DISASTERS AS AGENTS OF SOCIAL CHANGE IN RECOVERY AND RECONSTRUCTION

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ABSTRACT: This paper highlights a variety of studies on disaster recovery and reconstruction, some showing that political, economic, and social change is unlikely after disasters; some showing that change occurs frequently after disasters; and still others showing that both are true, depending on who you are. This paper examines the reasons for these findings and concludes by pointing out pitfalls and opportunities for both research and public policy regarding recovery and reconstruction.

INTRODUCTION

In Kai Erikson's influential examination of the Buffalo Creek flood (1976), he suggests that disasters can destroy the very communal foundation of society, making recovery and reconstruction almost impossible. On the other hand, when Anthony Oliver-Smith studied earthquake reconstruction in an Andean city (1986), he found that disasters can rejuvenate the communal base of a society, making recovery and reconstruction not only possible, but a force for improving the society. The long-term effects of disaster on society and infrastructure, as illustrated by these two examples, are not universal. In addition, predictions of the scale and direction of the recovery experience often vary, depending on which study or expert one consults. This paper is a review of what we know, or think we know, about long-term disaster recovery. Do disasters change the social and physical community, or not? If change does occur, is it for the better, or for the worse? As you might guess, the answers to these questions often overlap and frequently contradict each other.

DO THINGS CHANGE MUCH AFTER DISASTERS IN THE LONG TERM?

On the macro level (large, society-wide scale), there is a great deal of evidence showing that communities are not changed, in the long run, by disasters. Social stratification, economic viability, political motivation, and structural features, all tend to return to predisaster conditions. Change sometimes occurs in the short term—but it is rarely lasting.

For example, studies have shown that norms do occasionally change in the immediate aftermath of a disaster —that is, in the first few hours or days—but that those changes are short lived. Turner and Killian (1987) said that new norms emerge after disaster, but the changes are temporary. Taylor (1972) noted that new helping roles are adopted but soon abandoned after a disaster. Joan Alway et al. (1998) found that gender roles are sometimes disrupted after disasters, but also found that the changes are ''only slight and momentary.'' The solidarity, openness, and change in norms, as well as the conflict, that often emerges in the early stages of disaster recovery is fragile and short lived (Quarentelli and Dynes 1976). It is erroneous to conclude from emergent behavioral norms in the early stages of a disaster that norms as well as social structure will be equally pliable in the long term—that is, in the reconstruction and recovery phases of disaster.

Studies show that catastrophic natural-human interactions generally do not result in long-term social change. After surveying over 30 years of literature, Drabek (1986) suggested that changes in policy after a natural disaster are only a short-term response to the event and do not represent a ''wholescale or lasting priority shift.'' Rossi et al. (1978) and Friesema et al. (1979) noted that communities are not negatively affected economically by disasters. The effects of disaster are often absorbed by undamaged parts of the community or by other communities (Bates and Peacock 1987). In addition, numerous local, state, and national reports note how losses in one sector (e.g., unemployment due to flooded companies) are made up in another sector (e.g., increased employment in construction, engineering, public works). Thus, while individual people or businesses may lose, the structure of the overall regional economy feels little long-term effect from the disaster, and some segments of society gain from disasters [a process which prompts articles such as ''Is it Ethical to Profit from a Natural Or Man-Made Disaster?'' (Lowe 1993)].

In general, most studies do not show any evidence of long-term psychological effects (Drabek 1996), and physical infrastructure is usually rebuilt without much change from the original. Disaster communities rarely relocate. For example, earthquake-damaged cities almost always rebuild themselves on the same sites rather than relocate to safer territory (Walters 1978; Mileti and Passerini 1996), and the same could be said for communities on coasts and in floodplains. Sometimes reconstruction actually contributes to a community's disaster vulnerability —take, for example, the rubble of the 1906 San Francisco

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earthquake, which was pushed into the bay, subsequently developed, and is now highly susceptible to liquefaction.

It would be wonderful if the reconstruction process could be used as an opportunity to both increase the community's resiliency to future disasters and address ongoing community concerns such as urban decay, traffic, or nonconforming buildings. This rarely happens, however. Instead, there is a strong bias among citizens and policy makers to return to the status quo. But why? Why wouldn't people rebuild more safely? Why wouldn't disaster communities relocate and/or rebuild in more socially beneficial, energy efficient, and structurally sound ways?

