome with little to no supplies and deteriorating conditions. Whereas the first wave of evacuees used the Superdome as emergency shelter, those fleeing their flooded homes used it as temporary shelter, finding themselves waiting for further rescues to safer locations. Consistent with the literature, it appears that the majority of those in the Superdome were those who were more socially marginal in that they had little to no resources to leave the city on their own. What began as a protective measure from the approaching storm (emergency shelter) became the refuge for those fleeing the effects of the storm to stay for a longer time before they were taken and dispersed, often without knowledge of their destination, to safer locations (temporary shelter).

As with emergency sheltering, temporary sheltering is a social process that is not static; the needs of those seeking shelter vary across individuals and through time. Temporary sheltering is expected to be short term; however, no one has defined exactly what short term entails. While emergency preparedness focuses the most attention on this phase of post-disaster recovery (Tierney, Lindell, & Perry, 2001), little research has focused on issues such as population displacement, temporary shelter demand, location, and duration following a large-scale natural disaster. Research after Hurricane Andrew focused on understanding how social position affected temporary sheltering location. As expected, those with higher incomes were more likely to stay at hotels and motels, while those with lower incomes stayed with family (Morrow, 1997). More significant is that logistic regression results indicated that “among low-income households who had relatives move in with them, the chance of them still being there four months later was nearly three times higher” than for higher income groups (Morrow, 1997, p. 152).

One of the few in-depth studies of temporary sheltering focused on the implementation of tent cities by the U.S. military after Hurricane Andrew. While many of the 180,000 individuals who found themselves homeless after the storm had resources to relocate to homes of family or friends, many found themselves with few options. Lack of financial resources, transportation, and friends and relatives outside of the damaged area limited their options. More than 3500 individuals were sheltered at four tent cities in south Florida during the two months they were open. However, it is important to note that the tent cities did not immediately fill (Yelvington, 1997). Instead, as homes were condemned, renters evicted, and rains made uninhabitable the barely habitable damaged homes, the number of individuals increased during the first few weeks after the storm. In addition, population at the tent cities increased as deportation fears of undocumented immigrants diminished and relief information was released in both Spanish and Creole (Yelvington, 1997). For the most part, individuals did not choose tent cities as their first choice of sheltering, but rather ended up there when other options were not available.

Although the conditions were not normal for any of those who lived in these makeshift cities, the U.S. military who oversaw the day-to-day functioning of these new communities tried to integrate fun activities such as a 5-day tour by a Disney troupe to reduce the everyday stress people were experiencing (FEMA, 1994). The goal, however, always remained to close the tent cities as soon as possible by shifting temporary shelters to temporary housing. This shift began about 6 weeks after Hurricane Andrew as the first tent city closed and gave way to the Federal Emergency Management Agency (FEMA) sponsored travel trailer parks (FEMA, 1994).

These tent cities, however, were not planned for in advance. The use of the military to house disaster victims was an adaptive response to the overwhelming need in south Florida

after Hurricane Andrew. Similar adaptive responses occurred after Hurricane Katrina since little or no planning seems to have focused on having significant populations in need of temporary sheltering. While the response after Hurricane Andrew was relatively successful, the response to Hurricane Katrina failed to meet the needs of those who were displaced. Families were separated as individuals were transported to locations throughout the United States with little or no tracking in place to reunite households. With sections of the City of New Orleans significantly damaged, particularly socially vulnerable areas, significant number of individuals and households require longer term solutions in order to reestablish routine. What is clear is that while time plays a role in the transition from sheltering to housing, the amount of time varies, with those with more resources often able to transition from sheltering to housing more quickly.

The key distinction between sheltering and housing is the resumption of household activities and responsibility (Quarantelli, 1982, 1995b). With temporary housing, routine day-to-day household activities are reestablished, and those in temporary housing wait for permanent housing, either return to their pre-disaster homes or some type of alternative housing solution (Tierney, Lindell, & Perry, 2001). For those with the most extensive damage, temporary may be anywhere from weeks to months to years. According to a review of research done by Tierney, Lindell, and Perry (2001, p. 102) for the second assessment of natural hazards research, little is known about how households negotiate this stage of their journey to permanent housing. A significant feature, however, is that in the United States, temporary housing arrangements after disaster are usually funded by the FEMA or the Department of Housing and Urban Development (HUD) through cash grants for temporary rental housing or the provision of mobile homes (Bolin, 1993, 1994; Bolin & Stanford, 1991, 1998a, 1998b; Comerio, 1998; Quarantelli, 1982).

