

**Women and Housing Issues in Two U.S. Disasters:
Hurricane Andrew and the Red River Valley Flood***

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Writing about the chronically homeless from a disaster perspective, Kai Erikson links place, housing, and identity (1994, p. 159):

One can find asylum in a barracks or a dormitory, a prison cell or hospital ward, a crisis shelter or a flophouse. One can double up in the margins of someone else's household. But a true home — a place of one's own — is an extension of the individuals who live in it, a part of themselves. It is the outer envelope of personhood. People need location almost as much as they need shelter, for a sense of place is one of the ways they connect to the larger human community. . . . You cannot be a member unless you are grounded somewhere in communal space. That is the geography of self.

Research across the disciplines has demonstrated that this "geography of self" is constructed in gendered space: geographers explore how differently women and men use space as well as time (e.g., Rose 1993); sociologists and anthropologists how women work and earn inside the home (e.g., Tinker 1990; Boris and Prügl 1996); and historians how women have organized to secure safe housing in toxic-threatened environments (e.g., Rodda 1994), create "safe space" from male violence (Schechter 1981), and enhance personal autonomy through equitable land and property rights (e.g., United Nations Centre for Human Settlements/Habitat 1990). In short, housing matters to women.

Located self-evidently at the heart of what is lost in disaster and what is understood as recovery, housing also matters to emergency planners. Political,

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economic, and cultural issues in evacuation, emergency shelter, temporary housing, relocation, and reconstruction have long interested disaster researchers (e.g., Davis 1978; Quarantelli 1982; Bates 1982; Peacock et al. 1987; Aysan and Oliver 1987; Oliver-Smith 1990). Recent studies from the United States have identified lack of affordable housing as a factor in the slow recovery of low-income neighborhoods hit by earthquake (Bolin 1993); documented ethnic and class conflict over culturally appropriate temporary shelter and reconstruction (Phillips 1993; Bolin and Stanford 1991; 1998); and addressed the post-disaster housing needs of the homeless and elderly (Phillips 1991; Eldar 1992). A gendered perspective on disaster and housing is conspicuous by its absence.

This paper examines housing as part of a larger project to illuminate "shadow risks and hidden damages" (Hewitt 1995) and to specify root causes reproducing women's disaster vulnerability in developed nations (Blaikie et al. 1994), among them the gendered division of labor, economic dependency, male violence, and housing insecurity. I begin with a theoretical grounding of disaster housing in gender relations and global development patterns and then focus on the United States, drawing on Census data and qualitative field studies to address two key questions. First, what structural trends and patterns suggest women's housing insecurity in this context? Second, what emergency management issues emerge from empirical investigations of women's disaster housing experiences? I draw examples from two U.S. case studies to illustrate how housing in the disaster context is a highly gendered issue. The final section outlines women's housing needs and strategic interests and offers guidelines to practitioners.

Women's Housing Insecurity and Disaster Vulnerability in Developing Countries

Gender and development studies in the world's poorest nations provide a useful perspective for analyzing women and housing crisis in the United States. The gendered division of labor accords women responsibility for maintaining safe and clean households and for using and managing life-giving environmental resources; this role is pivotal when communities face severe housing damage or loss (Steady 1993). Secure shelter is also an essential foundation for women's autonomy in every society and its absence an indicator of crisis (Tinker 1990). Impacted both by gender inequality (economic dependence, male violence, unequal access to land, tools, credit, and training) and by global development patterns (increasing poverty, hyperurbanization, changing family structures, environmental degradation, migrant labor, and population displacement), increasing numbers of women around the world

are insecurely housed on marginal lands (Chant 1996; Sweetman 1996; Momsen 1991; Moser and Peake 1987).

Global studies of disaster-impacted communities demonstrate the salience of housing issues for women throughout the disaster cycle. Women's more homebound lives make them more vulnerable to injury or death under some conditions. For example, the practice of sex segregation placed women and children, but not men, indoors when dwellings collapsed in the 1993 Latur earthquake (Krishnaraj 1997). Women's losses may also be economic as women's home-based work increases internationally. In the 1985 Mexico City earthquake, the majority of houses destroyed were headed by low-income single women who supported their families through informal sector work based in and around their houses (Dufka 1988). During the emergency shelter phase, cultural barriers may place women more than men at risk; where the norms of female seclusion are strictly enforced, for example, emergency evacuation warnings are less likely to reach women, and community shelters are less accessible to them (Ikeda 1995). Later, women more than men may find it difficult to leave accommodations meant to be "temporary," as Geipel (1991) noted in the case of senior women following an earthquake in rural Italy.

International studies also document women's active participation during the rebuilding stage, both materially and as political actors. Following the Latur earthquake, Indian women organized in neighborhood groups to monitor construction work for corruption, collectively purchase construction materials, and build model homes adapted to their needs (Krishnaraj 1997). Women also shape the politics of reconstruction in impacted communities. Following a recent earthquake in Colima, Mexico, Serrat Viñas (1998) found women highly active in organizing community resistance to enforced relocation, echoing the activism of women around housing issues in the wake of the 1985 Mexico City earthquake (Momsen 1991, p. 101).

