

A COMPARISON OF THE BICOASTAL DISASTERS OF 1989

By Lewis Aptekar

***If God's in charge, I'm angry; if he isn't, I'm worried.
[African-American cotton farmer, McClellanville, South Carolina]***

***En los disastros ho hay fronteras, [in disastros there are no borders.]
[Undocumented Mexican migrant farm worker, Watsonville, California]***

For the 436 white residents and the 4,219 African-American residents of McClellanville, South Carolina, Hurricane Hugo did not come as a surprise. During the day of September 22, 1989, televised weather reports made it unmistakably clear that Hugo was as inevitable as it was powerful. In spite of being only a half mile from the sea, and merely 20 1/2 feet above sea level, Lincoln High School was McClellanville's designated shelter. Most African-American families in the vicinity went there, while the majority of those in the white community drove upland to stay with relatives or friends.

It was late in the afternoon when the African-American families left their homes and went to Lincoln High School. Once they were inside the building, the principal of the school placed 1,125 people into three areas: the cafeteria, the gymnasium, and the Home Economics room. The cafeteria was filled with two hundred families, about five hundred people in all. As they waited for the tidal surge to hit, the high winds knocked out the electricity, leaving them without light. Because he was afraid that too many people would continue to go into the cafeteria, the principal ordered the doors to be locked, inadvertently making the people virtual prisoners in protective custody.

As dark descended, the 138 mph winds broke loblolly pine trees in half and uprooted 200-year-old live oaks. The force of the winds was so great that in the nearby 250,000-acre Francis Marion National Forest, nearly a billion board feet were destroyed. This lumber was equivalent to a oneby-twelve-inch board long enough to circle the globe seven times (Graham 1990).

At 11:50 that night, the tidal surge, which reached approximately 18 feet, overtook the school. The air-conditioning units burst at the base of the walls of the cafeteria, due to the intense water pressure caused by the tide. Water began pouring into the cafeteria. Within minutes it had reached people's knees. When it reached their waists, they lifted the cafeteria tables up onto the stage, constructing their own high ground. Meanwhile the water continued to rise. People on the stage put chairs on top of the tables as a last-ditch effort against the onslaught of the rapidly rising water. In other places in the school, people began punching holes in the ceilings and hauling their children into the air-conditioning ducts. Still the water rose. Thirty minutes after the air-conditioning units broke, the water reached chest level. Parents who were standing on the tables on the stage lifted their children over their heads, resting them on their shoulders. Paula, a thirty-three-year-old mother, said, 'I gave my daughter a last goodbye, never expecting to see her again.' Another woman described how she was separated from her husband, who needed medicine because of a heart condition. Without light she could not see him, but by yelling back and forth she was able to locate him by the sound of his voice and to enlist the assistance of the people standing between them to help pass the prescription bottle until he received his medicine.

Miraculously, forty-five minutes after the tidal surge, with very little margin of freedom left, the water stopped rising. Stacked together like the very fish they packed in the local fisheries, these two hundred families stood with water up to their chests, prayed to God, and withstood the night. There is no doubt that they had an experience "outside of the normal course of human events" (American Psychiatric Association 1987: 247), and it might well be expected that they would develop posttraumatic stress disorder (PTSD). But, in fact, few of them did suffer from PTSD. Why some people do so and most do not is one of many unanswered questions about the emotional effects of natural disasters. Other, equally important, questions remain unanswered. Do demographic variables, such as age, gender, social class, and ethnicity, influence people's responses? How does the previous mental health of the victim contribute to post traumatic recovery?

Another research question has been asked concerning how or whether the disaster experience contributes to forming mental disorders. Some researchers believe that mental health is altered for at least two years following a disaster (Erikson 1976a, 1976b; Lifton and Olson 1976; Newman 1976; Titchener and Kapp 1976; Rangell 1976; Terr 1981 a, 1981 b, 1985; Gleser, Green, and Winget 1981; Green and Gleser 1983; Green, Grace, and Gleser 1985; Murphy 1986, 1987); while other researchers have taken the opposite view, namely that disasters do not produce psychopathology in their victims (Erickson et al. 1976, Quarantelli and Dynes 1977, Taylor 1976; Perry and Lindell 1978; Quarantelli 1978; Baisden and Quarantelli 1981; Powell and Penick 1983; Fairley, Langeluddeke, and Tennant 1986). Some work suggests that people respond differently to man-made versus natural disasters (Frederick 1980). Aptekar and Boore in press (1990) discuss several of the variables that relate to children's emotional problems following a disaster.

This study is concerned with two types of variables. First: What is the role of the community in mitigating people's responses to the disaster? Second: How do the quality and the nature of the disaster experience i.e., its unpredictable onset (earthquake) versus its known onset (hurricane) and its indefinite duration (earthquake) versus its limited duration (hurricane)-affect people's reactions? In the process of discussing these variables, possible answers to the above questions will also be offered.

PROCEDURE

With the help of the National Science Foundation and the Natural Hazards Research and Information Center, it was possible for us to study the psychological reactions to natural disasters and to gather information concerning the questions outlined above. The study was designed to assess the reactions of one community to a single event. It was only the unpredictable nature of natural disasters that allowed for the comparative study, for it so happened that in the short time between September 22 and October 17, 1989, both Hurricane Hugo and the Loma Prieta earthquake occurred.

Participant observations were recorded in each disaster. The research team (consisting of myself and two assistants) lived with victims in a Red Cross shelter in South Carolina. Because Loma Prieta Mountain can be seen from the front window of my house, I was also able to consider myself a participant observer of the earthquake, a role which was reinforced by daily visits to emergency shelters in Watsonville, California. (The names of the people who were interviewed have all been changed.) Archival data was collected from the local newspapers on both coasts, from U.S. Census Bureau reports, and from other government documents.

This is the first study of the psychological reactions to natural disasters that has used comparative methodology. By using a comparative method, several of the mediating variables listed above came into focus. For example, the data are drawn from two small towns (Watsonville, California, and McClellanville, South Carolina), both of which were highly impacted by the disasters. Describing the two towns according to the ways in which they differed from each other and the manner in which they were similar also focused our understanding of how social class and ethnicity contributed to people's psychological reactions to natural disasters.

Because each of these towns experienced a different type of disaster, the comparative method also helped to yield information about how people's reactions were related to particular types of disasters.

A COMPARISON OF THE TWO COMMUNITIES

The population of Watsonville is approximately 30,000, and the population of McClellanville is about 5,000. However, their sizes in relation to their states' total populations are comparable. The two towns are also similar with respect to their proximity to large urban areas. McClellanville is about an hour's drive from Charleston, and Watsonville about an hour and a half from San Francisco. Each is too far from the city to be a "commuter" town, but the cities are close enough so that the wealthier groups in the towns use them as centers for entertainment. For the poorer groups, these metropolitan areas are only places which they--or their children, through special school trips--occasionally visit.

The two towns also have similar histories. Both began as agricultural communities based on cheap labor, either from slaves--in the case of McClellanville--or from foreign migrant workers--in the case of Watsonville. The area that is now Watsonville was part of a land grant given to the Spanish settlers in the seventeenth century by the king of Spain. After the Civil War, Judge John Howard Watson, an Anglo-United States citizen, purchased nearly half of the original land grant for \$400, and the town of Watsonville still bears his name. The South Carolina coast was originally developed by immigrants from Scotland and Ireland, who came to North America to take advantage of its rich agricultural possibilities. Soon after their arrival, it became apparent that the best way to insure their goal was to import slaves to work the land. A very active slave trade emerged between the white South Carolina immigrants

and the slave dealers of the French and English Caribbean Islands. Sullivan's Island, twentyfive miles south of McClellanville, was the Ellis Island for African-Americans, and 40 percent of all the slaves imported into the hemisphere first came there.