Temporary housing can transition to permanent housing when displaced households cannot return to or refuse to return to their pre-disaster home (Bolin, 1994; Bolin & Stanford, 1991; Haas, Kates, & Bowden 1977). Often difficulties arise when trying to transition some households to more permanent housing options. FEMA mobile homes after Hurricane Andrew, for example, were expected to house displaced households for 6 months; however, the last family moved from their mobile homes 2.5 years after Hurricane Andrew (Morrow, 1997). While the provision of travel trailers and mobile homes, both after Hurricane Andrew and other storms such as Hurricane Charley in 2004, offered temporary housing for those in need, the conditions can be difficult, with parks often riddled with crime and violence (Enarson & Morrow, 1997; Wilkinson, 2005). The problems after Hurricane Andrew were not unique, as research in other disaster settings found mobile homes to be a problematic form of temporary housing (Bolin, 1982, 1994). Important to note is that some families who were hard to place in permanent housing because of family size or socioeconomic status were given their FEMA trailers and relocated to a different mobile home park that became their permanent housing (Morrow, 1997). For some households, these structures may represent a significant improvement in housing, but in other conditions such structures can inhibit housing recovery (Bolin, 1993; Peacock et al., 1987). In addition, these mobile homes become vulnerable housing in wind hazard situations. Less than one year after Hurricane Andrew, a major northeaster killed a Hurricane Andrew survivor who was living in a FEMA mobile home.

The problems and issues regarding temporary housing are not isolated to the United States. Research conducted in Italy, for example, after the Friuli earthquake found that the nature of temporary housing can significantly disrupt the nature of communities, social networks, and livelihoods, and had negative consequences for the psychological health of inhabitants (Giepel, 1982; Hogg, 1980). Bates (1982) and colleagues found that in Guatemala temporary

housing can have potentially debilitating impacts for long-term housing recovery (see also Bates & Peacock, 1987; Peacock et al., 1987). Specifically, they found that many households simply transitioned temporary housing into permanent housing, because they lacked sufficient resources to procure or reconstruct permanent housing. The failure to recognize that the severe limitations many households face when addressing housing issues in normal situations can result in a failure to transition out of temporary housing into permanent housing is a message relevant in nearly all post-disaster situations globally.

PERMANENT HOUSING

In the United States, permanent housing recovery is primarily a market driven process (Bolin, 1985, 1993; Comerio, 1998; Peacock & Ragsdale, 1997). With the exception of the 1964 Alaskan Earthquake where the federal government was actively involved in the management and reconstruction of residential housing (Kates, 1970; NAS, 1987; Quarantelli & Dynes, 1989), the federal government does not take an active role in housing recovery processes. The basic tenets of federal and state policy is to fill the gaps or, as Comerio (1998, p. 197) notes, provide a “safety net” by supplementing individual resources such as private insurance and nonprofit charity. This *laissez faire* approach at the federal and state level was noted by Quarantelli (1982, p. 77), who also suggested that the “matter is almost totally ignored at local community level disaster planning,” a theme also echoed by others (Bolin, 1985, 1993, 1994; Peacock & Girard, 1997). Allowing the market to “manage” housing recovery in the United States has led a number of researchers to characterize the results as essentially conservative in nature with restoration of the status quo ante as the goal (Bates & Peacock, 1989b; Bolin, 1982, 1985). Haas et al. (1977) takes this a step further by suggesting that the “market is a suitable mechanism in disaster recovery if one wishes to maintain or increase pre-disaster social inequities” (quoted in Bolin, 1985, p. 712). While it is a generally held assumption that pre-disaster social patterns will shape permanent housing recovery (Bates, 1982; Bates & Peacock, 1987; Blaikie et al., 1994; Oliver-Smith, 1990; Quarantelli, 1982), some have also suggested that this is particularly likely where market based recovery scenarios as suggested by Haas, may in fact accentuate pre-disaster inequities (Bolin, 1982, 1985; Bolin & Stanford, 1991, 1998b; Peacock & Ragsdale, 1997). In light of this, it will be worthwhile briefly discussing the nature of housing markets and housing related issues in the United States.

As Foley (1980, p. 460) suggests, housing in the United States operates as a trickle-down process: “New housing is provided for those who can afford it, and successively older housing is passed along to other households that seek to make incremental improvements in their situation.” On the whole, housing markets systematically fail when it comes to providing quality housing to low-income households and this failure disproportionately impacts racial and ethnic minorities (Alba & Logan, 1992; Bratt, Hartman, & Meyerson, 1986; Horton, 1992; Lake, 1980). Low-income households and racial and ethnic minorities tend to reside in poorer quality housing and that housing is often segregated into low-valued neighborhoods (Logan & Molotch, 1987; South & Crowder, 1997; Stinchcomb, 1965). Minorities, particularly blacks, still find major problems with racial discrimination when buying, selling, and renting housing in the forms of racial steering, redlining, hostile white attitudes, and lender discrimination (Feagin & Sikes, 1994; Guy, Pol, & Ryker, 1982; Horton, 1992; Oliver & Shapiro, 1995; Sagalyn, 1983). Minority households that are able to achieve sufficiently high incomes often find purchasing a home will still demand overcoming additional obstacles. For example, black households are more likely to be denied a mortgage, must make larger down payments, and

when accepted, they often pay higher interest rates; after purchase, their homes are likely to appreciate at lower rates (Flippen, 2004; Oliver & Shapiro, 1995). One of the hidden factors in successfully obtaining a mortgage is finding insurance. Minorities often have problems obtaining homeowners insurance in general and quality insurance in particular, which can make procuring a home mortgage impossible (Squires, 1998; Squires, O'Connor, & Silver, 2001; Squires & Velez, 1987). Finally, we still find high levels of racial segregation, and black households in particular are substantially less likely than whites to escape poor neighborhoods and, when they do, they are more likely to relocate to poor areas again (Charles, 2003; Iceland, Weinberg, & Steinmetz, 2002; Massey & Denton, 1993; South & Crowder, 1997).