Gender and development theory draws a useful distinction between women's "practical needs" to meet the demands of daily life and their "strategic interests" in challenging gender inequalities (Molyneux 1985; Moser 1987). The gender-aware disaster practices of Pattan, an NGO working with flooded Southeast Asian communities, led it not only to meet women's practical needs by rebuilding houses but to record ownership of these new homes in both partners' names (Bari 1998), arguably rebuilding a more egalitarian and hence less disaster-vulnerable community. I return below to this paradigm of women's practical needs and strategic interests in disaster housing.

Comparable investigations of women's housing issues have not yet been conducted in the wealthy nations of the industrial world, though such work would contribute substantially to a more cross-cultural and gender-inclusive disaster social science (Enarson 1998). In the next section, I review social

trends and population patterns suggesting that everyday life in the United States puts rising numbers of American women at risk during environmental or technological disasters.

Root Causes of Women's Housing Vulnerability

An aging population is a feminizing one. In the United States, over half of all women over 75 (and 20 percent of men) now live alone (Ollenburger and Tobin 1998, p. 101). The number of *senior women living alone* is expected to increase by 39 percent among women aged 55 to 64 and by 11 percent among women 75 or older (Schmittroth 1995, p. 221). Though aging is not a uniform process, the physical disabilities of age increase the likely disaster vulnerabilities of the elderly (Eldar 1992), and disaster planning with their needs in mind is essential. At all income levels, private residences, extended care facilities, and retirement facilities house large numbers of widows and other senior women likely to require assistance. While self-protection is a major theme in U.S. disaster preparation campaigns, senior women on their own may well lack the assistance or resources needed for home preparation, evacuation, or reconstruction.

The traditional nuclear household residing in an owner-occupied home is the focus of most disaster planning and preparation. Yet approximately one-quarter of all U.S. households are now either *sole-female* or *female-headed households* (Ahlburg and DeVita 1992). In the decade ahead (2000-2010), the fastest rate of increase for women heading households is expected among those under 25, a group of young women already subject to higher poverty rates and therefore likely to be insecurely housed (Schmittroth 1995, p. 224). At the other end of the life cycle, half of all elderly women live on less than \$9,500 (Ollenburger and Tobin 1998, p. 100). Many live alone and draw on very meager resources to prepare or repair their homes.

Low-income female-headed households are increasing. Just over half of all poor households are headed by women (54 percent), an increase of 46 percent between 1970 and 1991 (Nunez 1996, p. 12). In 1993, over a third of all female-headed households lived below the poverty line, five times the poverty rate of married couples (Schmittroth 1995, p. 511). The racial dynamics of poverty in the United States put racial-ethnic minority families at greater risk of substandard housing before disasters; poverty rates for single mothers in 1997 ranged from 37 percent for Anglo women to 46 percent and 54 percent for African-American and Hispanic women respectively (U.S. Bureau of the Census 1997).

Women in public housing are especially at risk. While projects vary in the degree to which they are safely located, retrofitted, or maintained, on balance

the rising maintenance costs in aging structures have resulted in a deterioration of the nation's public housing stock (DeParle 1996). Like renters, many project residents depend on absentee landlords to prepare or repair their dwellings. When affordable housing is not available to them, women displaced from public housing units become long-term residents in "temporary" post-disaster accommodations (Morrow 1997).

The nation's supply of *affordable housing* is declining despite the need (Nunez 1996; DeParle 1996). Low-income women and their children are likely to reside in substandard structures built where land is cheap and often hazard-prone; their shelter in trailers and on floodplains provides them little protection. Low-income women in minority populations are disproportionately subjected to routine toxic exposure and the risk of catastrophic toxic events in contaminated neighborhoods (Brown and Ferguson 1995; Taylor 1997).

Homeless families headed by women are the fastest growing sector of the homeless population and now constitute approximately 40 percent of this highly vulnerable population (Nunez 1996, p. 5; Glasser 1994). Increasing numbers of American women cope with the relentless "daily disaster" of homelessness, among them women leaving violent relationships and runaway teenaged girls on the street (Kozol 1988). Their daily rounds in and out of shelters, hotels, or borrowed space render them socially invisible, difficult to locate and assist, and well outside the normative household disaster planners target for information and resources.

Women in domestic violence shelters are also socially invisible yet highly vulnerable. Shelters offer safe space of last resort to women forced from their homes by violence; to maintain this lifeline, residents, volunteers, and staff may need physical assistance preparing and repairing their facility and locating alternate evacuation space unknown to abusers (Enarson forthcoming). Women living with physical or mental disabilities, or serious illness, in group homes or other public settings may need help tailored to their abilities and needs as they prepare and repair their living spaces.

These patterns and trends make housing in the disaster context a gendered issue in the United States, with particular significance for women raising families alone, those on low-incomes or in poverty, marginally housed women in public housing or domestic violence shelters, older women living alone, and homeless women. What can we add from the concrete experiences of U.S. women living through specific disasters?