McClellanville is in the center of this biracial, coastal salt-marsh community, which extends from Charleston, 40 miles south, to Georgetown, 20 miles to the north. The town of McClellanville was founded, around 1820, on a slight rise that picked up ocean winds in the summer. Plantation owners built large summer homes on this hill, in order to escape the heat and the mosquitoes, while the slaves worked the fields that surrounded the city.

On these fertile salt-marsh lands, the slaves produced first indigo, then rice, and finally cotton, all raised on plantations. Similarly, from Watsonville's first commercial crop of sugar beets to the development of its apple industry at the turn of the century, the land has been worked by Mexican peasants. Today, workers on the fertile lands of the Pajaro Valley (in which Watsonville lies) process between May and October almost 50 percent of the nation's vegetables. This production is accomplished by no more than 5,000 to 6,000 Mexican and Mexican-American workers, many of whom are women (Cockburn 1989).

Both towns have similar ethnic/racial proportions of whites and nonwhites. In Watsonville, more than half the adult population is Mexican or Mexican-American. Many do not speak English and quite a few are bilingual. In McClellanville, whites are also in the minority, and African-Americans represent over 80 percent of the population. In both towns, the public schools are predominantly nonwhite. The percentage of nonwhite children in each community is larger than the percentage of nonwhite adults, indicating that the population of the next generation will be even less white or Anglo than it currently is.

in Watsonville, the median household income in 1980 was \$14,500, but the average income was \$18,340, signifying that the distribution was skewed toward the wealthier households. It was estimated that the 1989 average income would be \$36,721, indicating that the distribution was growing dramatically more skewed (California 1988). While there are many seaside homes in Watsonville that are worth in excess of a million dollars, a full 25 percent of the households have incomes of less than \$15,000 per annum (Monterey Bay Area Governments 1989). Per capita income in Watsonville is \$6,529. These statistics show the wide divergence between the poor and the well to do in Watsonville.

Similar statistics are available for South Carolina. As of the 1980 census, the mean household income of whites in the area of McClellanville was \$18,894, while the mean household income of African-Americans was \$12,911. The median value of white homes was \$44,300, while the median value of African-American homes was \$22,600. Five percent of white families were below the Poverty line, compared with 24 percent of African-American families. (Two-thirds of these were more than 200 percent below the poverty level.) In these poorer African-American homes, nearly 21 percent "lack complete Plumbing," while no white homes were lacking in complete plumbing (U.S. Bureau of Census 1983: Table 1-13). Thirty-eight percent of the African-American homes were without transportation. (U.S. Bureau of Census 1983: Census Tract #50). Census Tract #50).

Watsonville, in the last decade, has had a substantial history of political activism, which affected how the community responded to the earthquake recovery. Three events in the last two years were particularly important to the development of political consciousness. First, two years before the earthquake, there was an eighteen-month-long cannery strike. Almost all of the cannery workers were Mexican and Mexican-American women. The strike was successful not so much for the wage concessions it brought but for the sense of solidarity and community that it created. In contrast to almost all other strikes in recent years, no workers in Watsonville crossed the picket line. The second event took place in 1988, when MexicanAmerican residents protested against the City Council's system of elections, which they claimed was biased against Mexican-Americans. When they did not receive an adequate reply to their protest, they filed a suit, which eventually was decided in their favor by the Supreme Court. The third event occurred almost immediately after the earthquake itself. A tent city was established in the center of town, at Calahan Park. It was purposely set up to protest the long-term need for affordable housing which was exacerbated by the earthquake. The tent city was highly visible to the citizenry, being in the center of town, and because it was not an "official" shelter, it drew a great deal of media attention. Within two weeks after the earthquake, a political march led by Cesar Chavez protested the inadequate services for Mexican-Americans and Mexicans. In short, Watsonville was a politically active community.

The nonwhite majority of McClellanville had fostered no political movement of any kind, prior to Hurricane Hugo. The formation, two years earlier, of a private school, Rutledge Academy, was an effort made by white families to keep their children from attending integrated schools, but it never received a clear counterstatement from the African-American community. There was also no sustained, organized effort to press the government for more services after the hurricane.

The role of the church within each community was similar, but the intensity of the people's involvement in church life was different in the two communities. Although it was clear that the poorer people in both communities sought direction and found solace from their churches, the Baptist churches of McClellanville were more influential in helping victims than the Catholic churches were in Watsonville. In McClellanville, the church was the main social organization. Nearly everyone, African American and white, attended and was socially involved with a church. In Watsonville, the church was not an overriding presence, even for the poorest and most culturally Mexican members of the population.

The women who had taken part in the Watsonville strike, after more than a year of picketing the canneries, were finally offered a settlement that reduced their wages by 20 percent and eliminated their health benefits. When the union told the women workers to accept the offer, because the union would no longer give them strike benefits, the women were left with a difficult decision. Many of them were single mothers, and they worried about making ends meet, after having difficulty doing so even with the strike benefits. Up until this time, the church had been mute about supporting the strikers. In desperation, the women began crawling on their knees from the cannery to the cathedral—a distance of more than a mile. The action was made even more dramatic in that it was preceded by three days of a hunger fast. The church authorities did not want the women to come to the cathedral and tried to avoid meeting them as they arrived. According to the strike committee, it was only the presence of the press that forced the church to choose between losing face in public or losing donations in private (Silver 1989). These Mexican and Mexican-American women did not uphold the stereotypical notion concerning their blind devotion to and support of their church.

In comparing McClellanville and Watsonville, we have seen that in size, in the distance to urban centers, and in the fact that both had been longstanding agricultural communities ruled by whites and worked by nonwhites, the two towns had much to share. Watsonville had a strong recent past of political activism by and for its minority population, however, while this activism was lacking in McClellanville. On the other hand, the presence of the church was greater in McClellanville. As a result of their recent political successes, there was a great sense of self-efficacy among the Mexican-American and Mexicans of Watsonville, but this sense of power was less evident among the African-Americans in McClellanville. These community comparisons have allowed us to examine how such factors contributed to the psychology of the disaster victims.

A COMPARISON OF THE TWO DISASTERS

In addition to the comparisons of the two towns, there were also comparisons to be made between the two disasters themselves. They had in common the fact that neither of them was an isolated trauma, leaving some areas of the community unaffected. In fact, the disasters were the two costliest natural disasters in United States history. Hurricane Hugo's costs were estimated at more than 5 billion dollars (Federal Emergency Management Association 1990). On the West Coast, the earthquake is estimated to have caused more than 6 billion dollars of damage (Dames and Moore 1989; Plafker and Galloway 1990; Ward and Page 1990).

Frightening catastrophic events also occurred in each disaster. In McClellanville, the people who spent the night in Lincoln High School experienced such an event. In Watsonville, buildings collapsed in full view of many of the citizens, which was so frightening that many people preferred to live in tents for weeks, rather than return to their homes. These catastrophic events contributed to the widespread feeling of being vulnerable to events that were outside of one's control and powerful beyond one's experience. Everyone felt imperiled. The impact was high for the whole community.

However, the two disasters presented quite different psychological stimuli. The hurricane came with advance warning, and then it left. According to Joy, a white woman who at sixty-five years of age had settled into her dream house on one of the Sea Islands: "it [Hugo] was here, it left, and with it everything we worked for the last twenty years." Indeed, her 3,000-square-foot house, filled on Thursday with the heirlooms of her family, was, by Friday, nothing but four concrete pillars standing like those of Stonehenge.