Low-income and minority households face many challenges dealing with housing recovery as we discuss later, but the simple trickle down nature of housing in the United States often predisposes these vulnerable populations to higher levels of damage in the first place. Research has found that such households often live in the structures that were built according to older, less stringent building codes; used lower quality designs and construction materials; and were less well maintained (Bolin, 1994; Bolin & Bolton, 1983; Bolin & Stanford, 1998b; Peacock & Girard, 1997). As a result, one of the most consistent findings in the disaster literature, whether discussing findings in the United States or abroad, is that low-income and minority households tend to suffer disproportionately higher levels of damage in disasters (Bates, 1982; Bates & Peacock, 1987; Bates, Fogleman, Parenton, Pittman & Tracy, 1962; Blaikie et al., 1994; Bolin, 1982, 1986, 1993; Bolin & Bolton, 1986; Dash, Peacock, & Morrow, 1997; Drabek & Key, 1984; Haas et al., 1977; Peacock & Girard, 1997; Quarantelli, 1982). In light of the differential damage impacts, it can be anticipated that permanent housing recovery, unless supplemented with higher levels of recovery resources for housing occupied by low-income and minority households, is likely to also be an uneven process.

With the preceding discussion in mind, attention is turned directly to permanent housing recovery. On the whole, there is almost no literature that focuses on permanent housing recovery itself; instead the focus is generally on homeowners and hence partially on owner-occupied housing. In addition, most research on homeowners generally addresses single-family housing, ignoring potential unique issues associated with other forms of housing such as condominiums. Permanent rental housing recovery is even less well researched and is generally limited to households occupying rental-housing units of unknown form. Researchers have also noted that pre-impact homeless populations are also ignored (Phillips, 1996; Wisner, 1998) and yet can represent sizable numbers in large urban centers, often becoming policy and moral issues when officially determining who "deserves" post-disaster shelter, housing, and other forms of aid. Our discussion begins with the primary resources drawn upon to finance housing recovery.

Permanent housing recovery is dependent on financial resources for repairing or rebuilding housing. One might also consider labor and expertise as critical for rebuilding, particularly in areas where household and family members are actively involved in the actual repair and rebuilding process. Clearly, this can be important in the developing world, but can also play an important role among some in the United States, as was found among low- to moderate-income households in Miami where many family members worked in construction and were able to donate their skill, expertise, and labor in the reconstruction process. However, more often than not, labor and expertise are purchased, hence the importance of financial resources. These resources primarily come from two broad sources: private and public funding (Bolin & Stanford, 1991; Comerio, 1998; Comerio, Landis, & Rofe, 1994; Quarantelli, 1982; Wu & Lindell, 2004). Private funding includes insurance, household savings, commercial loans, and, in some cases, funds from family and friends. Public funding also includes a variety of sources such as low-interest loans from the Small Business Administration (SBA), grants

from FEMA such as minimal home repair (MHR) or individual or family grants (IFG, often administered by the state), and additional funding from the Department of Housing and Urban Development (HUD) in the form of Community Development Block Grants (CDBGs) and HOME program funding. While individual homeowners cannot use the latter, they can be employed by community agencies to facilitate rebuilding, particularly for low- and moderate-income housing. In addition, some states might also have programs to facilitate rebuilding (Bolin & Stanford, 1998a, 1998b; Comerio, 1998). There are also a host of public programs such as FEMA's temporary rental housing program, SBA's rental housing loans, and HUD's Section 8 Voucher program which provide temporary housing through rent subsidies/payments or mobile homes or travel trailers that can be employed by renters and homeowners. While not directly focused on rebuilding, these programs can facilitate the rebuilding process. For example, some households obtain travel trailers that they move onto their property while their homes are being rebuilt.

In keeping with the market-based logic of housing recovery in the United States, private insurance is the primary source of most private funding for repairing and rebuilding homes (Comerio, 1998; Kunreuther & Roth, 1998; Wu & Lindell, 2004). There can, however, be considerable variations in the relative importance of private insurance for housing recovery across natural hazards and states. For example, according to Kunreuther (1998, p. 39), earthquake coverage can be included in a general homeowner's policy for an additional premium in most states, except in California where residential earthquake policies are purchased through the California Earthquake Authority, a state agency. Flood insurance, on the other hand, is never covered as part of a normal residential policy and must be purchased separately. The National Flood Insurance Program (NFIP) established by Congress in 1968 underwrites flood insurance, which is administered jointly by private insurance industry and the federal government. Wind hazards associated with hurricanes, tornadoes, and other storms are generally covered by basic wind coverage as part of a normal residential policy (Kunreuther, 1998, p. 40). However, this is not always the case. For example, in some coastal areas in Florida insurers have been allowed to split wind coverage from basic residential policies, requiring it to be purchased separately. The literature has consistently found that earthquake and flooding insurance policies are much less likely to be purchased than normal residential policies (Palm, 1995; Palm, Hodgson, Blanchard, & Lyons, 1990; Pastrick, 1998; Roth, 1998). As a consequence, the federal role in funding housing recovery from earthquakes and flooding tends to be much larger.

