



Communities in Disasters: Helpless or Helping?

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Abstract

Development faces the challenge of an unexpected rise in disasters of all kinds. Prompted by two popular books about disasters (Klein 2007; Solnit 2009), we review the North American scholarly literature on disasters to answer three questions. Practically, how do local communities respond to disasters? Theoretically, what is the relationship between local social networks and disaster response/recovery? For policy, whom should we count on to carry this out? The primary finding is that communities, however devastated, are not helpless, but helping, and in particular stages. Outside social forces can help, but disregarding local networks and processes impedes disaster response/recovery.

Keywords

community informatics, disaster response and recovery, social cohesion, agency

Introduction

The pace of disasters affecting communities, cities, and entire countries has quickened in recent decades, and the scale has widened dramatically. Two books—Naomi Klein's *Shock Doctrine* (2007) and Rebecca Solnit's *A Paradise Built in Hell* (2009)—published in the United States on disaster response and outcome pose different arguments about people affected by disasters. Klein documents how powerful social forces use disasters to shock a population and implement agendas that often further damage the affected community. She urges mass awareness and education as a counterweight to this manipulation. Solnit argues that community members typically respond to disasters by helping themselves and those around them, drawing closer to each other to do so.

She refers to “elite panic,” the response of elites fearing collective action by ordinary people.

These two diametrically opposed viewpoints give rise to questions on three levels. On the practical level, how do communities respond to disasters? On the research level, or on the level of theory, there are many questions, but our own focus in the emerging field of community informatics leads us to this question: What is the relationship between social networks and disaster response? And on the policy level, whom should we count on to carry out disaster response? Who are the first responders? What recovery mechanisms should national, regional, or local policy and funding support? These three levels are of course interactive: practice exists; research studies practice and should generalize and theorize; policy then uses research to better support and guide practice.

Community informatics is an emerging field examining the intersection between local, historical communities and digital technologies. A handful of community informatics studies examine communities in disaster. Other community informatics studies (see Williams and Durrance 2008 for a review) use social capital or social networks as their theoretical lens. These frameworks help to make community agency visible, particularly in settings where researchers and the community members are separated by differences in income, ethnicity, power, culture, or history. One of the settings for community informatics research is in fact disasters (Shankar 2008), and our own experience in the 1995 earthquake in Kobe, Japan, pointed up the dualities such as survivor and volunteer, community and government, and so on.

To make sense of and perhaps resolve the contradictions between Klein and Solnit, and to answer the above questions, we apply a social network framework to a review of early work by disaster studies scholars. Our focus is on 20th-century scholarship—an understanding of established research findings will help focus questions of practice, research (or theory), and policy. Thus this paper is divided into three sections, summing up the literature with respect to practice, theory, and policy.

At the Practical Level, How Do Communities Respond to Disasters?

First, communities respond to disasters in stages (Carr 1932; Form and Nosow 1958, 1966; Moore 1956; Taylor, Zurcher, and Key 1970). This is true regardless of the time the disaster takes to elapse or the geography it impacts (Carr 1932). For instance, some disasters are instantaneous, such as the munitions explosion in Halifax in 1917, while others are progressive, such as the 2005 New Orleans hurricane and subsequent levee failures. Some are “focalized”

(Carr 1932: 210), such as a mine disaster, while others are diffused like the 2010 floods across Pakistan.

Second, in the first phase of response, people in the affected community face the dilemma of whether to help their own family or help others. This does not actually unfold as conflict within the community. Instead, providing more help to one's own family is identified as providing more help to the community generally, in a sort of virtuous circle.

In his study, Killian (1952) investigates the reactions of people in four different communities that experienced disasters: three tornadoes in Oklahoma and one explosion in Texas. His findings show that people faced conflicting group loyalties and contradictory roles immediately after the disaster. The conflicts were identified as being between loyalties to the family and to the community. The people described themselves as caught between obligations related to their membership in other groups in the community, affiliated organizations, and ad hoc community groups. These dilemmas and conflicts were inevitable at the critical moment. Disaster response hinged on people's relationship with those community groups and even on their relationship with the community as a whole prior to the disaster. People had to make difficult decisions: Should they do something for a stranger lying injured or continue searching for family members? However, "devotion to the family as the primary object of loyalty did not always redound to the detriment of aid to other groups" (Killian 1952: 312), because many people were drawn to the areas of the greatest damage and casualties out of concern for their own family members. Sympathetic emotions drove them to aid all community members. The study found that people identify their roles with society at large, "and the emphasis of American culture upon the importance of human life [is] too great to permit them to pass an injured stranger without assisting [him/her]" (Killian 1952: 312).