On the other hand, the unpredicted earthquake came as a total surprise. While the hurricane came and went in a matter of hours, the earthquake lingered, because of the aftershocks, making its ending as uncertain as its beginning. Susana and Laura, two eight-year-old, Mexican-American girls, felt the series of aftershocks of April 19, 1990 (six months after the October 17th main earthquake), and could not sleep that night. The parents of both girls contacted the school counselor, asking for help. When the counselor saw them, the girls referred to the "earthquakes," as if the disaster had never stopped. There were many other victims who feared that the earthquake was not over. These fears were made more poignant by the media, which quoted geologists in a way that suggested that a bigger quake might be imminent (Smith 1989a).

Another difference in the psychological stimuli that were presented by the two disasters was the prior experience of the two communities. Some of the victims in Watsonville had been in the 1986 Mexico City earthquake, or had relatives who were there. They remembered that it was an aftershock. Forty-eight hours after the main earthquake, that contributed to the high toll of deaths. The victims of McClellanville had had previous hurricane experiences (the worst of which was Hurricane Hazel in 1954), but none as scary, destructive, or deadly as the events in Mexico City.

The final psychological comparison was what people saw and had to live with after the disasters struck. The level of damage after each disaster, at least from the point of view of what the damage *looked* like, was quite different. Since people's responses to disasters have generally been associated with the degree to which they have suffered damage or the extent of the impact they have experienced (Silber, Perry, and Block 1958; Newman 1976; Beigel and Berren 1985), it may be valuable to think in terms of the community impact of the two disasters. The most common material trauma in both disasters was the loss of homes and personal belongings. This was not comparable in both cases, however, because the kind of damage was unique to each type of disaster and because the housing situations were different in each community. It is true that *in* both disasters houses were completely destroyed and people made homeless. In South Carolina, 264,500 people were evacuated from their homes, and 60,000 became homeless (Federal Emergency Management Association 1990). And over 100,000 houses were damaged as a result of the earthquake (Dames and Moore 1989). But in McClellanville, there were no homeless *before* the storm. Housing was available even to the poor; whereas, prior to the earthquake, there was already a lack of affordable housing in Watsonville. Indeed, one of the major political issues prior to the earthquake was the lack of affordable housing for the poor (Cockburn 1989). (The only major political issue in McClellanville was the existence of the whiteonly private school, which was said to jeopardize the quality of the almost totally African-American public education system.)

The different types of material destruction created different visual images. The hurricane took large areas and destroyed them completely. It reduced houses to nothing more than their foundations, and it leveled large sections of forests. Ralph, at fifty-five, had been content to leave Savannah to get out of the heat, to retire from the contracting business that had left him well off, and to put behind him the bustle of big city life. Two years before, he and his wife, Mary Ellen, had finished giving a wedding party for their youngest daughter. Afterward, they had moved up to one of the Sea Islands and built their dream home. What was left of it was difficult even to find. Ralph walked the swamp 200 yards from where his house had stood a day before, locating a few of their belongings; a waffle iron, two legs of the kitchen table, and an old Civil War pistol given to him by his grandfather. There were plenty of other items on the ground, but they were all in the form of unrecognizable debris.

The devastation from the earthquake was far different. It struck some places, while leaving other areas without any physical damage. Within a single city block, some houses were made completely uninhabitable, while others were not even slightly damaged. Even the most severely affected houses were seldom completely destroyed in the sense of losing their total shape. Juanita, who had married Carlos in the summer of 1989, had, with the help of their parents, put a deposit on a modest house in the middle of town. When they first saw it after the earthquake, the west side was about two feet below the east side. Part of the chimney had fallen, and the porch roof was leaning. Otherwise the house was standing and recognizable, it was merely tilted.

In both disasters, houses were destroyed or damaged, but what this meant to their owners was quite different, as a result of the two types of disasters. When the houses in McClellanville were damaged but not completely destroyed, as Ralph's was, the damage did not prevent people from going back into their houses and staying there until the sea mud could be cleared, the sewage cleaned, and the debris carried off. In spite of the visible damage, people's houses were not unsafe to enter. The houses that were damaged in the earthquake, like that of Juanita and Carlos, looked and smelled less damaged, but they were labeled unsafe to enter, principally because it was deemed by a government agency that they might become even less safe in an aftershock. People were not allowed to reenter these houses, and many were given only fifteen minutes to get all their belongings out.

The comparison of these two disasters allows us to consider variables that center around the nature and the impact of disasters. All of these variables suggested initially that the earthquake would cause more psychological disturbance. First, it came without any forewarning, while the hurricane advanced under close watch. Similarly, the knowledge that the storm had come and gone was considerably easier to accept than the seemingly never-ending earthquake. The negative disaster experience of Mexico City had readied the people of Watsonville to expect something truly awful, while the people of McClellanville had lived through many benign hurricane warnings (even Hazel was not as bad as Hugo). In South Carolina, the visible results were certainly more destructive, which on the surface made things seem worse. But, ironically, even though the people in California could not see the extent of the damage, they were told that the probability of another earthquake had made their homes unsafe even to enter.

Finally, by government order, they were forbidden to enter their homes, while the homeless in McClellanville were allowed back in their homes and could immediately begin to clean them.

A COMPARISON OF REACTIONS FOLLOWING THE TWO DISASTERS

Many types of helping efforts began after the disasters. In each community, there were ad hoc groups, established government and private agencies, private insurance companies, and individual volunteers.

There were two types of ad hoc groups. The first consisted of the organizations that already existed, prior to the disasters. They had served a related constituency before the disasters and were able to change their focus immediately after the disasters. For example, community health and mental health agencies were already accustomed to providing social services. They opened their doors to victims during the recovery, which greatly expanded their usual clientele. A second type of ad hoc group was formed by an existing group that did not have a directly related disaster charge, but used the disaster as its immediate focus. Examples of this type were political and church groups.

The Federal Emergency Management Agency (FEMA) was the most noteworthy government agency. The FEMA's first task after a disaster is to find out whether the local and state governments can handle the damage. If it is determined that they cannot, the FEMA asks the President to declare the area an official disaster area, which allows for the availability of federal assistance. The FEMA is then allowed to give loans, technical assistance, temporary shelter for up to eighteen months, and other kinds of assistance, such as helping to rebuild roads and bridges. In both disasters, the FEMA received plenty of criticism for having too much paper work and too many regulations, for its inability to respond in a timely fashion, and for being insensitive to ethnic and racial groups. All of which criticisms were summed up by the remarks of Senator Ernest Hollings of South Carolina, when he said: "If there is any disaster worse than Hugo, it's the FEMA crowd up there in Washington" (Bandy 1989).

The government was also represented through the Departments of the Interior, justice, and Transportation and through the National Guard, which was active immediately after each disaster. Also on hand were the private agencies that specialize in disaster relief, most notably the Red Cross. The Red Cross provided food, clothes, shelter, medical assistance, and emergency housing. It was run by its staff members, but it was peopled by volunteers in an astonishing ratio.

The private insurance agents filled up the hotels, and, to almost everyone who had insurance, they ended up as the villains of the piece, not satisfactorily completing their vows to protect against the losses for which their customers had paid their premiums. The churches worked to mitigate the difficulties of victims in both coastal communities by sending volunteers with food and clothing. The amount of such food and clothes given by church volunteers was more than sufficient to meet the needs created by the destruction of the earthquake and the hurricane. Finally there were other volunteers who were either connected with one of the helping agencies, such as the Red Cross, or who went by themselves to offer their assistance. Because both McClellanville and Watsonville were removed from the main urban centers of Charleston and San Francisco, volunteers had to make a special effort to go to these areas. Watsonville was served by some Anglo volunteers, but the majority were MexicanAmerican, who came from all over the Bay area, particularly when the call went out for bilingual help. Some of the volunteers who went to McClellanville came from Charleston, and some of those were African-American. Most of the volunteer force, however, came from other parts of South Carolina or from nearby North Carolina, almost none of them African-American. The majority were white volunteers, many of whom were representatives of religious groups. In contrast, the volunteers who went to Watsonville went either as part of a cultural "family" or for political reasons, to show solidarity with the problems of undocumented workers, who were afraid to get any government assistance because they feared being deported.