First, large-scale community change is often not politically or economically feasible. Politicians and city leaders weigh the pressures to rebuild safely against those to rebuild quickly (and ''return to normal''). Especially if no predisaster mitigation plan is in place, making plans for changing infrastructure will take a great deal of time. Plans that take more time, such as modifying land use, retrofitting buildings, or creating parks, are often abandoned because they take too long (Mileti 1999). Extended kin groups, nonaffected communities, government, and professional organizations often contribute time and money to reconstructing the status quo (this bias, or constraint, is sometimes conscious and sometimes unconscious). Frequently, change requires more money than communities have, or are willing to spend. Speedy recovery can also be thwarted by the following conditions: outside donor programs that exclude local involvement; poorly coordinated and conflicting demands from federal and state agency assisted programs; staff who are poorly prepared to deal with aid recipients; top-down, inflexible, standardized approaches; and aid that does not meet the needs of the needy (Berke et al. 1993). Other scholars note that constraints to change include a lack of clear recovery goals at the federal, state, and local levels, the complexity of working with multiple entities, and an absence of institutional capacity (which could be built by preevent planning) (Mileti 1999).

Second, change is socially disruptive and communities desire to resurrect predisaster patterns of culture and human interaction. Even when rational economic reasons for community relocation and structural change exist, people may resist it if the change is seen as ''a step away from proven traditional strategies'' that threatens their social and cultural identity (which is often place-oriented) (Oliver-Smith 1982). Resistance to change in reconstruction is often a last-ditch effort to strengthen what remains of the sense of community—an affirmation of community spirit (Handmer 1985). Also, social networks are difficult to recreate after large change or relocation (Fried 1963; Finsterbusch 1980). Change, and particularly relocation, is especially hard for the old, for low income or long-term residents, and for people with social ties to the old city (House 1970; Burkhardt and Shaffer 1972; Colony 1972; Perfater and Allen 1976; Rohe and Mouw 1991). As Anthony Oliver-Smith notes (1986), people will often prefer to ''take their chances with the known dangers of the [future disaster] rather than risk virtually everything, the entire order of their lives in every aspect'' by moving or changing the social or physical infrastructure of the community.

An article titled ''Why Cities Don't Die'' echoes many disaster studies in noting that ''immense levels of physical destruction simply do not lead to proportional or greater levels of social and economic disorganization'' (Konovitz 1990). I would add the flip side to that as well: that disasters also do not lead to greater levels of social or economic *organization*—things stay about the same in reconstruction. For most of recorded history, communities affected by disasters—with the help of neighboring nonaffected communities, insurance, or government aid—traditionally get ''back to normal'' quickly after a disaster, and with as little structural, cultural, or institutional change as possible (Walters 1978; Aysan and Oliver 1987; Arnold 1993; Mileti and Passerini 1996).

WHEN DISASTER DOES EFFECT CHANGE, IS THAT CHANGE FOR THE WORSE?

Sometimes, of course, disasters do effect change. At the macro level, some disasters have overwhelmed the capacity of the community to recover. For example, some developing countries have experienced regional disasters where the losses totaled up to three percent of their gross national product, or which damaged the only basic industry in the country, or which made practically everyone in the (usually island) nation homeless (Quarentelli 1998). The Buffalo Creek flood mentioned earlier was also an important example of a disaster that destroyed a community. The community was severely affected and did not recover, largely because it was a very poor, declining, ''company town,'' and because the disaster may have been caused by corporate (''company'') negligence. Despite the existence of these cases, such overwhelming effects of disasters at the community or national level are rare.

On the micro level (individual or small groups), however, studies suggest that subsections of society are very much negatively affected by disaster (i.e., minorities, the elderly, women, small businesses, etc.). Who is most affected and to what extent they are affected is still a new branch of disaster research, but the preliminary work is intriguing.