This mosaic of coverage patterns means that the actual contribution of private insurance to the housing recovery efforts can vary considerably dependent upon the nature of the hazard. Comparing the relative contributions of private versus public funding following the Northridge earthquake and Hurricane Andrew easily conveys this variation. Wu and Lindell (2004, p. 69), employing data from a variety of sources, determined that 65.3% of housing reconstruction funds came from private insurers, followed by the SBA at 20.7%, with FEMA and HUD grants contributing 7% each following Northridge. Utilizing data presented by Comerio (1998, p. 90) on residential housing claims paid by private insurers and public funding of housing assistance, repair, and reconstruction following Hurricane Andrew, we calculated that private insurance funded 89.9% of residential reconstruction, followed by SBA loans at 3.3%, FEMA minimum assistance grants at 2.8%, HUD at 3.1%, and other sources such as the National Flood Insurance Program at 1%. If focus is narrowed to aid directly related to repair and reconstruction, removing, for example, FEMA IFG, SBA temporary rental loans and HUD Section 8 vouchers, the percentage of residential recovery funded by private insurance increases to nearly 95%. Clearly, there can be major variations across hazard and potentially disaster events; nevertheless, private insurance funds a majority of residential housing recovery efforts.

To better establish the roles various private and public funding play in permanent housing recovery, we must draw from the literature on household/family recovery. It is difficult to compare research findings related to household "recovery" because recovery is measured in many different ways including psychological perceptions of recovery, satisfaction with recovery levels, income recovery, house size recovery, domestic assets restoration and recovery, and household amenities recovery to name a few. At times, recovery is met when pre-disaster levels are reached, while at other times this is defined as restoration with recovery defined as reaching levels a household might have achieved had no disaster occurred. In addition, analysis techniques employed are as varied as are measures of recovery including qualitative/ethnographic methods, simple cross-tabulations, Chi-squared testing, difference in means and proportions testing, discriminate analysis, path analysis, ordinary least squares regression, lagged residualized regression, logistic regression, and interrupted time series. Thus, generalizing can be problematic. Nevertheless, throughout this discussion we draw upon household recovery research findings that are related to overall housing recovery.

Research focusing on household recovery, particularly of homeowners, suggests that insurance and public funding are indeed important for housing recovery and in many cases, perhaps even in a majority of cases, homeowners do generally receive the assistance they need to repair and rebuild. For example, Peacock and Girard (1997, p. 188) reported that in the Hurricane Andrew case, the vast majority of homeowners had homeowners insurance, with only 5% reporting no insurance. This figure represents a substantial improvement in coverage, particularly when compared to some historical studies dealing with hazards likely covered by general residential policies (cf. Bolin, 1982; Cochrane, 1975; Drabek & Key, 1984; Moore et al., 1964; Quarantelli, 1985). On the other hand, as can be expected, when dealing with earthquake and flood insurance, a different picture of much lower rates of coverage generally is found (Kunreuther & Roth, 1998; Lindell & Perry, 2000; Palm, 1995). The research literature also suggests that households having insurance generally report receiving sufficient settlements or at least what they consider fair/adequate settlements. Peacock and Girard (1997), again for example, reported that nearly 76% of homeowners following Hurricane Andrew received sufficient settlements and were on the whole satisfied. While this percentage is high compared to some prior research settings, the general pattern appears to hold (Bolin, 1982; Bolin & Bolton, 1986; Drabek & Key, 1984; Quarantelli, 1985). And, in the event that insurance is not sufficient, or there is no policy in effect, public assistance, particularly in the form of low-interest SBA loans and Minimum Housing Assistance from FEMA, become critical.

Research focusing on household recovery following earthquakes, for example, tends to find that these forms of assistance become highly important for recovery in earthquake disasters (Bolin, 1993; Bolin & Bolton, 1986) and can also be important in other situations such as flooding (Quarantelli, 1985). Unfortunately, the direct analysis of the impacts insurance and public funding play for housing recovery itself is difficult to assess, given (1) the limited research that actually focused on housing recovery, (2) the great variability in measures, (3) variability in techniques employed, (4) hazard variability in the relative roles of public and private financing, (5) data limitations, and (6) a host of complexities related to analysis decision, subsample selection, and data constraint interactions. On the whole, the results do suggest general positive impacts; however, assessments of the relative contributions, particularly for subpopulations, are difficult to ascertain.

