

**Cultural Diversity in Disasters:
Sheltering, Housing, and Long Term Recovery**

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Demographic shifts have put minority groups and the poor at greater risk to disaster during the last decade. Problems of sheltering and housing for these groups occurred following the 1989 Loma Prieta earthquake in Watsonville, California. To mitigate future problems, disaster planners must identify various ethnic groups and other groups in a community. Diversity must be built into the disaster response during the planning stage. Researchers should continue and expand work related to diversity and disaster.

Introduction

The 1990 U.S. census shows diverse demographic changes. For example, proportions of minority groups and the elderly are at an all-time high. Furthermore, the 1980s experienced a rise in poverty and homelessness, with higher than typical increases in minority populations. Added with a concomitant decrease in affordable housing, we have a housing crunch among an increasing special needs population. Increasing demographic diversity means communities need multiple approaches toward housing diverse low income groups. This is especially true after disaster.

Unfortunately, we do not need to wait for a 1990s disaster to see how special needs groups might be affected. Such a special needs population existed in California on October 17, 1989—the day of the California earthquake. Combined with a housing shortage for low income groups (Lowry 1983; Rosen 1984) social impact of the Loma Prieta earthquake became a long term recovery dilemma.

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Researchers and practitioners know that disasters disproportionately impact low income and often minority groups. In this paper, I explore how the Loma Prieta earthquake affected a low-income minority group's housing recovery. I include a discussion of massive emergency sheltering needs, and the transitions to temporary and permanent housing. I then discuss how community, state, and federal organizations responded to this displaced, low income and minority victims in Watsonville, California. Finally, I suggest how practitioners and researchers can effectively use this research for future incidents.

Implications for the United States

Governmental policies from the 1980s set the stage for a post disaster sheltering and housing crisis. During the 1980s, the federal government stepped away from subsidized housing, cutting federal support by two thirds (Rossi 1989a, 1989b).

As recent research shows, communities are typically ill-prepared for minority populations and disaster (National Research Council 1991). For example, in Saragosa, Texas, an inadequate warning system contributed to the deaths of 26 individuals, predominantly Spanish speaking (Aguirre 1988). Perry and Mushkatel (1986) noted that comprehensive emergency management necessarily includes preparation for diversity. Because race and ethnicity are closely correlated to socioeconomic status (Bolin and Bolton 1986) and minorities tend to receive lower wages, they will likely need extensive recovery assistance. These characteristics describe the focus of our analysis, Watsonville, California.

Watsonville, California

Watsonville, California is located about 75 miles southeast of San Francisco. Situated just off Highway 1, the county rests on picturesque Monterey Bay. Unlike its tourism-based neighbor city of Santa Cruz, Watsonville is largely an agricultural economy. Such an economy creates low income jobs and workers. Low-income workers require affordable housing. Given that most available land is agriculturally zoned, an affordable housing crisis exists in Watsonville.

Contrary to the stereotype, Watsonville agricultural and related workers are typically not transient. Local canneries, for example, have employed family members for several generations. The low to middle income population creates a high demand for affordable housing. Indeed, prior to the Loma Prieta earthquake, low income families and single adults lived in

overcrowded and even substandard housing. City housing maintained a one to four percent vacancy rate—great for landlords, but not for tenants. Rosen (1984) observed that demographic shifts in the 1980s would compromise affordable housing availability. Natural disasters could accelerate the loss of affordable housing (Rosen 1984)—a scenario that Watsonville realized in late October, 1989.

Methods

Data used here are from a longitudinal study of how the Loma Prieta earthquake affected low income and minority populations in Santa Cruz County. A research team consisting of one sociologist, a sociology graduate student, and two undergraduate sociology students travelled periodically to the cities of Santa Cruz and Watsonville for in-depth interviewing, observations, and gathering relevant documents.