Studies show that disasters reinforce and intensify existing conditions (Geipel 1982). A 20-year study of Alaskan communities suggests that a community in decline before a disaster will continue to decline (and sometimes fail altogether), while a community that is prospering before the disaster may recover and thrive after the disaster (Davis 1986). Some researchers have noted that disasters may affect the rate of change that was already in a community, but that disasters do not create the change (Bates et al. 1963; Haas et al. 1977; Geipel 1982). Other studies show that, while large businesses or financially healthy businesses may not be affected by disaster, smaller, strug-

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gling businesses may be hurt. ''Once a vulnerable business—for example, a small business, or one that is not in good financial condition—suffers disaster-related losses, it will be difficult for that business to recover'' (Tierney and Dahlhamer 1997; see also Alesh et al. 1993). Some communities are so disenfranchised, because of race and poverty, that they are not politically or economically able to compete for reconstruction resources. As one research study noted, ''[this community] was also a city on the edge—in this case on the edge of poverty—and Hurricane Andrew may well have blown it over the brink'' (Dash et al. 1997).

Researchers are increasingly noting that disasters produce differential impacts and intensify inequality depending on factors such as race, class, gender, and age. In other words, there are winners and there are losers in disasters, and ''the reconstruction process benefits . . . the socially powerful at the expense of the less powerful'' (Dynes 1989). A literature review of disaster's effects on minorities shows that ethnic minorities and the poor are often disproportionately affected by disasters in the long term (Fothergill et al. 1999). A book titled *Hurricane Andrew: Ethnicity, Gender, and the Sociology of Disasters* points out that ''economic and political conditions predisposed certain segments of the community to be disproportionately impacted and placed them at a disadvantage during the competitive recovery period'' (Peacock et al. 1997). A special issue of the *International Journal of Mass Emergencies and Disasters* (1999) on gender and an edited book titled *The Gendered Terrain of Disaster* (Enarson and Morrow 1998) point out vividly how the subordinate status of women in everyday social life results in women being disproportionately, and differentially, affected by disasters. These two documents also point out that, while women have special knowledge and insights that would be helpful to mitigation and recovery/reconstruction efforts, they rarely have the social or political power to express those ideas publicly.

While most of the studies on differential impact focus on preparedness or response to disasters, a few have focused on the recovery/reconstruction phase. For example, communities of color are more likely than white communities to experience a decline in their long-term standard of living after a disaster (Bolin and Stanford 1991). In some cases, low income housing stock is lost and not rebuilt after disasters (Phillips 1993; Dash et al. 1997). Language barriers and outright community and realtor racism also affect minorities' ability to recover from disasters (Bolin 1993; Phillips 1993). Some studies have shown that blacks are less likely than whites to have access to, qualify for, or receive FEMA and Small Business Loans (Bolin 1986, 1991; Bolin and Bolton 1986; Bolin and Stanford 1998). Poorer families (which are composed disproportionately of minorities, the elderly, and women) have more difficulty recovering from disaster and obtaining aid.

WHEN DISASTER DOES EFFECT CHANGE, IS THAT CHANGE FOR THE BETTER?

Many people, after a disaster, hope the disaster can help accelerate hopes and plans for change (Anderson 1970). There is an assumption throughout popular culture, government publications, and scholarly papers, that a ''window of opportunity'' exists in the aftermath of a disaster in which change may be easier to effect than in ordinary times. For example, the comprehensive White House report on flood management in the 21st century, or the ''Galloway Report,'' states, ''relocations, in particular, offer a unique opportunity to start from scratch in planning and constructing to assure sustainable development becomes an integral part of the entire community'' (Galloway 1994). The idea of a window of opportunity is an assumption that there is greater potential for solving social problems after a disaster than there was before the disaster. Charles Fritz, in 1961, said that disasters break the ''cake of custom,'' and this unstructured social situation can lead to innovative changes in social structure. Such a disturbance of habit, say Catton and Dunlap (1980), may well evoke the response called ''paying attention,'' which will lead to social change. The ''Public Arenas'' theory of social problems (Hilgartner and Bosk 1988) and recent cellular automaton modeling (Passerini and Bahr 1997) suggest that dramatic real-world events can lead to a receptivity to claimsmaking and particular solutions to social problems, although these theories are statistical and do not suggest which events will trigger change and which ones won't, or how change will occur. Some case studies of specific disasters have found that disasters often spark long-term social change by triggering increased interaction and the process of issue formation, blaming, framing, and collective action (Cobb and Elder 1983; O'Brien 1991; Mileti and Darlington 1997; for a summary of other cases see Drabek 1986).