Despite these overall patterns suggesting favorable outcomes, it is sometimes what Drabek and Key (1984, p. 93) termed the "patterned neglect" that is equally important for understanding the full complexities of household and housing recovery. Just as we saw with normal housing market operation, low-income and racial/ethnic minority homeowners often have limited

access to both private and public resources important for permanent housing recovery. Poor language skills and educational backgrounds can leave many minorities, low-income households, and even female-headed households at a distinct disadvantage in the protracted qualification and negotiation processes often necessary to obtain public financial resources such as SBA loans or minimum housing assistance (Bolin, 1985; Bolin & Stanford, 1990; Morrow, 1997; Morrow & Enarson, 1997; Phillips, 1993). With less economic power and political representation, marginalized racial/ethnic groups are often excluded from community post-disaster planning and recovery activities (Bolin & Bolton, 1983; Morrow, 1997; Morrow & Peacock, 1997; Phillips, 1993; Prater & Lindell, 2000; Quarantelli, 1985; Tierney, 1989) and may be taken advantage of by private businesses. For example, a group of low-income Hispanic homeowners in southern sections of Miami-Dade County had little success at negotiations with their insurer whom they felt had not properly compensated them for damage to their homes. It was only after a community-based organization pleaded their case to the insurance commissioner that the company increased their payout. Other low-income minorities did not fair as well (Dash et al., 1997; Morrow, 1997; Peacock & Girard, 1997).

Households and neighborhoods that are poorer prior to disaster often fall far short of receiving necessary aid to jump start the recovery process, particularly for housing (Berke, Kartez, & Wenger, 1993; Bolin & Stanford, 1991; Dash et al., 1997; Phillips, 1993; Rubin, 1985). Low-income households are often limited in transportation options and this limitation may increase following a disaster when public transportation is extensively disrupted and personal transportation is destroyed. Lack of mobility may slow down the effort of recovery for these households and even jeopardize their employment (Morrow, 1997; Peacock & Girard, 1997). In addition, low-income households are less likely to qualify for governmental reconstruction programs because of their weak capability to repay (Bolin, 1982, 1986; Bolin & Bolton, 1983; Tierney, 1989). It must be remembered that the primary governmental program for those without insurance or with insufficient insurance coverage is the SBA's low-interest loan program. However, this is a loan program, not a grant program, and as a consequence, low-income and marginalized households, such as those on fixed or limited incomes, find it difficult to qualify. Indeed, the research has clearly shown that low-income and minorities are much more likely to fail to qualify for an SBA loan than are higher income and Anglo or white households (Bolin, 1982, 1986, 1993; Bolin & Bolton, 1986; Bolin & Stanford, 1998a, 1998b; Drabek & Key, 1984; Quarantelli, 1982). FEMA's minimum home repair program is exactly that, minimum. This program is designed to fund limited emergency repairs, in the interest of preventing further damage, and no more.

Similar patterns emerge when examining private insurance claims. Earlier research tended to consistently show that low-income and minority households were more likely to report not having insurance in the first place (Cochrane, 1975; Drabek & Key, 1984; Moore, Bates, Layman, & Parenton, 1963, Moore et al., 1964). Later research found that it was not just the lack of insurance, but that poor and minority households were also more likely to report insurance payments that were not adequate to meet repair and reconstruction needs (Bolin, 1982; Bolin & Bolton, 1986). Peacock and Girard (1997) found a similar pattern in Miami-Dade County following Hurricane Andrew, where minority homeowners, both black and Hispanic, were more likely to report insufficient insurance settlements for repairs and reconstruction. These differentials, however, were in part a function of the companies underwriting the policies. Households not covered by one of the top insurance companies were many more times likely to report insufficient insurance payments, and one of the most important determinants of having coverage by a top three company was the proportion of blacks residing on the block where the home was located. In other words, there was evidence suggesting that insurance

redlining prior to Hurricane Andrew resulted in lower insurance settlements. The overall results found that black and lower income households were significantly more likely to report insurance settlements that were not sufficient to meet housing recovery needs (Peacock & Girard, 1997).

The picture that emerges from the household recovery literature clearly suggests that while both insurance and public funding are important for household recovery, access to these resources is far from equal. While the majority do indeed have access to both private and public recovery resources, lower income and minority homeowners appear to have much greater difficulty procuring access to adequate insurance and qualifying for SBA loans. While this research tends to focus only indirectly on housing recovery itself, the findings suggest that housing recovery is uneven at best and leads to significantly lower rates of housing recovery and increasing housing inequality at worse. The parallels to normal housing attainment processes do appear to play out in the post-disaster period; unfortunately, there is little systematic research that directly addresses and assesses uneven recovery rates in housing recovery. The picture for renters follows the same general pattern.

Rental properties have unique recovery problems. In the aftermath of a natural disaster, renters are much more likely to be displaced, for they have few if any rights to the property, only to the contents within them, whereas single-family homeowners can often choose to stay despite the damage. Renters are much less likely to have insurance to cover their assets (Kunreuther & Roth, 1998), and the range of government programs open to them is much more limited as discussed in the preceding text (i.e., IFG, Section 8 rent vouchers; SBA rental loans, food stamps) (Bolin, 1982; Bolin & Stanford, 1998a, 1998b; Comerio, 1998; Quarantelli, 1985). Low-income and minority households often have particular difficulty finding alternative housing, in no small measure because affordable housing is likely to be in short supply prior to the disaster (Bolin, 1982, 1985, 1993; Quarantelli, 1982). As a consequence, they are much more likely to find themselves in various forms of temporary sheltering and housing options (Bolin, 1985, 1993). Of course, renters are, in some sense, more mobile and less constrained than perhaps homeowners who often feel compelled to secure and guard their property. Hence, renters, at least theoretically, are free to move on to other rental opportunities. However, their ability to locate permanent housing will depend upon a number of factors such as transportation; economic resources such as savings, job, and family locations, and, most importantly, rental vacancies.