We conducted 117 in-depth interviews with individuals from organizations representing disaster recovery, housing recovery, local through federal disaster relief, and special populations. The 117 interviews represent a total of 72 separate individuals from 58 different organizations and offices. As part of the longitudinal analysis, we interviewed some organizational representatives during follow-up trips. Our research included an initial field trip in March, 1990, and follow-up trips in May and October, 1990, and July, 1991.

We collected additional data through observation at public relief meetings and assorted committee meetings, such as those held within county disaster organizations. We also toured numerous housing development and/or rebuilding sites. A final data collection strategy was the accumulation of pertinent documents such as disaster plans, organizational memoranda, public information releases, newspaper articles, etc.

Earthquake Impact

The Loma Prieta earthquake struck at 5:04 p.m. on October 17, 1989. Although many Americans think of this as the San Francisco earthquake, the earthquake extensively affected cities like Watsonville, Santa Cruz and Los Gatos—areas closest to the epicenter. For example, Watsonville lost eight percent of its housing stock, several downtown blocks and the local high school to the earthquake. Watsonville's hospital also suffered damages severe enough to cause temporary closure and extensive rehabilitation. During the short term response, massive and unique sheltering needs arose. Conflict between the predominantly Latino community (over 60%) and

predominantly Anglo city power structure and Red Cross developed. Long-term housing recovery loomed. Yet, out of the conflict former adversaries created new systems of cooperation and communication. Watsonville appears to be in the early stages of a fresh, integrated approach to disaster mitigation, response, and recovery.

Short-Term Recovery: The Problem of Sheltering

Almost immediately after impact, thousands of Santa Cruz county residents, including those in Watsonville, left their homes. Many remained outside throughout the night, camping in yards, parks, and other open spaces. As expected, the American Red Cross (ARC) opened shelters in local armories, churches, and other appropriate buildings. Despite this available shelter, though, hundreds—perhaps thousands—of earthquake victims remained in outdoor, emergent shelters. Because hundreds chose this outdoor shelter, tent cities sprang up creating unique sheltering challenges (see also Bolin and Stanford 1990).

Within days postimpact, earthquake victims gathered in two main public parks. Watsonville's Callaghan and Ramsey Parks became camping sites. Literally hundreds stayed in these two locales for weeks. Four days after Tuesday's earthquake, the city, county, and ARC agreed to open Ramsey Park as an official shelter—an unusual move on the part of the ARC. Typically, indoor shelters provide far more of needed amenities than a public park would offer. Ramsey Park had limited sanitation and bathroom facilities. Yet, campers remained in open air locales, even when Callaghan Park did not open as an ARC shelter.

I believe these sheltering needs can be explained by looking at four factors. These include prior experiences, perceptions, preplanning, and participation by citizens. First, this unusual sheltering arrangement emerged because of *prior experience* with earthquakes. Some families had experienced, personally or through extended family, the 1985 Mexico City earthquake. Fear of damaging aftershocks underlay the newly impacted victims' camping activities. In addition to the loss of homes, hundreds of chimneys crumbled or sagged precariously. Residents allegedly feared that these chimneys, and other structural hazards, posed a risk due to continuing aftershocks. Victims felt safe from dangerous or potentially hazardous structures through camping outdoors.

Victims' prior experience also hindered some outdoor sheltering attempts. To accommodate the outdoor campers, city and county officials persuaded the ARC to open Ramsey Park as an official shelter. To expedite this process, the National Guard erected tents inside fenced off areas of the

park. However, Central American refugee families apparently found this image terrifying. Immigrants who had fled military and government-backed death squads in their native countries now faced similar imagery after disaster. What city, county, and ARC officials hoped would become appropriate shelter now became transformed into a symbolic concentration camp. Approximately three hundred campers refused to leave Callaghan Park for Ramsey Park—in part because of this horrific reminder. Some of our respondents suggested that campers remained in Callaghan Park for political purposes, given the upcoming district election.

A second major factor is *proximity*. Campers decided to remain close to their homes to maintain security. A perception that looters could take advantage of the situation entered the camps, despite the reality that looting rarely occurs after disasters. Yet this desire for close proximity to one's home also indicated a practical decision. Families could be close to their personal possessions as well as familiar stores, neighbors, and schools. This latter, rational factor probably accounts for more of the camping phenomenon than the misperceptions over looting and organizational responsibilities.