What happened to volunteers, once they arrived on the scene, depended on whether or not they could connect to an existing relief agency, such as the Red Cross. Most of the volunteers went as part of a group. This was almost uniformly the case after the hurricane, but less so after the earthquake, where many people did go on their own. The established relief effort in McClellanville worked comfortably with the incoming volunteers, because there was no language problem between the volunteers and victims (as there was in Watsonville), because there was no political motivation for volunteering (as there was in Watsonville), and, finally, because almost all of the volunteers went as members of religious groups, which was not the case in Watsonville, where many went on their own or with small groups of friends. When these noninstitutional volunteers went to Watsonville to work, they had great difficulty helping and, because they often went to offer help to their own ethnic group, this created further problems. Even the bilingual volunteers had problems helping if they volunteered as individuals, without a formal connection to an existing relief group. Lydia, Fernando, and Tomas left a nearby university after hearing about the need for

bilingual volunteers. Being Mexican-American and bilingual, they were anxious to help, so they drove for an hour and a half to Watsonville, carrying a load of clothes. When they arrived, they were turned away by members of one relief group, who said that they were not accepting clothes. At another agency, they were told not to enter the shelter and talk with the victims, because they were already "talked out." In both cases, the people running the shelters were non-Spanish-speaking. These were the types of interchanges that played a significant part in the community response of Watsonville.

After both disasters, it was made clear to the victims that they were not only human beings belonging to the animal kingdom, with the basic fears and needs of animals, but also citizens of a community, and therefore living under a government. As citizens, they were expected to obey orders and to accept authority, as difficult as it might be to do so. The government's power to exert its will in moments of crisis and the necessity for the victims to accept the government's will were most apparent in the fifteen-minute rule set after the earthquake, which allowed people fifteen minutes-but no more-to go in and retrieve their belongings, or business stock, from condemned buildings.

Peter had operated the Hallmark Shop in Watsonville for sixteen years. It was located in a shopping center that was badly damaged. The buildings were scheduled for demolition, and the store owners were given fifteen minutes to get their business stock. Peter received a call at 10:30 Friday, October 27th, and was told that he was on stand-by for Saturday, when he would be given fifteen minutes to recoup all of his business stock. He got a U-Haul truck, and five friends to help him. When they arrived an engineer was standing by with a stop watch.

The six of them, acting like grocery store prize winners given a certain amount of time to fill their grocery baskets, rushed into his store and went to work filling boxes with Peter's merchandise. The stress that Peter was under was increased by the fact that his house had also received damage. In addition to the \$100,000 of stock in his store, he had already calculated an equal loss to his house. He could not understand why he could not take an hour in the store, which was the time he figured he needed to get his merchandise out. He himself was willing to take the physical chances, and in fact his part of the building was not all that badly damaged. "What's so magic about fifteen minutes?" he kept asking.

John, the engineer who had condemned the buildings and was responsible for the fifteen-minute rule said: "At first I was going to allow only ten minutes, but then I thought that people might rush too much and hurt themselves. On the other hand, if I had allowed a half hour, they would start bringing out items that were unimportant and easily replaced" (Trabing 1989).

Not all of the victims, including those who were forced to accept government regulations, responded in the same way to government aid. People's reactions to the disasters were to some extent related to their socioeconomic status. The very poor (which generally meant nonwhite) in both communities were reduced to the basics of shelter and food. However, they had not fallen as far from their material comforts as had their wealthy counterparts. In Watsonville, for example, many of the migrant poor had lived in small adobe longhouses, with communal bathrooms and no hot water, before they were made homeless by the earthquake. At certain shelters, they had drinkable running water, three meals a day served to them, day care for their children, and transportation to and from town. They actually had a higher standard of living in some of the shelters than they had had before the earthquake.

The working class people in Watsonville and McClellanville, having pushed themselves through hard work and diligent spending to get to the point where they had some security and some possessions that they could proudly call their own, were more embittered by the losses they received, particularly if it seemed as though they would not be reimbursed by the government or by the insurance companies for their losses. Life in the shelters was a large step down for them, and as a result they were less likely than the poorer victims to reach psychological resolutions to their losses. The upper-middle class victims, after their immediate fears were over, had either from private insurance or from savings-the resources to rebuild or at least to begin again. Being more familiar with how to work with government, with filling out forms and making connections, they were more likely to receive aid than the very poor and the nonwhite victims. In both communities, old wounds and tensions were rekindled between those who had power and those who sought it.

The most important difference between the two communities in their responses to disaster was the degree to which the poor citizens voiced their demands through the political process. In Watsonville, the political process was alive and was fueled anew by the experience of many of the bilingual volunteers. Because of the recent success of the cannery strike and the City Council elections, the poor citizenry were aware of their rights, and they had advocate volunteers from among the wealthier Mexican-Americans and from white political groups to help them fight for a more equitable distribution of goods. In McClellanville, politics were subdued and unorganized. The political process was not public, nor was it confrontational.

The political process itself reflected the different underlying attitudes of the populace of each town, and these attitudes were important in determining how people reacted not so much to the immediate fears of the disasters, when culture was less important, but to the long sequence of events with the government agencies in charge of repairing the destruction. These differences can be seen by comparing Calahan Park, the ad hoc shelter tent city in Watsonville, to the ad hoc housing and community group in McClellanville that called itself DARE (Dupree Association for Repair). At the first DARE meeting, Gordon, a fifty-five-year-old African-American long-standing resident of the community, who had traditionally been the Democratic Party's liaison with the African-American community, was unofficially elected to be DARE's spokesperson and political power broker. During the meeting, in which other African-American community members began to complain about the services they felt were going only to the white community, Gordon took the microphone. In the mid-day sun of what was once the Washington family's yard, but was now filled with the sea mud from the storm, he told the crowd: "Now is the time to be humble," advising them that in this time of crisis they should rock the boat.

In contrast, at Calahan Park, twenty-one-year-old Arturo used the timing of the disaster crisis to hold the Watsonville city authorities hostage to the long-term problem of housing. He crafted a power base through media coverage by keeping the tent city park in high visibility in the center of town, instead of on the edges of town, where the other shelters were, and by making sure that the fifty or so families in the Park were kept informed and had their basic needs satisfied.

Gordon tried to keep the media out of DARE, preferring to negotiate privately behind the scenes. He also asked that people return to their homes to wait for the aid to come to them, rather than drawing attention by acting as a group. Instead of establishing a political group by uniting the victims toward a common goal and seeing that they stayed united, Gordon worked toward having each person represent his or her own case with the authorities, not on home turf, but in government offices.

These different reactions—one of accommodation, the other of confrontation—had different effects on the community and relief organizations, which also contributed to the people's mental health. The Red Cross did not want to mix its services with local political issues. This attitude was in line with Gordon's point of view, but exactly the opposite of Arturo's. At first the Red Cross refused to give services to Calahan Park, because it was not an official shelter. The pressure that Arturo's group was able to place on the city because of the media coverage and the high visibility of the Park put the city authorities in a difficult position if they refused help to Calahan Park residents. This eventually forced the city to lobby the Red Cross on behalf of Calahan Park. Eventually the Red Cross agreed to bring hot food to Calahan Park three times a day.