In addition, while they may be freer to relocate, they are often as tied to a location because of employment, schools, and social networks, as homeowners. For lower income households these factors are all in question and, as noted earlier, racial discrimination in housing can also limit possibilities of minorities (Girard & Peacock, 1997; Morrow, 1997). In addition, as has been noted by a number of studies, rents often increase in the post-impact period, and higher income and more affluent households often occupy the vacant rental properties that are available (Bolin, 1993; Bolin & Stanford, 1998a, 1998b; Comerio, 1998; Quarantelli, 1982). The net effect is that in major natural disasters, the opportunities can be very limited, which places those most vulnerable in a very untenable situation. This is clearly being played out in the aftermath of Hurricane Katrina for the many low-income renters who find themselves scattered to the winds.

What can exacerbate this situation tremendously is that rental housing can be difficult to bring back on line. The owners of rental properties, whether individuals or commercial entities, are responsible for recovery duties such as inspecting buildings and repairing damage to ensure safe occupancy. Rental properties often take significantly longer to rebuild and in the rebuilding process these projects rarely target low-income affordable housing, a continuation of normal

TABLE 15.1. Housing Characteristics in Six Disaster-Prone Cities

	Los Angeles	San Francisco	Houston	New Orleans	Miami	Charleston
Housing units	1,337,668	346,527	782,378	215,091	148,554	44,143
1 unit/detached (%)	39.2	18.1	46.6	41.9	30.6	50.5
1 unit attached	6.6	14.1	5.4	15	11.5	4.6
2 units	3.2	10.9	2.1	13.7	6	7.2
3–4 units	6.4	12.5	4.2	9.6	6.5	9.3
5–9 units	9.4	11.3	6	5.6	9.3	11.5
10–19 units	10.4	10.1	8.3	4.2	8.4	7.1
20 or more	24.1	22.9	26.4	9.3	26.7	8.6
Mobile home	0.6	0.1	1	0.3	1	1.1
Boat, RV, Van	0.1	0.1	0	0	0.1	0
Owner occupied (%)	38.6	35.0	45.8	46.5	34.9	51.1
Renter occupied	61.4	65.0	54.2	53.5	65.1	48.9
Vacant	4.7	4.9	8.2	12.5	9.6	8.5

housing processes. In their research after the Whittier Narrows, Loma Prieta, and Northridge earthquakes, Bolin (1986), Bolin (1993), Bolin & Stanford (1998a, 1998b), and Comerio et al. (1994) found evidence that some landlords delay repairs to damaged housing because of limited financial assets and developers seeking to establish new multifamily units are often blocked by local officials or residents. The typically slower reconstruction of rental properties places neighborhoods with a high proportion of rental properties at risk of failing to recover and potentially becoming blighted areas typically referred to in the literature as post-disaster ghost towns (Bolin & Stanford, 1998b; Comerio, 1998; Morrow & Peacock, 1997).

The difficulties for renters, particularly low-income renters needing affordable housing, is made much more difficult because of the nature of post-disaster policy. As Comerio (1998) and Comerio et al. (1994) note, there is seemingly a distorted image of whom the federal and state government needs to help. Policy is focused on the American dream household, as if the populations of households are all the owners of single-family detached housing. The effect has been that post-disaster policy has been biased in favor of homeowners, particularly single-family middle-income homeowners, at the expense of renters, the owners of rental properties, and low-income households (Comerio et al., 1994, p. 37). This bias is particularly evident in major urban centers likely to experience a major natural disaster. According to the 2003 U.S. Census estimates, 68.3% of households are in owner-occupied housing and 56.4% of all housing is owner-occupied single-family detached housing, these figures are at least somewhat consistent with the bias found in policy. However, a very different picture emerges from Table 15.1.

Table 15.1 presents housing characteristics data drawn from the 2000 Census for six cities that are likely candidates for future disasters given their histories; the first two are of course probable earthquake candidates and the last four are hurricane candidates. In fact, New Orleans is currently living its disaster nightmare. Only in Charleston are single-family detached housing units a majority and only in the same city is owner-occupied housing a majority. Indeed, in Los Angeles, San Francisco, and Miami, sizable percentages of housing units are renter occupied and in four communities between one-fifth and one quarter of all housing units are located in buildings with 20 or more units. Clearly, at least in these metropolitan areas, the logic of a post-disaster housing policy that is biased against renters and rental unit owners (particularly large apartment buildings) must be brought into question. In addition, in all but one of these

cities the vacancy rates are all below 10%. It is likely then that there would be a housing shortage following a major event.