It has been noted that major federal legislation addressing disasters usually follows on the heels of especially devastating disasters (Birkland 1996) and that individual politicians' responses to major snowstorms and floods have made and broken many political careers (O'Brien 1991). John Barry (1998), in a book called *Rising Tide: The Great Mississippi Flood of 1927 and How it Changed America*, notes that the flood (affecting an area the size of Maine) expanded Americans' opinions of what the federal government owed its people, hastened the outpouring of blacks from the South to the North, helped elect Herbert Hoover, and turned blacks away from their traditional allegiance to the Republican Party. The Exxon Valdez oil spill changed oil spill emergency preparedness through new congressional acts (The Oil Pollution Act of 1990) and watchdog organizations (Sylves 1998). Similarly, other disasters have prompted a wide variety of changes in land-use regulations; local, state, and federal public policy; and building code enforcement.

Disasters prompt us to struggle with difficult, fundamental questions about the nature of society, many of

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which are outlined in the book *Disasters and Democracy* (Platt 1999). For example, there are ongoing disputes about who should bear the burden of unwise land-use decisions (federal flood insurance, for example, is increasingly being called ''welfare for the wealthy'' and an incentive for unsustainable development). Also, debates about property rights versus land-use regulation, as well as ''takings,'' are played out in courts and county commissioner meetings across the country. These conflicts represent a nation's efforts to decide the proper balance between human rights (and needs/wants) and ecological health, between private rights and collective goods, and they contribute, in the long run, to more thoughtful policy and public process.

Others have found that forms of political dialogue and/or coalition building can form following disasters (Quarantelli and Dynes 1976; Bolin and Stanford 1991; Enarson and Morrow 1998). An interesting pilot study recently found that disasters can generate an ''expanded political space for popular movements and/or regime critics to organize and act'' (Olson and Drury 1997). Earlier research (Cuny 1983; Alba-Bertrand 1993) explained that disasters highlight social inequalities that can lead to increased social unrest. Social unrest, it should be noted, could be considered change for the better or change for the worse, depending on what position you hold in society. Change for the ''better'' or the ''worse,'' are, of course, subjective categories, and as any good social scientist would tell you, you have to ask ''better and worse—for *whom*?'' I include social unrest (social movements, not riots) as a ''change for the better,'' because I think a change toward increased social equity is positive, even if the process makes governments and other segments of society uncomfortable.

While relocation is rare after a disaster, when given the choice of support for moving, or no support, communities will choose support. Valdez, Alaska, as an example, relocated after the 1964 earthquake. Locals were in favor of rebuilding, but a federal reconstruction commission called for relocation and exerted political and financial pressure for relocation. Simply put, Valdez citizens were given the choice of relocation with federal funding, or rebuilding without it (Mader et al. 1980). Similarly, some communities moved after the 1993 Midwest floods—but only because the federal government picked up most of the bill. In fact, one study has found that communities are very receptive to change and relocation if they do not have to incur the majority of the costs (Mittler 1997). While the relocation of whole cities is rare, decisions are sometimes made to relocate damaged buildings and infrastructure in less disaster-prone areas of the city.

There is some evidence recently that disasters are teaching us lessons about traditional building structures. For example, as Southern Florida and Turkey have showed us most recently—older (and in some cases ancient) structures withstood the disaster much better than recent structures. Corruption in building code enforcement and the capitalist push to get more through doing less creates a disaster when none is necessary. Similarly, often ''traditional'' structures hold up better in disasters than do modern, mass-produced nontraditional structures (Berke and Beatley 1997).