Third, a lack of *preplanning* accounted for the emergent camping. Since the earthquake, the ARC has recognized the lack of planning for diverse populations in postdisaster times. For example, Latino leaders in Watsonville lodged numerous complaints against the ARC on behalf of the campers. Providing food for the campers became a problem. In the immediate aftermath, camping victims appreciated any kind of available food. Within the week, however, palettes unaccustomed to predominantly Anglo cuisine grew weary. Victims came down with diarrhea. This is not an isolated phenomenon; the ARC encountered similar problems with Cajun victims in Louisiana. Furthermore, the Watsonville ARC and City Hall lacked sufficient bilingual workers and volunteers to help with sheltering and mass care. As a result of the aforementioned problems, the ARC formed a national committee to look into the lack of preplanning for diverse populations. The result is a newly created course on Cultural Diversity and a general organizational recognition of a need to address the problem appropriately. The local Watsonville ARC hired bilingual, bicultural workers and trained Latino leaders in volunteer disaster response.

Likewise, the city had not included the Latino community in disaster planning. Latino leaders' complaints about culturally insensitive disaster response resulted in a Department of Justice (DOJ) investigation in Watsonville. Although the DOJ found no overt racism, investigators did suggest including Latino leaders in ensuing disaster meetings. The City of Watson-

ville did so, and created an Ombudsperson's Office for assisting Latinos throughout much of the following sheltering and housing periods. More recently (1991), city leaders created a culturally diverse county-wide disaster planning team. Additionally, local Latino organizations created internal disaster response plans.

A key element, *participation by citizens* was missing in the preplanning. Future disasters will enable us to assess the impact of this new process of including wider participation. Such citizen participation is also part of a larger grassroots social movement phenomenon in disaster preparedness and recovery activities (Quarantelli et al. 1983).

For example, the Federal Emergency Management Agency (FEMA) faced a dilemma in responding to the large Latino community. Following on the heels of Hurricane Hugo, Loma Prieta stretched FEMA's ability to respond to bilingual needs. A lack of forms and trained, bilingual workers abated FEMA's ability to respond. Again, local community members raised allegations of cultural insensitivity. With increasing demographic diversity a virtual certainty in this country, FEMA can anticipate addressing this situation again. In fact, my recent trip to Miami following Hurricane Andrew showed similar problems emerging for FEMA. For example, FEMA recognized that various victims belonging to ethnic groups around Homestead, Florida, were fearful of the federal government. Thus, at Disaster Assistance Centers, FEMA posted signs identifying themselves as the Emergency Management Agency or "EMA."

Long Term Recovery: The Problem of Housing

Temporary Housing

Many earthquake victims remained out of permanent housing for almost two years after the earthquake. Thus, temporary housing loomed as a significant obstacle to recovery after resolution of short-term sheltering concerns.

A variety of local, state, and federal temporary housing programs eased the postdisaster housing crunch. At the local level, community social workers and a lodging association created and implemented a motel voucher system. Motels, as temporary housing, were feasible since the earthquake struck at the end of the tourist season. A local lodging association arranged for rooms at lowered rates. Community donations, later supplemented by external monies (including ARC) provided the financial means to place victims into hotels. Although most victims moved out of the motel rooms within days or weeks, some low income families remained for over a year.

For some families, the state provided temporary housing in a farm workers' labor camp. The camp is not generally used during the winter due to sanitation problems. The state and city collectively overcame these problems, albeit temporarily.

FEMA reluctantly brought in trailers, in newly created but temporary trailer courts. Approximately 117 trailers (estimates actually ranged between 117 and 130) served as temporary homes for mostly Latino families. Typically, FEMA does not provide such coaches since many are outdated and expensive. Community and political pressure resulted in FEMA's capitulation on this issue. Furthermore, FEMA normally provides temporary housing aid for 18 months postimpact. In Watsonville, however, a few trailers remained until June, 1991, over three months past the federal deadline. Now, the city faces a dilemma of having unusable trailer parks on public property. Rezoning for trailer parks is not a possibility. Thus, the trailers did not become a potential source of permanent housing.