In addition, Form and Nosow's analyses (1958, 1966) of the Beecher Tornado in Michigan clearly illustrates that a group's integration into the neighborhood makes it an ideal rescue unit because its members know the physical layout of the homes and the community area. Most of the subject groups of Form's study indicated that they responded immediately to confirm the well-being of other family members. If family members, friends, and neighbors were unhurt, other types of activity emerged: "People tended to look around and appraise what had happened. They took stock of property damage, but usually did not stop there. They began looking for victims whether they knew them or not. They performed first aid, transported victims to aid stations, and did other things to facilitate rescue" (Form and Nosow 1958: 62). In fact, "only 3% of activities of individuals in their first phases were associated with

organizations” (Form and Nosow 1958: 115). Likewise, Moore’s Waco Tornado (1956) and Taylor, Zurcher, and Key’s Topeka Tornado (1970) studies showed strong evidence that individuals began intense rescue activity quickly, using their strength and vigor as soon as they were sure of their family’s safety.

Third, all the time-sequence models in the above mentioned studies note one salient reality: the members of the affected community respond first, others respond later. Survivors respond first by helping themselves, their families, and others. In the model from Taylor et al. (1970), this happens after a stage they identify as Immobility: the silent moment after a tornado has reduced a town to rubble but before the survivors crawl out of their shelters. On this issue of community response, Prince (1920) concludes in his study on the Halifax explosion that “the earliest leadership that could be called social, arising from the public itself, was that on the part of those who had no family ties, much of the earliest work being done by visitors in the city. The others as a rule ran first to their homes to discover if their own families were in danger. From this body in a short while, however many came forward to join in the activities of relief” (p. 61).

In studying the Topeka Tornado, Taylor et al. (1970) found civic-minded spontaneous leadership in rescue operations. As reported in the study, a married couple living five miles away from the path of the tornado came to the affected community and established a small volunteer service at a church within two days. They provided clothes and other supplies to victims and coordinated the assistance efforts on the part of local residents and local churches and schools. Taylor et al. emphasize that the ordinary roles of these community members as mother and father were “laid aside for the emergency; instead [they were] busily organizing and directing an essential service” (p. 56).

Fourth, there is an intense rescue phase (Moore 1956) that Taylor et al. (1970) call the Utopian Period, where attitudes and norms adjust to the challenge of recovery. In this brief period, superhuman efforts are made to overcome extraordinary challenges. Taylor et al. found that the disaster they studied demanded that all the stakeholders—including victims, unharmed victims, volunteers coming from nearby regions, external institutions, local, state, and federal agencies—adapt to the situation. Subsequently, news reports and information exchange began to circulate in the community, capturing the interaction among all the stakeholders as they sought to make sense of the situation. At some point, the community at large experienced “post-disaster Utopia,” in which people ephemerally developed wishful and yet active behaviors and norms of community. Local volunteer rescue groups began to evolve at this stage. The Utopian mood facilitates the governance of the relationships

between people by informal mechanisms. At the same time, the internal and external people and resources begin to act alongside each other, and anger among the locals toward bureaucratic formalities and routine procedures of institutions (and vice versa) starts to evolve (Taylor et al. 1970: 125-127, 143-144). Whether or not these conflicts persist, the mobilization of organized social action provides the service of recovery. Finally, once the recovery process is underway, external service agencies and humanitarian institutions move on to the stage of termination.

Fifth, the later phase of outside people and organizations helping is conditioned by and depends on what happens in the earlier phase of community self-help (Carr 1932). During the period between the impact of the disaster and the arrival of organized response activities, such as when emergency plans go into operation or professional rescue organizations take control, without any organization “usually some part of the community remains on its feet, fighting back” (Carr 1932: 212). These individuals spontaneously begin to rescue the injured. The duration and character of this period of self-help significantly influences the following processes of disaster response.

There is one caveat here: What is effective disaster response or recovery, and for whom? A particular problem for collectivities such as communities is that they are composed of individuals (Lévy 1997). Among these individuals there are multiple and sometimes competing interests; the system of New York City highways designed and implemented by Robert Moses shrunk intra-urban and urban-suburban distances for residents with vehicles, but destroyed the sidewalks (not to mention the housing) that allowed the city neighborhoods to work for locals (Jacobs 1961; Caro 1974).

At the Theoretical Level, our Own Focus in the Emerging Field of Community Informatics Leads us to This Question: What Is the Relationship between Social Networks and Disaster Response?

First, the community self-help stage of disaster response and recovery depends on the affected community’s pre-existing social cohesion. To the extent that the social networks are robust and social capital abundant, the community can help itself.