CONCLUSIONS

Many people hold the hope that the reconstruction phase of disasters can be developed into a process of reducing vulnerability and increasing economic viability (Anderson and Woodrow 1989; Berke and Beatley 1997). Recently there have been suggestions, although with little or no empirical evidence, that disaster events can contribute to ecological dialogue or transform the logic of conventional politics, that natural disasters (especially chronic or catastrophic ones) delegitimize state institutions and claims of rationality, that they can change popular opinions regarding the environment, and that one social problem (a disaster) can lead to a concern with a new social problem (unsustainability). It does seem reasonable to encourage sustainability in the aftermath of a disaster, simply because communities are rebuilding and replacing things anyway, and sustainable changes could be both cost effective and timely. It also seems reasonable that disaster-affected communities might be more open to change than nonaffected communities. However, at the present time there is no strong empirical evidence to support these claims, regardless of how reasonable they sound. As noted earlier, while change sometimes occurs after disasters, there are also a myriad of structural and cultural forces that keep people from considering or embracing change both before and after a disaster. People are not necessarily more open to new ideas after a disaster. Nor are they necessarily more closed, either. Clearly, the recovery/reconstruction phase of disasters is a process on which people hang many different hopes for the future, yet it is the least understood aspect of disasters.

Reconstruction is probably the least studied phase of disasters (Dynes 1989; Berke et al. 1994). Scholars have also warned that many of the conclusions reached in the studies that do exist are based on single case studies and may or may not be generalizable (Rubin et al. 1985). Tierney and Dahlhamer (1997), for example, note that, while there are a few recent exceptions, research findings on the long-term business impacts of disasters have generally been based on individual case studies. When larger samples are drawn, they are not representative and systematic, but purposive. There are also substantial problems in accurately measuring disaster impact and recovery, as well as comparing those measures cross culturally (Bates 1986). Available findings are often inconsistent, research methods are inadequate, sample sizes are small, and control samples (to compare with the impacted community) are rarely used (Drabek 1986). More research on recovery/reconstruction, using more rigorous research methods, is necessary. Below are some questions that could help direct future research and that policy makers and disaster managers should also consider:

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1. What are the long-term economic impacts of disasters? How can those impacts be measured adequately? For example, what is the proper way to consider weakened infrastructure that, while still structurally sound, may fail more quickly in the future?
2. What is the stratification of disaster losses and gains? Who wins and who loses, and what is their relation to each other?
3. What are the cultural, social organizational, and political-economic conditions/options that affect how reconstruction occurs (for better or worse). What are the cultural and structural elements that keep people from making changes after disasters?
4. How can disaster practitioners institutionalize the social mechanisms that make things better and disrupt the institutional forces that make things worse?
5. Do local governments and businesses have significant information about recovery/reconstruction, and in what way do predisaster plans have an impact on postdisaster recovery? For example, many scholars have said that there is a need for ''predisaster planning for postevent recovery'' (for example, Mileti 1999). It is implied that those communities with a plan are better able to effect change and recover well after a disaster. Without a predisaster plan, relocation and reconstruction are harder/take longer (Geipel 1982; Alexander 1986). It would be useful to quantify this contention, as well as to explore the processes by which mitigation plans are successfully carried out in the recovery/reconstruction period.
6. Similarly, many others suggest that predisaster plans need to be democratically decided upon, with voices of all factions present, or the plans will be contested and politicized (for example, Alexander 1986; Bolin and Stanford 1991). Others add that successful recovery efforts typically include strong local community participation and integration of the community into regional and national networks (for example, Mileti 1999). The mobilization of local knowledge and expertise are increasingly seen as important aspects of recovery/reconstruction. Democracy, participation, local knowledge, integration of the community, and nonpoliticized consensus are wonderful terms to throw around, but there is a great deal still to be learned about the process by which democratic, indigenous, mitigative decisions are made—and how such a process is undetermined.

This paper has highlighted a variety of studies on recovery/reconstruction, some showing that change is unlikely after disasters, others showing that change occurs frequently after disasters, and still others showing that both are true, depending on who you are. Whether the change is ''good'' or ''bad'' also seems highly contestable. What we know for sure, however, is that there are far too few rigorous studies on the recovery/reconstruction phase of disaster. As policy makers continue to link pre- and postdisaster mitigation and pin high hopes of radical social change on the recovery/reconstruction phase, it becomes imperative that we understand the processes that determine long-term recovery and social change. In addition, if, for example, we view disaster recovery/reconstruction as a process that can potentially remedy the underlying inequities that caused disaster in the first place, we must better understand not only the disaster recovery processes, but the processes that created the inequity.

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