Housing Experiences of Women in Two U.S. Disasters

Taking up the challenge of feminist standpoint theory to understand and critique ruling relations and power structures from women's everyday domestic

experiences (Smith 1987), some researchers have recently investigated women's disaster experiences in the developed world, during Miami's Hurricane Andrew (Morrow and Enarson 1996; Enarson and Morrow 1997; Morrow 1997; Enarson and Morrow 1998a; Alway, Belgrave, and Smith 1998); in flooded areas of North Dakota (Fothergill 1998), Wales and Scotland (Fordham 1998; Fordham and Ketteridge 1998), Australia (Finlay 1998), and Canada (Enarson and Scanlon 1999); and in the aftermath of fire (Cox 1998; Hoffman 1998) and earthquake (Phillips 1990). Though not directly investigating gender and post-disaster housing, these studies suggest that women are highly impacted by issues arising during emergency preparation, evacuation, emergency shelter, temporary accommodation, repair, and reconstruction.

This paper reports on original data from an earlier study conducted with Betty Hearn Morrow following Hurricane Andrew in Miami and from my ongoing investigation of women's disaster experiences during the 1997 Red River Valley flood in the Upper Midwest (North Dakota and Minnesota). In these studies, too, housing loss and recovery were critical issues facing women.

Research Strategy and Study Samples

The field studies were conducted to document and analyze the experiences of women in a recent U.S. hurricane and flood, among them women's housing needs and interests. The studies employed qualitative methods appropriate to this goal, primarily open-ended interviewing and focus group sessions. Guiding research questions elicited information about women's vulnerabilities and losses and about their resources and responses in each phase of the disaster cycle. Interviews and focus groups were conducted with the use of informed consent forms and background data sheets; all discussions were tape-recorded, translated from Spanish to English if necessary, and later transcribed for computer-assisted qualitative analysis.

Because their ideas, feelings, and observations are often marginalized, narrative accounts were solicited from women particularly vulnerable to disasters. In addition to professional women in service-providing agencies, emergency response organizations, and local government, interviews or focus groups sessions were conducted with migrant farm workers, refugees, seniors, women in public housing and in domestic violence shelters, home-based workers, single women, rural women, low-income single mothers, racial-ethnic minority women, and small business owners. In most cases, potential focus group participants were identified and contacted by knowledgeable key informants (e.g., shelter manager, agency director, community leader). This strategy resulted in a non-probability, purposive sample of women representing the broad range of community difference across the divides of race, ethnicity, age, citizenship status, and social class.

Research conducted in Miami in 1992-1994 included interviews with 25 service providers (e.g., the YWCA, South Dade Immigration Services, Legal Services of Miami); five focus groups involving 25 women; observations in tent cities, service centers, and provider organizations; and extended participant-observation of an emergent community group. In "Grand Forks" (used here to include Grand Forks, North Dakota, and East Grand Forks, Minnesota), I conducted interviews with 95 impacted women, service providers, and disaster responders during three field visits at 6, 12, and 18 months after the April 1997 flood.

Other data sources included agency documents, local research reports, and media accounts; numerous informal conversations with residents during field visits; personal letters and other documents in the University of North Dakota's Special Collections Library; and oral histories conducted under the auspices of the University of North Dakota Museum of Art.1

Findings

The following section reports sequentially on key patterns or issues which emerged from women's accounts through the disaster cycle of household preparation, evacuation, emergency shelter, temporary accommodation, rebuilding, and resettlement in permanent housing. I emphasize that the findings are not conclusive but suggestive, raising a host of questions for further investigation, among them how gender interacts with race, class, and age to bring these dynamics into play, and what gender-specific issues might emerge in a similar study of male residents.

1. *Conflict with men was reported over priorities during household preparation and evacuation.* When couples in the Red River Valley differed over how much and how soon to prepare their homes for flood, and whether and when to evacuate, women took action earlier and wanted more help from male partners and kin.² As the Red River waters rose dangerously high, most child-free and able-bodied residents, male and female, volunteered at "Sandbag Central" to help dike endangered homes, schools, businesses, and other public structures. But women and men were often divided over the need for mitigation at home. Interpreting women's desire for action not as mitigation but as "panic," husbands in some cases actively resisted women's efforts to gather sandbagging materials for the home, pack belongings for evacuation, or move furniture and other possessions to safer ground. Their partners later spoke bitterly about this male resistance to protecting their homes and property, resenting both the material losses and the emotional cost. As one woman explained:

When the women showed this concern (to buy flood insurance, to move things upstairs), their significant others . . . in many

cases discounted their turbulence, little was done, and much was lost. . . . [My husband] disconnected himself from my efforts. In the early stages, he used little words that discounted what I felt. In the later stages, I knew I had to move regardless of how he felt and I moved like a woman possessed. I didn't force him to help me, but I missed his companionship when I felt our home was at stake. This created a chasm between us which we recently have begun to bridge. (Crawford 1997)

2. Highly vulnerable women sometimes lacked needed assistance preparing their homes. As Hurricane Andrew approached, women in public housing units in Miami reported that managers ignored their requests for plywood and nails to cover apartment windows: "Everything was right there. All they had to do was open it up and give us some nails — we could have did it ourselves. They didn't want to do it. They didn't tell us anything." As a result, living units were damaged or destroyed, resulting in increased losses of personal belongings. Eighteen months later, women and children reported numerous respiratory problems caused by mildew and mold in apartments still under repair. Similarly, in some rural homesteads along the Red River Valley, a strong regional ethic of self-reliance may have inhibited widows living alone on deteriorating family farms from asking for help, leaving them in substandard housing "with their basements collapsing" after the flood.