While research focused on individual household recovery shows variations in the abilities of households to marshal reconstruction financing and other resources, the direct consequences for trends in owner- and renter-occupied permanent housing recovery have not been explored. Indeed, it is only at the aggregate levels that overall housing impacts and recovery are addressed. Housing recovery is usually characterized as generally being completed within 2 to 3 years after the event (Bolin, 1993; Comerio, 1998). Comerio (1998, p. 92) suggests that 75% of the single-family stock that was lost was restored to within 90% of its pre-Hurricane Andrew value within 2 years. Following the unprecedented efforts at modifying normal housing recovery funding patterns, following the 1994 Northridge earthquake which saw the federal government working with Los Angeles, to target special supplemental programs focusing on multifamily and lower-income housing, Comerio (1998, pp. 109–113) suggests remarkable success within 2 years as well. However, all of these findings are “estimates” based on very limited if any data, often times as questionable as local housing authorities claims. The simple fact is that there are no systematic studies. One now famous attempt, using aggregate level Census data for two decades (1960 and 1970), found that disasters have no significant long-term impact on housing stocks in the disaster-stricken community, particularly when examining broader countywide or regional impacts (Wright, Rossi, Wright, & Weber-Burdin, 1979). However, in light of the literature on household recovery and early stages in the restoration process, one might well expect the distributive effects at the individual level to be quite different than aggregate level statistics suggest.

In an attempt to model and track permanent housing recovery following Hurricane Andrew, Peacock, Zhang, and Dash (2005) used property tax data from Miami-Dade County to assess differential recovery patterns in single-family housing that might be invisible at aggregate level analysis. While they too reported that in general single-family housing had reached, on average, pre-Andrew levels in 2 years, 32% of properties were still below their pre-impact levels nearly 2 years later and even 4 years later 16% were still below their pre-impact levels. They undertook a panel analysis of more than 60,000 single-family detached housing units from 1992 through 1996 and found considerable variation in recovery trajectories. Specifically, they found that rental housing was significantly slower recovering when compared to owner-occupied housing. Furthermore, their findings also suggest that single-family detached housing located in lower income neighborhoods and in neighborhoods with higher concentrations of non-Hispanic blacks and Hispanics had significantly slower recovery trajectories.

SHELTERING AND HOUSING SUMMARY

As evidenced in the preceding text, a review of the literature emphasizes that historically little research focuses on systematically understanding the four stages of Quarantelli's (1982) typology of sheltering and housing after disaster. While useful, more recent literature, particularly on hurricane disasters, suggests that the typology may be dated and need revision. For example, pre-impact sheltering, such as sheltering for hurricanes, does not fit cleanly into Quarantelli's categories. Even more complicated is trying to disentangle household recovery and housing recovery. As this chapter has shown, while our emphasis is on housing recovery, a complete understanding of this process must also be couched in terms of household recovery since it is the household, in part, that is negotiating the stages leading to permanent housing and receiving or as the case may be, not receiving, adequate assistance or resources to return to permanent

housing. The other substantial part relates to rental housing itself, little research, and policy for that matter, has focused on this important component of housing recovery.

What is clear is that regardless of the type of shelter or housing being addressed, preexisting social processes related to housing attainment or, more broadly, the social construction of vulnerability, play important roles in shaping outcomes. Specifically, the above discussion highlights the consequences class and racial/ethnic differences play in the complex social process of returning to permanent housing after disaster. Whether considering differential levels of damage caused by natural hazard events, the ability to insure property and household assets, the availability of adequate emergency and temporary sheltering and temporary housing, or the challenges faced when garnering adequate resources to recover, the process from disaster impact to permanent housing recovery is complicated, particularly for low-income and minority households. The housing recovery process is rife with challenges for those with few personal, social, and financial assets.

The market “managed” recovery scheme upon which the United States depends is structured to favor those most likely to have resources to recover in the first place. Disaster recovery policy focuses on offering single-family homeowners assistance in rebuilding their homes, and thus, their lives, while leaving renters and the most financially marginal homeowners who cannot secure subsidized loans with few options. The safety net is flawed. Yet, because little systematic research has highlighted these inequities and problems, policy continues to focus on owner-occupied single-family housing recovery even though, as Census data show, in many areas the majority of households would be left to recover on their own. Only through a clear research agenda focused on the reality of disaster impact and recovery for all types of housing and households can we inform public policy and suggest change that will better meet the needs of all households.