Undoubtedly, the most interesting problem resulting from temporary housing was the extended need for impermanent facilities. Low-income disaster victims, given the existing national affordable housing crisis, will require long-term temporary housing assistance.

Watsonville simply did not have enough postimpact affordable housing for all displaced families. Preimpact overcrowding exacerbated the situation, as the earthquake displaced more families than one might anticipate. In addition, building inspectors (many from outside the community) red-tagged all substandard units, even if not from earthquake damage. FEMA also had trouble verifying the existence of illegal units; families could not prove they had resided when a cash economy for illegal rentals existed. Only the heads of households qualified for FEMA monies. Thus, Watsonville and Santa Cruz county ended up not only with people in FEMA trailers, but an increased homeless population.

Permanent Housing

Watsonville and FEMA experienced multiple barriers in moving trailer families into permanent housing. An economic barrier due to the low income situation perpetuated one's trailer stay. Fortunately for the trailer families, a special release of HUD section eight vouchers eased the cost of renting units. A typical one bedroom unit in the area, for example, ranges from \$600 to \$800.

Still, even with the vouchers, families had problems locating suitable housing. Many of the families had three or more children. HUD regulations

stipulate that overcrowding cannot happen with voucher-paid units. Therefore, families living in overcrowded conditions before the earthquake could not use vouchers for similar postdisaster housing. Finding governmentally-acceptable, voucher-assisted housing in a tight rental unit was challenging.

In order to ease the transition, a variety of organizations sought to assist the families. FEMA, ARC, a locally based earthquake trailer park project, the housing authority and interfaith groups tried to help. Their combined efforts ranged from casework to rebuilding to advocacy. Initially these groups worked relatively separately from each other but found it necessary to combine efforts toward the end. They did not form an umbrella group but rather worked cooperatively, sharing housing leads and organizational strategies.

Problems with Permanent Housing

Language accounted for some of the problems. Many of the trailer families, although established Watsonville residents, spoke only Spanish. Most of the landlords spoke English. Thus, a language barrier prevented victims from negotiating leases. The local community addressed this problem through classes educating them on rental applications, tenant's rights, credit, and budgeting.

A related problem came from the families being predominantly Latino in a rental market dominated by Anglos. Local social workers felt that racism played a part in trailer families being denied available units. Landlords, alleged social workers, did not want to rent to Latinos.

Trailer families also resisted moving from the parks. For some, the coaches represented an improvement over previous living conditions. Naturally, families wanted to remain in improved situations. Unfortunately, the county had no available trailer spaces and zoning regulations prevented more from being developed. Even if the families could have afforded moving expenses (about \$3000, with trailers sold for \$1 through the government), the county had no place for relocated trailers.

Conclusions

Researchers and practitioners know that disasters disproportionately impact low income and often minority groups (Perry and Mushkatel 1986; Aguirre 1988; Bolin and Bolton 1986). Low income groups are more likely to live in affordable, yet hazardous areas. In Watsonville, the earthquake devastated low-income, often substandard housing. This dilemma is likely to affect other communities.

We can anticipate that because we live in an increasingly hazardous society with concomitantly urbanized populations, more problems like what Watsonville experienced will develop. Poor families are more likely to be urban, thus increasing their potential for disaster impact. Recent census data indicate that minority groups are rapidly increasing (Schwartz and Exter 1989). Watsonville is now 61% Latino; Dallas, Texas, is also over 60% minority.

The experiences of Loma Prieta victims in combination with emerging demographic transitions suggest a need to be more inclusive in planning. All socioeconomic, ethnic, racial, and age groups need to be engaged and active with mitigation efforts. The benefits of such an approach are manifold. A reduction in potential conflict and antagonism between minority-dominant groups should ensue. Adverse media attention should diminish. Unpleasant sheltering conditions could be avoided. And, all citizens would be better served in times of disaster.