3. *Women were less likely than men to resist or delay evacuation.* In the Grand Forks area, many families experienced emergency evacuation in darkness as dikes broke overnight, and virtually all residents were evacuated when city services ceased. Women tended to evacuate earlier than men,³ due both to safety concerns about youngsters and because the men in their families resisted evacuation, increasing women's caregiving responsibilities. In one professional family, the wife was seriously ill at the time of the flood crest but more concerned about her husband's recent heart problems:

After about 1½ hours of sleep Friday night, I turned the radio back on and they were saying that the whole town should evacuate — our area was specifically named. I woke [my husband and grown son] about 5:00 a.m. Both said they would not go. . . . It took me until the afternoon on Saturday to convince [him] that we should leave. All medical services were down, and I didn't want to have to worry about getting him to medical help if he should need it in an area where none was available. [My son] refused to go.

4. *Lack of housing and safe space put some women at higher risk of violence.* Increasing incidents of domestic violence were reported after Miami's hurricane and the Red River Valley flood (Enarson forthcoming). Designated

evacuation space or relief centers may not be safe spaces for women in violent relationships, as this shelter worker explained:

[T]hey're in that shelter because they're in danger. And the Red Cross shelters, those types of shelters, are not safe for them. Their other courses of action tend to be neighbors, friends, family members who are logical places for the perpetrator of that violence upon them to look for them. . . . And so I think this really shows that we need to have a plan of action ahead of time. . . . Because they're there for a reason.

When floodwaters destroyed the community shelter for homeless and abused women, Grand Forks residents were made more aware of the needs of battered women for emergency shelter and affordable transitional housing. The flooded shelter in Grand Forks had not been replaced one year later, and crisis workers had physically relocated the crisis intervention center to five different locations.

Housing shortages brought former boyfriends and recently divorced spouses back into many women's lives during evacuation, shelter, and temporary housing; some spoke of increased conflicts with children, threatened violence, substance abuse, and emotional strain. In Miami, lack of accommodation for out-of-town construction workers and their families was the proximate cause of abuse of a young woman who lived in a tent for six months while her partner repaired homes.

5. *Women's domestic and kin work intensified when living conditions were disrupted.* Women in both studies spoke frequently of what "putting the house to rights" entailed in the aftermath of a hurricane or flood. Lack of facilities, equipment, supplies, space, and time clearly expanded women's postdisaster domestic labor, magnifying the demands of the "second shift" most employed women face. This was especially true of low-income women unable to purchase such replacement services as child or elder care, restaurant meals, domestic help, or dry cleaning.

The inability to perform basic household tasks was emotionally stressful for women who saw themselves as family providers:

When I couldn't fix a meal because I didn't have water, when I had basement water in my kitchen — that's what I felt like I was responsible for, washing their clothes and — it *majorly* disrupted *my* life, where my husband could go off and go to his job and bring a pay check home, and "Everything's just fine." And I'm like, "Everything's not!" I couldn't shop at the stores I wanted to shop at, I couldn't do anything.

Insecure housing during the evacuation and resettling period also greatly expanded women's traditional socioemotional and kin work. They reported

having primary responsibility for assessing the extended family's housing needs and resources and arranging for appropriate temporary living space. Overcrowded living conditions in damaged houses, relatives' homes, or government-provided trailers intensified women's emotion work as caregivers in much the same way that non-functional kitchens intensified their physical labor. Respondents and service providers in both Grand Forks and Miami attributed increased family stress, leading in some cases to conflict and violence, to overcrowding in tents, trailers, hotels, the homes of relatives, or their own damaged houses or cars.

Households often expanded in size as women able to do so offered space and personal services (cooking, laundry, child care, emotional support) to kin, co-workers, friends, and evacuated families not known to them personally. Many women recalled the struggle to keep up with their paid jobs, clean up their damaged property and workplaces, and create a "home" away from home for their own families or those they hosted:

I know of a lady who had 17 families living with her — families! And the last one left two days ago [six months after the flood]. We're talking long-term. Families still have families with them, because they don't want to move — the denial — they don't want to move into a trailer. They want a home situation as much as they possibly can.

6. *Government-provided temporary housing communities were not designed around the needs of women and children.* During their long stays in temporary trailers, women's day-to-day efforts to cook, clean, and care for their families, often in combination with paid jobs and unpaid community work, were complicated by the physical limitations of temporary accommodations, e.g., lack of privacy, few play spaces for children or activities for teens, insufficient laundry facilities, and social isolation.⁴ In Miami's trailer camps, women were often isolated, fearful for their personal safety, lacked needed mental and reproductive health services and reliable transportation, and were unable to access needed community services. There was no child care, elder care, or family respite care consistently provided in public spaces either in Miami or in Grand Forks to support women with dependents in their efforts to repair homes, search for new housing, or access relief services. A community center offered Grand Forks trailer residents needed recreational services, computer facilities, after-school care, and other services, but mothers spoke often about overcrowding and the lack of safe, outdoor play space for children. Outreach workers identified limited public bus transportation as an issue for women in temporary housing who lacked cars but were still responsible for searching for permanent housing, getting to jobs, and transporting children to child care and home schools.