This victory was very helpful to the spirits of the Mexican-American Calahan Park victims. A similar phenomenon did not exist in McClellanville, where the African-American people were not able to influence the authorities. Their failure to do so added to their sense of helplessness. Prior to the hurricane, only the whites had a political agenda, and that was to establish the private school for their children to attend. The African-Americans of McClellanville were not able to stop the formation of the Rutledge School. Thus the history of separation between the races was kept alive, making clear the lack of political power among the African-Americans. In contrast, the Mexican-Americans in Watsonville had recently profited from their successful cannery strike and from the favorable Supreme Court decision on municipal elections. Thus, the Mexican-American community was in the midst of successfully recapturing its power.

Disasters come to places with their own histories, and they are met by people with their own particular experiences, both personal and political. Comparing how the people responded in their respective communities illustrated some of the particular ways in which politics and history came to play a part in these moments of crisis. Watsonville, with a politically effective community of Mexican-Americans, was able to ward off the higher degree of poverty and the stressful experience of the aftershocks much more successfully than the African-Americans in McClellanville, who suffered no aftershocks, but who had no political power.

We turn now to some personal reactions to the disasters, in order to explain a taxonomy of psychological reactions and to illustrate how crosscultural and political factors contributed to people's responses.

THE PSYCHOLOGY OF THE DISASTER VICTIMS

As the McClellanville hurricane victims walked out of Lincoln High School, exhausted but delighted at having outlived the ordeal, the majority of them were highly charged with anxious energy and were incessantly talkative. However, this was not true for everyone. Some victims displayed their anxiety over the night's trauma by a reduction of energy, and, instead of being talkative, they withdrew from people instead. What was clear was that almost everyone showed mental confusion. For the victims in Watsonville, the same reactions occurred after the earthquake.

Throughout the first week, anxiety and mental disorientation continued, until the start of a second phase, when most people began to take control mentally, trying to give themselves more power over the situations that had made them powerless. This was accomplished by cognitive changes that were made in order to reorganize patterns of thinking about what had happened. The most frequent example of this cognitive coping device, in both disasters, was for people simply to deny the impact of the disaster. Coupled with this mental phenomenon of denial was the behavior of altruistic help toward others.

By the end of the third week, disaster victims on both coasts had begun to express their anger. Like Job, they asked: "Why me?" When they could not come up with a satisfactory answer, they went to the governmental and private agencies that were on hand to help them. Since in their minds they were not at fault and therefore should not have received this punishment, they believed that these agencies *should* help them. Psychologically, they reasoned that they should be reimbursed not only for their material losses but also for their more important loss, the loss of living in a just world. Finding a resolution to their losses characterized the final stage of coping. The victims had to accept the fact that damage was done, and that no matter what the help or lack of it might be, they had to move forward with their lives.

Although these phases of the recovery process developed fairly consistently in both disasters, here, too, there were differences. One of the differences between the two disasters was caused by the aftershocks of the earthquake, which made for a longer-lasting impact than that of the single acute event of the hurricane. This difference meant that people's denial and anger also lasted longer after the earthquake than they did after the hurricane. In addition, their past political success meant that the citizens of Watsonville had gained a political consciousness that allowed them to speak out and in so doing they gained a sense of self-efficacy that produced less anger and fostered a quicker resolution than was true for the hurricane victims. Thus, the earthquake victims in Watsonville showed more distress, which lasted longer, but they reached resolution more easily and more quickly than did the hurricane victims of McClellanville.

Phase One: Coming up for air

Quite soon after each of the disasters, the people's thinking and social patterns changed. Almost no one was able to think clearly at first. When the Lincoln High School survivors returned to their homes to assess the damage, they were faced with such an inordinate number of decisions to make that they busied themselves in unimportant, but manageable tasks. One man in McClellanville whose yard was covered with fallen branches, a hundred-year-old uprooted oak tree, about six inches of sea mud, dead fish, and an assortment of other debris, started to pick up soda cans. He walked back and forth across his lawn, carrying one can in his hand each time, and then dropped each one in a central place. He showed a tremendous capacity for staying busy, but with little concentrated or thoughtful effort toward solving his major problems. Nevertheless, by his frenetic efforts he was regaining a sense of mastery over a world that had abruptly lost its predictability. This response was not much different from those of many people after the earthquake.

At the time of the earthquake, Elmira, a thirty-seven-year-old high school teacher, was relaxing in her front yard, pulling weeds from the flower bed. The sun was still far enough up in the sky to give her warmth. Her neighbors' children were unloading groceries from their car. She had just finished saying hello to her new neighbor, Bert and Beryl, when she heard a sound that she described as "coming from the bowels of the earth." Looking up, she saw the picket fence first ascend and then descend. She saw the chimney of her next-door neighbors' house fall and shatter. She smelled what she thought was garbage (natural gas), and then she thought: "This is the big one."

Her first instinct was to check on her parents. She fought her way past the mess of fallen articles in the garage and grabbed her bike. She rode the seven blocks to her parents' house as fast as she could, to find her mother in tears and her father already starting to clean up the debris inside their house. As she held her mother in her arms, the two of them stared in disbelief at the broken dishes and the "otherwise stable items that were tossed about as if they had been in a clothes dryer and then spit out." It was only after she knew that her parents were unhurt that she realized that both of her bike tires were flat.

In addition to demonstrating confused thinking, victims in this first phase of recovery also exaggerated their normal forms of social functioning. Those who were extroverted became gregarious, and those who were shy became withdrawn. In normal times, Langston, a thirty-five-year-old man who lived alone, went to the shrimp docks each day to look for work. After the hurricane, he paced for a long time in front of the general store, which was closed. When the owners, a married couple, called out to him to come and get out of the rain, he acted as if he did not hear them. And when they went out to talk more directly with him, he stared into their faces without hearing their words and continued to pace for several more hours.

Because the Presbyterian Church on the main street of McClellanville was damaged by Hugo, the usual Sunday service had to be conducted on the front lawn. Several days in advance of the Sunday service, Herbert, the middle-aged minister, began to alert the people to this change. He stood on the sidewalk, notifying each passer-by. He struck up a conversation with each of them, asking how they were and what he might do to help, and not letting them extricate themselves easily from his friendly, but extended greeting. In fact, Herbert had become so involved in this sidewalk ministering that he had not found time to wash for three days. In spite of the mental confusion that contributed to Herbert's uncharacteristic lack of hygiene, there was an element of celebration in his gregariousness. The disaster was over, and although the church could not hold services inside, they could at least hold their usual services. And these services would be attended by people who, in spite of having lost their homes, had not lost their lives. This type of emotional arithmetic occurred in many people's minds shortly after the hurricane, but not following the earthquake, since the aftershocks prevented people from believing that the event was over.

Phase Two: Cognitive reorganization: coping devices

Within the first week after the hurricane (and the first two weeks after the earthquake), some of the cognitive confusion subsided. As people began to reorganize their thoughts, they looked for an explanation for why they had been victimized. Some people relied on magical or religious explanations of the disaster. Searching for a reason, they gave the disaster the status of a divine act: God punished us or saved us; it was part of God's plan. As Jim, of McClellanville, said: "Thirty minutes and it destroys your whole life. Who knows why, but it was God's will."