While our focus has been primarily on housing issues in the United States, it is clear that the literature has gained from research conducted in international settings. Much of the work cited in the preceding drew extensively from research conducted in Latin America (Bates, 1982; Bates & Peacock, 1987, 1992, 1993; Bolin & Trainer, 1978; Bolin & Bolton, 1983; Haas et al., 1977; Oliver-Smith, 1990, 1991; Peacock et al., 1987), the Caribbean (Berke et al., 1993; Morrow, 1992), Europe (Bates & Peacock, 1992, 1993; Geipel, 1982; Hogg, 1980), and Japan (Wisner, 1998). Indeed, the insights related to social vulnerability and linking disasters with normal developmental processes, which have so fundamentally shaped recent, albeit limited, research that has been undertaken on housing recovery, were greatly influenced by international research (i.e., Blaike, Cannon, Davis, & Wisner, 1994). In addition, the international literature is relatively more well developed in the areas of emergency and temporary sheltering and to a certain extent on issues related to temporary housing (e.g., Davis, 1978, 1981), and U.S. researchers might well gain from it. In addition, to the extent that market phenomena are readily spreading with marked increases in globalization, the lessons learned in the United States regarding housing market failings, insurance, and their consequences for housing recovery are likely to find increasing relevance internationally. What is clear is that the broader sheltering and housing literature is emerging in both the United States and international context and much can be learned, gained, and fruitfully shared.

DISCUSSION AND FUTURE RESEARCH

We began this chapter with a focus on housing recovery following disasters and in so doing adopted the shelter and housing typology introduced by Quarantelli (1982) in an attempt

to clarify the various forms of shelter and housing individuals and households often find themselves in need of or involved in as they cope with the displacement that is associated with natural disasters. For some households, this displacement is very limited, perhaps better termed temporary dislocation, as they flee their homes because of an acute hazard threat, or, in the immediate aftermath, as a result of limited damage to their homes or lifeline disruption. However, for households that are displaced because they are victims of a major natural disaster that has destroyed or otherwise left their homes uninhabitable, as we saw unfolding before us in the wake of Hurricane Katrina, seeking emergency shelter becomes only the first step in what may well be a long and protracted process of reestablishing permanent housing.

This chapter has highlighted research findings associated with each form of sheltering and housing, paying particular attention to what is generally considered the goal, reestablishing permanent housing, or again, in the vernacular, reestablishing home. This undertaking has made clear that some solid research has been undertaken in the 20 years since Quarantelli introduced his typology. It is indeed ironic that in addition to the typology, Quarantelli also offered twenty-two topics, seven of which he defined as high-priority topics, for future research. Of the seven he singled out as high priority, two have received no attention, four have received limited attention, and only one has received, relatively speaking, a good deal of attention albeit by only a few researchers. That one topic was “how pre-disaster conditions affect the post-disaster recovery operation in housing” (Quarantelli, 1982, p. 80). Rather than restate his list, we urge researchers to pay it heed, for most if not all deserve attention even today. Instead we offer the following general suggestions.

- While the emergency shelter–permanent housing continuum is not meant to suggest a progressive linear process, it does provide an interesting framework for examining the process of housing recovery. A recent dissertation by Cole (2003) perhaps represents a first step in mapping out and examining the complexities of households transitioning this process, sometimes moving forward, falling back, and even skipping over forms.
- Solid ethnographic/qualitative research needs to be undertaken following panels of household through the process of housing recovery, paying particular attention to transition points in the process. Ethnographic decision tree analyses would be particularly fruitful in helping the research and policymaking communities better understand factors shaping household decision making in the complex housing recovery process.
- Solid ethnographic/qualitative research also needs to be undertaken on developers, rental property owners, and managers, to better understand the decision-making process related to post-disaster repair, rebuilding, and redevelopment decisions. This should examine not only owners and developers of properties that existed prior to a disaster, but also those that consider such activities following a disaster.
- Longitudinal panel studies of households—both renter and homeowner households—transitioning through the housing recovery process following a major natural disaster. In light of future demographic trends, focusing on populations in large multiethnic metropolitan areas would be particularly important as well as considering all dimensions of social vulnerability (i.e., gender, age, etc.), not simply class and race/ethnicity.
- Longitudinal panel studies of different forms of housing (single-family, multifamily, condominiums, etc.) and the difficulties experienced by households occupying these structures having varying tenure status should be undertaken.
- Consistent and appropriate quantitative multivariate analysis of future, existing, and historical datasets should be undertaken. Advances in generalized linear models, hierarchical linear models, and panel analytic techniques provide a greater range and

flexibility for researchers to undertake appropriate analyses with all forms of recovery measures. Revisiting and reanalyzing historical datasets might be particularly fruitful.

- Displacement of individuals and households from their permanent homes, as noted by Quarantelli, is the first step setting into motion shelter and housing process. Displacement itself will be a function of not only disaster damage to the structure or lifelines, but also a host of social factors such as tenure status and access to resources. Displacement/dislocation itself should also be a subject of research.
- Clearly, insights have been gained from the international research arena that have been fruitfully applied in the United States context. However, we have not seen concerted efforts to integrate research between these settings. As research focusing on housing recovery emerges, more efforts must be undertaken to share and exchange insights and thereby promote transferability.
- Finally, and perhaps most importantly, we return to Quarantelli's (1982, p. 80) final admonition: conceptual rigor and clarity. As researchers, we must strive for conceptual and theoretical clarity in our work. This may involve the creation of distinctive concepts as tools for the development of our theories and research or the refinement of existing concepts; but unless we are clear in our theorizing about the phenomena under study, we cannot hope to cumulatively develop as a mature area of research.