7. *Women were slow to locate affordable housing and leave temporary accommodations.* Women's economic status and family roles were formidable

barriers in the race for affordable housing, making women more dependent than men on private or public temporary accommodations. In Miami, women were the majority of those long-time residents of "temporary" housing, especially minority women heading multi-generational families. One year after the flood, a housing specialist in Grand Forks estimated that 30 to 40 percent of government-provided trailer residents were women, often single mothers with large families, on public assistance, or marginally employed. Disaster relief workers, Unmet Needs Committee members, and others engaged in Grand Forks' recovery process concurred that low-income women rearing families on their own were especially disadvantaged in the post-flood housing market, echoing the stories told by single mothers of their many moves in and out of trailers and around the community. One housing specialist explained:

We have a lot of lower-income families, like single mothers with three children, you know, that can barely make it the way it is, let alone with paying rent, because they only pay utilities on these places. . . . I have a list of all rentals in Grand Forks and it's just — they're still real high. Even for sleeping rooms, they're like \$200 a month. . . . We have one lady out here that has nine kids and she's going to need a four-bedroom. And the last apartment I saw was over a thousand a month for rent.

Lack of affordable permanent housing was as major setback for low-income single mothers, pushing some back into dependency and depression. They often spoke of behavioral problems with children in crowded living quarters, health problems, loss of home-based income, and unwelcome engagement with former spouses in need of housing. Treated earlier for depression, this mother of four repeatedly stressed the need for secure space for her active youngsters and two teenagers:

I had things set. I had a house leased until my eldest daughter graduated from high school. We had four bedrooms, a big enough house for my family, big yard. I was going to start college in June. . . . I was single, I was starting college, I was feeling good. I had my head together. When we get another house that we have space in, we'll feel better, but I'm starting to get the feeling that that's not going to happen and I'm starting to get real upset again, thinking I'm stuck-into an apartment and then we'll have to move again, and move again, and move again.

Among the predominantly Scandinavian residents of the Red River Valley, Latina women were highly visible in the search for relief goods and housing. After losing her home and its contents, one single mother of three drove non-stop to Texas for emotional and material support from her extended family. She focused on racial bias in describing her subsequent search for permanent

housing and the conflicts which developed between her teenaged children and her landlord:

I had a hard time getting that apartment but I actually begged him — actually, I kneeled down and I said “Please, me and my kids need a place. . . . I have to go into storage to get clothing for me and my kids. I need a home.” And he’s over here, “Well, let me think about it for two weeks, because Mexicans used to live in my place and destroyed my apartments before the flood.” That’s what I was told by him. So that’s where I thought racial had something to do with it.

8. *Gender was a factor in decisions about home repair and rebuilding.* Couples in both studies struggled to resolve conflicting priorities when making decisions about whether, when, and where to relocate, and about repair and rebuilding priorities. In Miami, an advocate for low-income refugee women recalled mediating many conflicts between couples when women more than men wanted to use relief funds to make immediate home repairs and replace needed household supplies. As the account below suggests, home repairs were delayed for other Miami women when male partners more readily took on waged clean-up jobs than helped out with necessary but unwaged home repairs:

[We] three women spent 39 days without electricity — washing clothes in the bathtub, heating water on the campfire for the children’s baths, washing dishes in a bucket. We cooked Mexican food over a makeshift kitchen in the yard, preparing corn tortillas on a cast iron griddle. . . . Disaster or no disaster, the men demanded hearty meals of traditional foods and refused to eat at the military kitchens. . . . The men began to hire themselves out, repairing others’ homes as the job market for workers boomed, but our home lay in disarray. (Colina 1998)

Tenants in South Dade County were expected to continue rent payments, but landlords in low-income areas often failed to make needed repairs. As women are more likely to rent than to own homes, this impacted women directly, especially those most vulnerable to exploitation. This advocate for Haitian immigrants in Miami explained:

Well, even if you got a [FEMA temporary housing] check, where are you going to go? Now a lot of them, what they did — they make deals with the landlord. OK, we stay, we pay you rent, you fix. So the landlords are getting the money but they’re not fixing. [This young single mother had] no electricity, no lights, and she had her 14-day-old baby, and she was paying \$260 rent every month.

In Grand Forks, service providers noted that poor health and special needs kept many elderly widows from returning promptly after their evacuation. Because they were not in town to arrange for prompt clean-up and repairs before construction work slowed for the winter, repairs were delayed on their homes and they returned to depressing living conditions in damaged homes and deserted neighborhoods. On the other hand, returning too soon created problems for some women. A public health educator observed that the husbands and fathers she worked with were sometimes overeager to begin repairing their homes; this led some men to bring women and children back to wood-frame homes not yet thoroughly dry and safe for occupancy.

9. *Housing loss had direct economic consequences for some women.* Women generally did not benefit from casual work on construction and clean-up crews in either Miami or Grand Forks. There were many reports of women’s secondary unemployment as a direct result of housing damage, among them domestic workers in Miami. Often primary hurricane victims themselves in hard-hit South Dade County, many lost work when their middle-class employers lost their homes or temporarily relocated during reconstruction. Contractor fraud was reported by some respondents in Miami during the rebuilding phase, particularly targeting older, non-English-speaking women.