People's thinking was also reorganized in other ways. Some distorted the memory of the disaster. They added material to the events in and around the disaster. They forgot parts of what happened, and they denied the magnitude of the disaster and their reactions to it. Coupled with denial was the behavior of altruism toward others. Like denial, altruism allowed people to avoid their own losses and pain. In fact, the widespread degree of altruism (almost everyone on the scene demonstrated some of it) and the magnitude of individuals' altruism made the phenomenon seem almost religious in nature—as if by doing something for someone else, atonement for having been afflicted was more likely or the possibility of receiving compensation more realistic. Jessica, who lived near McClellanville, first had the roof of her house blown off. Then the rains came, destroying the interior of the house. A month before the storm, her ten-month-old baby had died. The insurance adjuster, three weeks after the storm, had still not been to her house. When asked about how she was doing and how she was handling the tardiness of the insurance claim, she said, "I don't really mind. A lot of people are worse off than me."

Although denial helped people to accept the unacceptable, it also set up other problems. Parents who denied their own problems had a great deal of difficulty seeing their children's dysfunction. The same was true for teachers, many of whom, in addition to dealing with the children at school, had to contend with their own children's problems and their own damaged houses. As a result of the compounded overload, they, too, tended to deny the emotional problems caused by the disasters. This sort of denial created a problem for researchers and practitioners, who had to make a decision between accepting the parents' and the teachers' point of view as being accurate, namely that the children were not having problems, or accepting the fact that indeed the children had more problems than the teachers and parents were reporting. Finally we decided that parents and teachers, for the sake of their own mental health, were reducing the dimensions of the problem by denying its magnitude.

The questionable accuracy of accepting the school teachers' accounts became apparent within the first month after the disasters. Less than a month after Hurricane Hugo, Carol, a high-school counselor at the school attended temporarily by the Lincoln High School students, said that less than 1 percent of the students had hurricane-related problems. Three weeks after the hurricane, at an elementary school attended by 100 of the 600 students from the Lincoln High School trauma and another 85 students who had been displaced from their homes, a counselor reported that it appeared that few students were having emotional problems. At a high school in Watsonville, three weeks after the earthquake, teachers and counselors in a group therapy session called in order to discuss the earthquake reported that students did not want to talk about the disaster. The teachers and counselors immediately agreed to this denial of its importance on the part of their students.

A second problem caused by denial was that when it occurred within families, it contributed to creating an unusual and unproductive series of family interactions. Children, sensing that their parents were bereft, were afraid to show their own fears, and thus denied having them. These children felt that since their parents were greatly upset, they must be on their good behavior. This attitude did not develop out of a sense of altruism, however. The children reasoned that if they caused any further problems at home (or at school), then the few thin threads of normalcy that were left in their homes might be totally torn apart, and this was too frightening to contemplate.

Other family dynamics were also changed. Parents, not knowing how to respond to the changed set of circumstances, were not sure how to discipline their children. One forty-year-old Mexican-American man in

Watsonville asked his eleven-year-old son to pick up some of the fallen trees in their yard. When his boy said, "I don't want to pick up any more limbs," the father did not know how to respond. Having the child clean up, participate in putting the damage aside, seemed appropriate, but for this child it apparently rekindled in his mind how much damage had been done. Because the father was denying the extent of his own reactions, he was not sure whether he should demand that his boy pull his own oar during the stressful time, or whether he should make special allowances for him. This question was not easily resolved, since the father was unaware of his own fears about the disaster. If he relaxed his demands and let things slide, he was fearful of losing even more control, after having already been made helpless in the face of the earthquake. But the father also had an investment in helping his child deny the event, since it reduced his own tension.

The children's denials and the parents' need to accept them contributed to a circle of underreporting emotional problems, and an additional factor served to increase the level of denial even further. American culture expects people to face up to their problems, rather than to be victimized by them. Mental illness is looked upon as a weakness, while stoicism is seen as a virtue. The best way to be stoic in the face of a large amount of adversity is to deny that the adversity has happened.

The third problem created by denial was that it caused people's symptoms to be manifested in strange ways, making it difficult to ascertain who was having problems and how severe the problems were. In fact, it was not only denial that contributed to a strange set of symptoms, it was also some of the other kinds of cognitive reorganization that made the pathway between the disaster and the symptoms of distress diverse and rarely straightforward. This was particularly true for prepuberty (preoperational) children, who manifested their emotions through toothaches or through tears over lost toys, but rarely through any symptom that seemed to be directly related to the disaster. Thus, although it might appear at first that a victim was functioning adequately, still it happened that when something—often a seemingly minor, random event—pierced this outer shell, then the extent of the person's emotional distress became apparent, particularly if one was aware of how unusual this manifestation of symptoms really was.

One fourth-grade boy in Watsonville was known to the counselor before the earthquake because of his timidity and his habit of withdrawing from making friends. Three weeks after the earthquake, he was sent to the counselor's office because he was complaining about a toothache. Shortly before the earthquake, he had been to the dentist and been given an antibiotic. As he spoke with the counselor, he said that his tooth ached. When he was asked about the earthquake itself, he said he was doing fine. He had not lost his home, and he and the members of his family had not been separated from each other. Without understanding the denial of postdisaster psychology, it would have been easy to send this boy back to the dentist. But when he was asked to describe what happened to him during and immediately after the earthquake, he burst into tears. During the earthquake he had seen his mother cry for the first time. It was not hard to figure out what really hurt him most.

Phase Three: The more prolonged battle

During the month or so after each disaster, people had plenty of time to assess the damage to their property. They had talked with friends (most often about how they might get back to where they were before the disaster), and they had found out which government programs had been set up to assist them. Talking it over with their friends, people's conversations took on a mystical quality. Some victims attributed the destruction to a whim of fate, others to an unknown design of God, but they all recalled being made absolutely aware of the undeniable fact of human vulnerability. It was the struggle to revamp their losses from the dismal turn of events that characterized Phase Three of the disaster victims' psychological reactions.

In McClellanville, Bob was considered an outsider, having been born in North Carolina. He had married a local girl a dozen years before, and since that time had settled into life in McClellanville, raising three boys and working as a carpenter. He had built a house on the salt marshes less than a mile from the Atlantic. In spite of having talked over his distress with his family and friends, he was not able to find an easy answer to why his house had been destroyed, being neither religious nor a believer in fate. Because he was the kind of person to take action, he was one of the first people to enter the FEMA office.

Instead of being greeted personally at the FEMA office, Bob received a number. Then he waited for thirty minutes until he was asked -to enter a room to receive an application. After filling out the application, he went to see the map reader, who would determine whether or not his property fell within the designated area. Since there was only one map reader for the 104 people who were filling out applications that day, Bob spent several hours waiting to see him. He then waited to see the single small business loan representative, who had the power either to agree or refuse to give him a loan on his carpentry tools that had been destroyed.

At each step of being accepted or rejected for aid, Bob was required to fill out government forms, without much help. Even when all the forms were completed, he was never sure whether or not he was eligible for aid. This uncertainty increased his sense of being helpless. Because he could not understand the complex set of rules and regulations, most of which would be so important to his general welfare, he was cautious about what they meant and anxious to ask questions. He was not in the best of mental health, since he had just been through the hurricane and lost his house. All of these factors-his low ebb of energy, his degree of stress, and the long wait at the FEMA office, where he was met with rules and regulations beyond his comprehension-led to an accumulation of frustration.

The next day, Bob went to see his insurance agent, whose company had reserved several rooms in a motel in a resort town about forty-five minutes away. Because his car had also been damaged, it was difficult to get there, but he managed to get a ride in the back of a friend's truck with a couple of other friends. While he waited in the air-conditioned motel lobby, he felt confident that, as all the advertisements said, he would be able to get a quick advance and make his family comfortable again. (By this time, his two youngest boys, ages six and eight, had both caught colds.) After two hours, Bob was led into one of the motel rooms, where he was shown several long forms and was told that his insurance covered part, but not all, of the damage. He could either sign a short form now, and receive a check for about \$4,500 in a week, or he could take home all of the forms and wait to see how much of his damage was covered. Too afraid to sign anything then and there, he took the longer forms and returned home.