Recommendations for Practitioners

Based on my Loma Prieta research, practitioners might consider four main tasks, all of which are part of generic emergency management practices. First, assess the impact of disaster potential *including specific populations*. Check census data for emerging populations within your jurisdiction. Look at social characteristics of the populations—their age, income levels, type of residence, family size, race/ethnicity, etc. Determine who is most at risk and for which type of disaster agent.

Second, reassess the community disaster plan and other mitigation measures in light of what is found within the community's population. For example, in a community with a significant Latino population, are bilingual radio and television messages part of the plan? In Saragosa, Texas, difficulty in relaying a tornado warning played a role in the deaths of 29 victims (Aguirre 1988). Determine which types of messages are most effective for special populations. For example, Perry and Mushkatel (1986) found that radio is the preferred warning vehicle for most groups, although television and social networks are also useful.

Also, is the disaster plan current? Keeping a list of accurate telephone numbers is essential—but does your list include an active list of bilingual volunteers? Or a list of community organizations with resources such as bilingual medical care or food services? Even more important, has there been a recent disaster drill incorporating all of these aspects?

Third, bring members of the potentially affected population into the planning process. A task force or advisory group is a starting point (Perry and Mushkatel 1986). Turn to leaders of special populations, and to heads of community organizations. In a predominantly Latino community such as Watsonville, for example, citizens know and trust the leaders of Latino health care organizations, food banks, churches, etc.

The Watsonville Red Cross also recruited volunteers for disaster training. Red Cross employees then went on to volunteer or serve on the boards of Latino organizations. This interorganizational cooperation fostered awareness, reduced friction, and created a pool of trained personnel for the next disaster. Furthermore, people now know each other. There is now a basis for interaction and trust. Such actions should serve as a mitigative measure in future disasters.

Finally, remember to plan for a long term recovery. Santa Cruz County experienced an extensive housing recovery. Low income groups in particular were hard to place after the earthquake, with federal, state, and local assistance needed for almost two years. Toward the end of the first year, informal relationships had emerged between relevant housing organizations. An emergency manager might want to forge such relationships prior to impact. For example, one could develop a general but flexible plan to house low income groups after a disaster. Talk with potentially active organizations before catastrophes occur, rather than ad hoc the process and prolong the recovery. Recovery begins during the planning stage.

The overall message is to face social and demographic reality: plan through an inclusive, deliberate process. Rely on community resources within potentially affected populations. Build relationships before disaster to mitigate physical and social effects.

Recommendations to Researchers

Researchers are facing an important line of inquiry: the impact of disasters on minority populations. Perry and Mushkatel (1986) published a seminal work on warning systems and their impact on minority citizens. Different ethnic groups hear and respond to warnings differently. Good planning entails consideration of these culturally-differentiated responses. Sadly, Aguirre (1988) found that a lack of appropriate warning systems resulted in deadly community devastation. Others, including Bolin and Bolton (1986) and Bolin (1982) have clearly described the differential impact of disasters on low income victims.

I believe it is important to continue these lines of inquiry, especially considering the growth of low income and minority groups. Such research could be especially useful when conducted independently or jointly by minority researchers. Baca Zinn (1979) has pointed out the difficulties Anglo researchers may have within minority communities (see also Marin and Marin 1991).

Research along organizational lines may prove to be worthwhile. Studies of how key community organizations could network and participate with emergency managers in mitigation activities are needed. Community groups, especially from minorities, are more likely to fall outside emergency management networks. Studies of successful and unsuccessful efforts to include such groups or of groups trying to be included could prove fruitful.

Given that this is the International Decade for Natural Disaster Mitigation, such research and practitioner efforts seem timely. As we move into a new century with shifting populations and increasing hazards, a total community mitigation effort would be ideal. Now is the time to find avenues for such an ideal world to evolve.

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