Home-based work losses were reported by self-employed women in both cities. Grand Forks flood victims minimized housing damage (“just six feet in my basement”), but basements often provided needed living space. Basements were also used for storing equipment and supplies used by low-income women in home day care, hair dressing, bookkeeping, and other forms of home work. For example, each of the Grand Forks family day care providers interviewed reported significant economic losses; estimates of how much their earnings contributed to family income ranged from 30 to 100 percent. Home-based child care was a vital but invisible part of the Grand Forks economy until floodwaters washed away basement services and kept thousands of employed mothers at home. A childhood educator observed:

What happened was that most of the facilities in which children were cared for were flooded. There were very few that weren’t flooded, because most of them were in basements. That’s where we keep kids! . . . So everything shut down. And even the ones that didn’t get damaged, they didn’t have water — it was impossible to provide care. So what happened was the astounding realization that when businesses needed parents back in the work force, they didn’t have anywhere to leave their kids. So all of a sudden it became an important issue. It was one of the key issues in getting people back to work.

10. *Emotional impacts of housing loss were gendered.* Returning to dam-

aged or destroyed housing may be especially difficult emotionally for those who built or remodeled their own homes, more often men than women. A member of the disaster outreach team touring Grand Forks met this distressed wife in an affluent flooded neighborhood:

We had a lady call us and say "Just come, I'll show you." We go down there and the guy got out of the car and he stopped at the end of the driveway and he sobbed and he sobbed. And she goes, "This is what he does every time. We can't even talk. He's a wreck and I have to hold everything together."

Women often articulated especially strong ties to place, reflecting the gendered division of labor and the material grounding of women's lives in the domestic realm. Women, in turn, may experience the loss of relational space more acutely. In both studies, women recalled their destroyed or damaged homes as places of personal growth where babies were born, family rituals enacted, gardens tended, and emotional and physical lives constructed under their care. The loss of household possessions was the loss of family history and personal identity: "Every box of my life was floating around," one Grand Forks woman remembered feeling as she surveyed her flooded basement (Fothergill 1998).⁵ Less visible than male-dominated clean-up in the public realm, women's work in and around the damaged household enhances the emotional and material recovery of the family, for example when Grand Forks mothers retrieved and cleaned family memorabilia discarded on curbside berms.⁶

11. *Some women took on nontraditional roles in the housing crisis.* Though rarely employed in construction trades, women in a number of families reported practicing or developing new construction skills as they worked alongside husbands to repair their homes, especially in low-income households. As this woman reported:

I can do wire now! Changed all my outlets and I can put up lights. I'm real scared of wiring even though I've done that. And I really got to be a good plasterer because I didn't like the way they did it so I redid it at nights myself.

In Grand Forks and Miami families, supervising or negotiating conditions with contractors, repair crews, and insurance agents often became women's work. Women reportedly took on most of the bureaucratic work of rebuilding (e.g., applying for building permits and arranging for volunteer assistance) as they had taken on the paperwork of emergency relief earlier on. The migrant community agency in Miami that built replacement housing after the hurricane reported that women were among those residents most actively involved in hands-on construction work. In the construction of Habitat for Humanity homes in Grand Forks, women were engaged in critical roles as board members, construction managers, and volunteers.

12. Women organized politically to influence housing policy during the rebuilding phase, though social action was difficult in post-disaster conditions. Often lacking cars, burdened by the needs of dependents, and facing the challenges of home repair, it was difficult for women in both communities to make their housing needs visible in the public rebuilding process. As this outreach worker observed in Grand Forks: "We have a lot of public forums where people are allowed to come and-but I don't think that works for [women]. You don't take your kids, or you can't get there, for starters. It just doesn't work."

Women did successfully organize around housing and other issues in Miami, where the multicultural women's coalition, Women Will Rebuild, established a working committee to investigate women's housing conditions and needs.⁷ A founding member described the housing conditions which moved her to action:

What I was seeing when I went to the trailer parks . . . over and over again the people who were living in unbelievable circumstances were women. They were living in those ghastly trailers. There was no playground, there wasn't a swing, there wasn't anything. The kids' main toys were razor-sharp pieces of metal from the blown-away trailers. They were being incredibly persecuted by the white mobile park owners who were getting zillions from the feds and who never had "funny people" in their place before. And it was hell down there. Grandmothers were taking care of a trailer full of kids. Mothers were out working. There was one huge park with no phones because the owner wouldn't let them in. So try to imagine all those children with no access to a 911 number. These were the kinds of stresses I was seeing. I was listening to those fancy people sitting over in the Gables who had no sense of what was going on down on the ground.

Latina women in Grand Forks reported racial bias in apartment rentals (and in the distribution of relief goods), lack of rental housing affordable to low-income Latina families, and lack of recovery assistance for migrant workers absent during the flood but impacted indirectly by housing shortages when they returned for the growing season. A focus group of seven Latinas criticized city officials' approval of expensive new townhouses, asking:

So who's going to benefit? There's homeless people still. . . . We're thinking of forming a group. It's still in the making, but we want to get together — all Hispanic women — so we can have a voice. We still need to get some basics.

Implications for Action

The patterns and issues reported here from two field studies are suggestive but far from conclusive. Disaster responders, elected officials, government leaders, community activists, and vulnerable women in at-risk communities all need more concrete knowledge about women and disaster housing. Practitioners need more concrete information on specific housing issues likely to impact women in order to more effectively anticipate problems and match resources and needs.