On the following day, Bob set forth to get food, to check on his FEMA application, and to talk with his friends about the insurance forms. He learned from them that almost no one had fared any better than he had. At about this time, he began to drink heavily. He was expressing in this way, together with his friends, his anger against God, who brought the disaster; against the government, which refused to treat him decently, let alone give him what he was due; against the insurance companies, which refused to honor his premiums; and finally, against himself, for being reduced, for the first time in his life, to being a welfare client.

Very few people, in either disaster, were satisfied with their insurance. Most homeowners in the hurricane area would have had to purchase at least three types of insurance to have their houses covered: homeowners, windstorm and hail, and flood. But even this much coverage would not have fully replaced all that was damaged. The same was true in the earthquake. An article in the *Register-Pajaronian* (Smith 1989b: 1) suggested that "if anyone thinks the insurance companies are paying out in a time of need, think again." All earthquake insurance had a deductible amount of at least 10 or 15 percent. If your house was worth \$150,000 (which in California is a middle-class home that was probably bought years ago for much less) you would have to have damages above \$15,000 or even \$22,000 before you would get any insurance money. The first \$15,000 or \$22,000 would come out of your own pockets, as it did for many disgruntled policy holders.

Not only was it unlikely that homeowners would get full refunds for damages but the *manner* in which they were served also led to social and personal difficulties. In order to get insurance benefits from private companies, people had to obtain itemized estimates. However, that is not the way contractors generally work. Instead, they make estimates by square footage. Thus, for example, when Jaime, a Watsonville contractor, received calls from his neighbors for estimates on individual items, he had to go through a tremendous amount of time, effort, and cost to make calculations in a way for which he had had little experience. He was concerned, because he was not really sure what the actual costs would be. To protect himself, he tried to avoid his neighbors' requests, and they thought that he was trying to avoid them personally, since they assumed that making an estimate was a simple task.

Because of their growing anger, it was very difficult to determine the degree to which Bob's and the other victims' explanations of their experiences with the various agencies were accurately described. Since they were themselves the victims, they often did not realize how they also contributed to the inhumane process that they described. They had not arrived at the FEMA or the private insurance representative's office without their own emotional tensions, most of which were both taken out on *and* affected by the FEMA office or the private insurance agencies. This type of interchange illustrated how difficult it was to get accurate information from victims, as well as how the emotional problems caused by the disaster were often taken out on the very organizations that were designed to serve the victims. In this highly charged atmosphere, it was difficult to come to the truth about how each of these groups was functioning.

Victims who could not resolve their losses tended to rigidly focus their attention and thoughts on the dysfunction of the helping agencies. They continually expressed their anger about being denied what they once had owned and deserved to own again. Not being able to accept the loss, they found themselves reduced to acting like young children, constantly challenging and being reined in by the authorities (who were trying to make them obey, as their parents had once made them obey). Thus, the victims' reactions to authority and leadership became even more important in that they were also symbolic. These responses of frustration and anger were present to some extent

in almost all of the victims in both disasters. Some people were less able to manage them than others. On the psychological level, it was apparent that people who had difficulty with authority and who had difficulty in coping with change and stress were more deeply affected by these difficult-to-manage emotions than were some of the other victims.

just as people's psychological reactions were controlled according to the individuals' different developmental histories, so these reactions were likely to affect people in different sections of the communities differently. The different segments of each community had had different experiences with government agencies and with seeking help from the communal pot. Many African -American victims in the small community of McClellanville had heard their grandparents tell stories of slave days, of being helpless and dependent on their white plantation masters. Similarly, Mexican-Americans in Watsonville recalled their families' stories of being deprived of their land, of being punished for speaking Spanish, and of being threatened with deportation. In short, the collective memories of each of these communities had divided its inhabitants, forcing some to be dependent on the desires of others. The postdisaster mitigation efforts had a way of re-enacting these events. Social class, which mirrored ethnic boundaries in these communities, played a significant role in people's reactions to Phases Three and Four of disaster psychology, as the disaster victims struggled back to normal and tried to settle the score.

Phase Four: Settling the score

The reactions involved in battling the authorities for help (Phase Three) lasted a long time, not only because the long time involved in settling disputes with private or public agencies (as of this writing, eight months after the disasters, many disputes on both coasts are still going on, particularly those that involve the poor) but also because the victims differed in their degree of readiness to put the disaster behind them.

Who among us *does* accept unexpected and undeserved loss without becoming angry or depressed? Here are a few examples:

- (1) People with little pre-existent anger or depression, who certainly have an easier time than those who do carry such a burden;
- (2) people with little to lose -either realistically, in the case of the very poor, or psychologically, in the case of those whose investments in material objects have relatively little symbolic value;
- (3) people with family and community support;
- (4) people who live for a higher cause, such as their religion or a devotion to work, to a craft, or to art.

What this listing suggests is that people with the best premorbid mental health coped better and suffered less than their less stable counterparts. Indeed, McFarland and his colleagues (1983) found that the strongest predictor of mental illness after a disaster was the premorbid level of functioning.

One of the difficulties encountered in coming to terms with the emotional responses to disasters is the fact that being a victim re-enacts many childhood experiences. In Phases One and Two, the victims were made helpless by the uncontrolled shock of the disaster, which forced them to resume the same dependency needs that they had experienced as children, when they were also helpless. Because of the unpredictable aftershocks, which kept the fear alive longer, this helplessness was made worse in the case of the earthquake. The feeling of being in someone else's control was brought home to many people when they went to file their claims with private or public agencies. Thus, the psychology of emotional reactions to disaster brought up many childhood memories and conflicts, which, to the extent that they were uncomfortable or troubling, reduced the person's ability to resolve the problems generated by the disaster.

Sylvia, a fifty-four-year-old African-American and the mother of three boys, was born and raised in McClellanville. When she was twelve, she ran away from her parents' home. After staying with relatives in the Midwest for a short period of time, she moved to Seattle, where she worked as a live-in babysitter. She continued over the next several years in this work, while on the side she pursued the trade that her mother had taught her, sewing. As she put it: "I could always sew. It was just a gift."

At eighteen, Sylvia had her first child, and a year later she married the father, with whom she stayed throughout the birth of two more sons. For most of the fifteen years they were together, however, Sylvia felt unhappy and trapped in her marriage to this man, and all during this time she planned for her financial and personal independence. As she tells it, "for fifteen years I thought about leaving him," and finally she was able to do so. Although her academic skills were below par, she was able to work at her sewing, as a maid, and finally in a

hospital. Raising her three children without a father was difficult, though, and she had little time to supervise them. By the time they were ready to enter high school they had had numerous problems with the school authorities.

On the other coast, Sylvia's father, now widowed, was offering to help her move back to McClellanville, so she took her savings and, at the age of forty-five, returned to her home town. There she bought a small plot of land, with an old house, where she lived with her children. Her father died almost a year to the day before the hurricane, and with her small inheritance and her full-time sewing, Sylvia was just able to make ends meet. She worked out of the bottom floor of her house, which was filled with her thirty years' worth of sewing patterns.

in spite of the high winds, Hurricane Hugo did not knock down Sylvia's house, but a six-foot tidal surge swept through the bottom floor and left a foot of red sea mud and silt. She was not allowed to clean her house until the insurance and the FEMA agents came. She talked to us as she carried her drenched and muddied sewing patterns in a wheelbarrow to the front lawn, where they were to be carried away by a bulldozer. Sylvia spoke rapidly, her words coming like coins from a slot machine. When she got to the painful points, she began to stutter. She had wisely purchased \$100,000 of home insurance and \$50,000 of insurance for its contents. When the insurance agent visited her home he measured the water line at six feet and told her that she was covered for winds, but not for floods. He offered to pay for the damages above the water line, but not below, and he wrote out a check for \$4,600. Unhappy with the offer, she did not sign the check. She tried to call her own insurance agent several times to talk about the settlement, but the agent would not answer her calls.