This analysis focused on utilizing gender-specific knowledge to reduce community vulnerability. Women's housing needs are frequently subsumed under generalized categories (e.g., low-income households, racial-ethnic groups, and the elderly), although the root causes of their housing crisis and their need for services may well differ, for example in the case of female and male homelessness before and after disasters.

In this regard, funding gender-sensitive research on local vulnerability patterns is a significant mitigation strategy. Emergency management organizations should also consider gender audits of housing policies and practices to assess whose needs are addressed, what groups are targeted, what assumptions are made, what resources are made available, what benefits are likely, and how gender relations are impacted (Kabeer 1994, p. 302).

Grassroots women's organizations can and should be fully engaged as co-researchers in participatory research projects, drawing on their local knowledge about women's living conditions to design studies providing local practitioners with useful information and insight. Qualitative methods such as focus groups, semi-structured interviewing, and oral history will be useful strategies for bringing the diverse voices of ordinary women to community emergency planning. Evaluation researchers can identify "best practice" models in which women's housing needs in disaster contexts are successfully addressed. As Blaikie and his colleagues note (1994, p. 227), sex-specific data on the "hazardousness of home and workplace" will provide important information on the root causes of community vulnerability. More longitudinal research projects are also needed to track women's housing recovery in diverse racial, economic, and age groups.

Hazards assessment at the local level should incorporate a gendered analysis of housing vulnerability and accurately reflect the needs of all at-risk populations. Vulnerability maps should incorporate such indicators as the location and size of public housing units, residential patterns and trends among single parents and elderly women, home work patterns, migrant housing and labor market patterns, average numbers of women residing in emergency domestic violence shelter, spaces utilized by homeless women, local housing

costs, and sex-specific income and employment data. If not yet available at the local and regional levels (and gender-specific data are rare in the tool kit of most emergency planners), this information should be developed through collaborative research projects involving academic researchers, community members, and disaster planners.

Meeting Practical Needs and Long-Term Interests

Figure 1 offers ten strategies for addressing the material housing needs of different groups of women through the disaster cycle. Researchers and responders have offered a variety of models for mitigating housing losses, stressing the need to address the chronic housing needs of the "persistently vulnerable" (Bolin and Stanford 1998, p. 33), map the housing vulnerabilities of migrants, transients, complex households, the disabled, and other groups and broaden the planning base to utilize the local knowledge of community-based organizations (among others, see Bolin and Stanford 1998; Morrow 1999; Phillips 1996; BAREPP 1992). The strategies offered here build on this framework but identify women as a housing-vulnerable group with specific needs and resources.

Meeting women's practical housing needs — for example, of senior women living alone for home repairs or of single mothers in trailer camps for adequate transportation — is vital but does not challenge deeply-rooted patterns of gender, race, and class power producing women's housing insecurity. To reduce social inequalities placing women at risk, *disaster housing policies and practices must also support women's autonomy*. Reconstruction programs should support women's right to secure housing; accommodate women's responsibilities in the home, work force, and community; and facilitate women's access to nontraditional skills, tools, and responsibilities.

Affordable, safe, and appropriate housing for women is both an immediate post-impact need and in the long-range interest of gender equality and community solidarity before and after damaging extreme events. Secure housing which meets the needs of women at all income levels, in all cultural communities, across the life cycle, and with varying physical abilities is an essential precondition for women's autonomy.

Engendering reconstruction is also in the long-term interest of women as well as men. Post-disaster redevelopment forces the issue of how communities are constructed socially as well as materially, affording a window of opportunity for revisioning housing and community life. Feminist urban planners, geographers, architects, and activists have offered models for woman-friendly redevelopment including such features as affordable and accessible housing for women through the life cycle, shared open space, on-site child care and other social and human services, decentralized employment

Figure 1. Strategies for Meeting Women's Practical Needs in Disaster Housing

1. Identify insecurely housed women at the local level for priority assistance with preparedness, evacuation, repair, and re-housing, including women in domestic violence shelters, low-income women heading households, senior and disabled women, public housing residents, and home-working women.
2. Include locations of group homes, homeless shelters, public housing, non-confidential domestic violence shelters, extended care facilities, and migrant labor camps in community hazards maps.
3. Organize and administer emergency and temporary housing projects to meet women's needs for personal safety, child care, access to relevant employers, public transportation, reproductive health care, and gender-sensitive mental health services; employ a gender-fair checklist to plan and evaluate housing projects.
4. Develop educational materials for use by women's grassroots organizations to educate senior women, non-English-speakers, low-income single mothers, undocumented women, and other vulnerable women about safe clean-up, home repair, fraud, exploitation, redevelopment policies, and other housing issues.
5. Develop gender-specific emergency communications, e.g., publications responding to male resistance to home preparedness and evacuation, providing contact information for caregiver support, etc.
6. Provide and subsidize drop-in child care and adult respite care in temporary housing sites and central community facilities during evacuation, clean-up, and rebuilding; provide on-site child care at meetings of temporary residents' councils, community committees, and government bodies deliberating post-disaster housing decisions.
7. Monitor progress of repairs in public housing, migrant housing, women's shelters and other sites housing vulnerable women; liaise with knowledgeable community groups, e.g., through an appointed municipal ombudsperson.
8. Develop a community roster of women in the construction professions and trades and offer nontraditional skills training for women during repair and reconstruction; strive for gender-balanced contracting during clean up and rebuilding.
9. Mandate consultation with low-income women, women heading households, and other insecurely housed residents in the design and location of new housing units.
10. Implement gender audits assessing and monitoring impacts of new housing initiatives or land use policies on women operating home businesses, low-income single mothers, women with mobility barriers, and other vulnerable women.

and city services, safe public lighting, and affordable public transit (e.g., Hayden 1981; Eichler 1995). Disaster professionals working with communities to rebuild should include this perspective and these professionals in their consultations.

Finally, *women need decision-making voice in constructing sustainable built environments*. Local mitigation initiatives must engage women's groups and advocates representing migrant and homeless families, minority families in at-risk neighborhoods, battered women, the frail elderly, women in public housing, and other insecurely housed women. Women's long-range housing interests are rarely part of public discourse in the highly politicized process of postdisaster housing redevelopment. But effective planning for sustainable and disaster-resilient human settlements cannot engage only the energies and ideas of men; women, too, must be fully engaged as full and equal partners. Rebuilding without taking the material conditions of women's lives into account not only fails to mitigate the impact of future disasters but reconstructs significant housing vulnerabilities.

Conclusion

Understanding that disasters are as much social constructions as the individuals, households, organizations, and communities they touch, disaster researchers have searched for underlying fault lines and fractures placing communities at risk — including gender inequalities. Women's practical needs and long-range interests in secure housing were investigated in this context, suggesting root vulnerabilities in developed societies and addressing the practical question, "So what?"

The absolute need for shelter, land, and secure housing is manifestly greater in the world's most impoverished nations and where women lack land and inheritance rights. Secure housing under those conditions is a vital need for women before, during, and after disasters. But demographic trends and global development patterns suggest that housing is and will increasingly be salient for women in the world's wealthiest nations as well. Persistently high poverty rates, women's longevity, the global trend toward single mothering, cutbacks in social subsidies for affordable housing, and increases in family homelessness and homelessness caused by violence against women undermine the housing security of women across the nation long before the threat of flood or hurricane.

Preliminary and suggestive in nature, findings from the gender-focused field studies reviewed here also suggest a range of housing issues that arise for at-risk women impacted by disaster in wealthy developed nations like the United States. Both overlapping and distinct from those experienced by women in developing countries, these include: shortage of housing affordable to women, especially to low-income women supporting families; gender-based barriers to household preparation and repair; stressful living conditions

for women caregivers in temporary accommodations; economic losses to home-based businesses; increased risks for women in domestic violence shelters or otherwise homeless; and neglect of women's long-term housing interests as communities rebuild. A better understanding of these complex and inter-related housing issues can guide community planning and may help untangle the causes of women's apparently higher levels of post-disaster stress (e.g., Ollenburger and Tobin 1998).

Finally, a number of action steps for planners and practitioners were suggested to help integrate gender-specific housing issues into community-based mitigation and response planning. Why should practitioners take this up? In the final analysis, focusing on women's housing needs is a needed tool, providing a framework for planners and residents to work together in practical ways to anticipate and plan for disasters. Disaster practice based on concrete knowledge of how and where women live and the housing issues they face in emergencies is an essential step toward building more disaster-resilient households and communities.

Notes

1. My thanks to Dr. Kimberly Porter of the University of North Dakota Department of History and to Eliot Glassheim of the University of North Dakota Museum of Art for facilitating early access to this invaluable resource.

2. In contrast, a study of middle-class couples in Miami found most men highly involved in physically preparing their own and others' homes, perhaps finding hurricane warnings more credible than flood level predictions (Alway, Belgrave, and Smith 1998). Facing more remote threats, men were less likely than women to seek information or protect household items in a study of aftershock communication after the Loma Prieta earthquake (O'Brien and Atchison 1998).

3. Gender bias in evacuation can also be explicit, as occurred across the U.S. border in the rural municipality of Richot in Manitoba. There, only women providing direct services to the remaining male responders (e.g., waitresses) were exempt from mandatory evacuation orders as the Red River floodwaters moved north (Enarson and Scanlon 1999). Australian researchers found stress levels to be higher among evacuees from Cyclone Tracy, among them virtually all the women and children of Darwin (Milne 1979).

4. A study from Perth, Scotland found that even basic household appliances like washing machines were not widely available ("50 caravans and one washing machine"), and time-consuming and expensive daily trips to buy food were necessary in temporary accommodation (Fordham and Ketteridge 1998, p. 88; see also Fordham 1998). That temporary housing during evacuation impacts women's lives more than men's was also apparent among families evacuated from the Red River flood in Canada (Enarson and Scanlon 1999).

5. My thanks to Alice Fothergill for sharing an early version of the manuscript from which this quotation is taken.

6. Participants at an Australian symposium on women and disaster noted that male clean-up crews tendency to throw away damaged personal items conflicted with women's desire to clean and preserve emotionally significant household items and may contribute to post-disaster stress. See Dobson 1994; Fuller 1994; and Honeycombe 1994.

7. See Enarson and Morrow (1998b) for an analysis of Women Will Rebuild. See also Leavitt's description (1992) of women's activism in public housing damaged by civil disorder in Los Angeles and Turner's (1997) analysis of Anglo women mobilizing around home clean-up and sanitation issues in the aftermath of the 1900 Galveston hurricane.

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