At this point Sylvia's anger with the insurance agent spilled over to the people in the neighborhood, who, she claimed, only fended for themselves. She pointed out that the part of the African-American community that was not badly hit was not helping those like herself, who were in more need. Since she had no car, she was furious with her neighbors, who had not asked to drive her to get groceries, but she was adamant about not asking their help.

Her complaints went on and on, and soon they were directed at her children, who, she said, were not helping out, but were only demanding to be taken care of. She grew more and more critical of them. The oldest boy had left home before the hurricane and had gone back to Seattle. Sylvia was convinced that he was taking drugs, and even this she attributed to the stress of the hurricane. Sylvia also complained that her sister, her only relative in McClellanville, did not care about her and had never offered to help. So the story continued, a series of strained relationships with all the people she was close to, anger at neighbors, fury at being cheated by her insurance company, alienation from her boys. She was slowly but surely isolating herself. Without work and without plans to start again, she was becoming increasingly idle.

What will become of Sylvia? She did not seem to be suffering from posttraumatic stress disorders (PTSD), yet her reactions were typical of those who failed to cope with the losses caused by the disasters. To come to terms with the disaster, Sylvia would have to accept her loss, to put it into perspective. For people like Sylvia, whose pasts, have been filled with difficulty, it will be even more problematic to put into perspective the loss of a home or of a thirty-year collection of treasured sewing patterns.

CONCLUSION

During the first phase of their reactions, the victims in each community, regardless of race or ethnicity or social class, felt the full fear of the disaster and were, like Elmira (who bicycled on flat tires to check on her parents), reduced to anxiety and mental confusion. Within a week, much of the confusion subsided, and people like Jessica began to reorganize their thinking by distorting or denying the stressful events and thinking altruistically about those who were worse off than they were. By the end of the first phase of coming up for air, most people, even the victims who had been trapped in Lincoln High School, had managed to cope with the terror of the disaster. Very few suffered from PTSD, and there was a good deal of exemplary resiliency to be seen, including the altruistic helping of others. There were few new mental disorders as a result of the disasters, and the most strained emotional reactions seemed to come to those, like Sylvia, whose psychological situations were troubled *before the* disaster. As a rule, victims like Bob returned after their frustrating struggles with various agencies to their predisaster levels of functioning.

These findings are in line with the majority of research findings on natural disasters, which "suggest that disaster contributes to the persistence or recurrence of previously existing disorders but is not responsible for the genesis of new psychiatric symptoms or disorders (Smith 1986: 75). One possible exception is the development of posttraumatic stress disorders, but the prevalence of this disorder has been greatly exaggerated. Smith (1986: 74) noted that "less than 25 percent of disaster victims experienced any posttraumatic stress symptom and only 5 percent met criteria for a diagnosis during the year after the disasters." These statistics are in line with our own observations.

The existence of the discrepancy between the commonly-held belief that disasters cause enduring mental illness and the current research, which suggests that it does not, is in part caused by the focus of disaster research. What has been missing from disaster research is a connection that demonstrates the relationship between actual human behavior in extreme situations such as disasters and psychological theory about human behavior in more common daily situations.

Current disaster research is oriented to methodological issues, leaving unresolved the question of whether or not human behavior in extreme situations represents one end of a continuum or a qualitative difference. However, some earlier work (Wallace 1957) compared the disorganization that follows a disaster with an individual's perception of other disorganizing events. In both cases, people resisted change because it disrupted the predictability of their lives. Wallace's cross-cultural work suggested similarities of human behavior, rather than qualitative differences. A similar approach was taken by Schneider (1957), who was able to demonstrate that typhoons in the Western Caroline Islands were defined according to the amount of disruption in daily life that they caused. Thus disasters and the syndrome of responses to them were, by cultural definition, an extension of everyday life circumstances.

The view that natural disasters are phenomena solely of the physical world, rather than also being parts of the social and political world, needs rethinking. Certainly, the initial events-earthquakes, storms, or other natural disasters-are physical phenomena, but the associated disasters are human occurrences. The physical aspects of the earthquakes at Loma Prieta and in Armenia were nearly identical, but the California earthquake killed fewer than a hundred people, while the dead of the Armenian earthquake numbered more than a hundred thousand. What turns a natural event into a disaster is its relation to everyday human activity, such as the quality of farming, the building materials that are used for houses, and the location of homes. If connections can be made between everyday life and a natural disaster, then the psychological responses to the disaster can more easily be tied to the everyday reality that is brought about by the social history of the community.

One of the advantages of using the comparative method in this study is that it has allowed us to gather information about how racial, ethnic, and social class relationships worked to mitigate or exaggerate the disaster responses in each community. Once the immediate emotional problems of the first two phases had passed, they were replaced by the second and third psychological phases, in which people's ethnic experiences contributed to how they responded. Since the ethnic and racial differences mirrored the social class disparities, it was difficult to separate social class, race, and ethnicity and to determine how each of these variables influenced people's emotional reactions. But it was clear that in both disasters, social class and ethnicity were interwoven into the later phases of emotional reactions. People of different social classes reacted to their material losses differently.

The African-Americans and the Mexican-Americans, because of their histories of poverty, slavery and patronismo (the nearly feudal system in which a worker is beholden to a patron or owner for material goods and physical health), have held inferior positions of power in their respective communities. In the past, they had to act as if they were children asking parents for what they needed, in order to reach their goals. The patrons and the slave owners had been in the position of parents with respect to the power and authority they held. By the 1960s and 1970s, however, things had changed in both communities. Gordon, the spokesman in South Carolina, and Arturo, the more effective leader in California, were both products of their places, their times, and the histories of their class and ethnic struggles. They reflected their prospective civic politics, and they demonstrated how the two communities, demographically similar and each traumatized by a large natural disaster, had reacted differently because of their disparate political histories. Although the victims of Watsonville had to contend with aftershocks and with the knowledge that there was little likelihood of regaining adequate housing, they were buoyed by a sense of political efficacy. On the other hand, the victims of McClellanville, who could put all their energies into rebuilding their losses as soon as the storm passed, still felt helpless because they could not gather political force or feel a sense of control in their efforts to seek restoration. The comparative method has allowed us to see that people's reactions to the two disasters were in great part determined by events outside of the physical phenomena themselves. It is unfortunate that it is only the physical event that has become synonymous with the concept of natural disaster in the minds of most people.

By comparing the two communities, it was also possible to obtain a cross-cultural view of race relations in two small American Towns, thus revealing, as a microscope reveals the minute but powerful virus, the painful social history of each community. These social histories, with all their hidden and difficult agendas, came into sharp focus. Finally, this comparative study, made in the aftermath of two unexpected and largescale disasters-when guards were down and feelings ran high, unabated by contemplation-has afforded us an opportunity to see how modern American society related to its poor and how different ethnic and racial groups interacted with each other in moments of crisis.

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The study used participant observational methodology to understand the psychological reactions to the Loma Prieta Earthquake and to Hurricane Hugo. Data was collected in two high impact areas; Watsonville, California and McClellanville, South Carolina. Comparisons were made between the two towns and between the two disasters. The results indicated four psychological phases of victim psychology: confusion, coping by cognitive changes, displaced anger, and resolution. The first two phases lasted longer for earthquake victims than for those suffering from the hurricane. Differences in the two communities effected the phases of anger and resolution.

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