Fritz (1957) compared six different cases, focusing on people’s reactions to disasters as they attempted to re-establish effective social and personal organizations in their communities. He studied four airplane crashes between 1951 and 1952 in Colorado and New Jersey, a series of house explosions and fires in 1951 in New York, a coal mine explosion in 1951 in Illinois, an earthquake in

California in 1952, and a tornado in Arkansas in 1952. In most of the cases, recovery efforts were based on fieldwork that began within the first few hours and continued for one to three weeks. Major findings across the cases focused on the individual psychological impact and the influence of the pre-existing solidarity among community members, in that “a socially cohesive community is likely to recover more quickly from [an] impact than a community characterized by lack of social solidarity” (Fritz 1957: 8).

Second, the help provided by professionals working in formal organizations to the disaster-affected community is found to be least effective when those professionals are outsiders.

As Fritz (1957) and the other disaster scholars reviewed here observe, members of the affected communities were not paralyzed in the wake of disaster, but rather, they participated in the recovery. Thus, if preparedness and mitigation plans are not informed by knowledge of communities and their functions, the stages of disaster are needlessly protracted and continue to harm the community and its people. Form and Nosow (1958, 1966) acknowledge both perspectives on disasters in community and community response:

Fortunately, whether a community has or has not made disaster plans, there are certain social mechanisms constantly operating that enable people to meet many types of daily crisis. . . . Every community life is the result of what people believe in, their values, their expectations, and their social loyalties. These beliefs and values are not destroyed by tornadoes or bombs. They survive physical destruction and enable people and their communities to function under the most distressful conditions. (Form and Nosow 1958:10-11)

Moore (1956) as well as Form et al (1956) modified Carr’s (1932) sequence slightly, pointing out that even though the length of the disaster process varies based on individual and institutional involvement and characteristics of the disaster, every disaster will, at first, produce immobility among people in the area. Then “almost immediately after the impact of the destructive event” (Form et al. 1956: 181) people recover from the immobility and “a period of intense activity quickly follows” (Moore 1956: 735). People and institutions react to the situation by involving themselves in rescue operations, which are informal and unorganized collaborative efforts of “almost complete selflessness and great generosity.” (Moore 1956: 735) As they take these actions, they begin to acknowledge external resources and the participation of outsiders in the operations. These, typically, are professionally trained professionals affiliated with agencies such as the Red Cross. As community members receive help, they gradually become frustrated by being ignored. These scholars

recognize 1) that external rescue agencies ignore local standards and 2) the need for appropriate leadership that addresses local demands and problem solving rather than outsider-driven command-and-control leadership.

Third, stronger local social networks inside the community can lead to conflict with outsiders or official response organizations and also to a positive community transformation.

Wolensky and Miller (1981) conducted empirical studies in four northeastern Pennsylvania communities within the affected area of Tropical Storm Agnes of 1972. Their study emphasizes the differing expectations on the part of citizens and local officials concerning the role of local agencies in response to disaster. The definitional incongruity resulted in two changes in the post-disaster community. First, immediately after the disaster, citizens formed ad hoc groups for rescue operations. Second, in the recovery stage, significant changes occurred in the local political structure. The pre-existing position of council manager was replaced by the office of the mayor. Based on their interviews with citizens about the performance of local agencies in the disaster response, Wolensky and Miller observe that people gained “the desire to have the principal administrative personnel under direct control of the electorate... [S]ince the disaster, a plethora of ad hoc citizens’ committees have emerged throughout the area and joined forces under a citizen’s coalition... The disaster apparently helped demonstrate... that the existing power structure was not meeting the everyday needs of some constituencies” (Wolensky and Miller 1981: 499). The citizens apparently transformed not only the community structure but also their roles in the community in the wake of devastation of disaster.

According to Rubin, Saperstein, and Barbee (1985), three elements contribute positively to recovery from disasters: (1) if *personal leadership* is in place, (2) there is a predisposition to exert pressure on *ability to act* which, in turn, leads to (3) the acquisition of *knowledge of what to do*. These three elements exist in every community to some extent and definitely orient the recovery process towards local needs and desires (Rubin et al. 1985: 25), as does leaders’ prior knowledge of the community.

Discussing the Waco tornado, Moore (1956) notes that demolition crews working with external rescue organizations started knocking over walls for safety reasons, and “merchants were ordered to remain away from their stores” (p. 735). However, these same merchants had led the earlier spontaneous response by giving away their goods. The professional rescue organizations simply came in and started giving orders, provoking a hostile response by the community at a mass meeting the following day.

At the Policy Level, Whom Should We Count on to Carry out Disaster Response? Who Are the First Responders? What Recovery Mechanisms Should National, Regional, or Local Policy and Funding Support?

First, the conclusions above contradict the conception of the first responders to community disasters as being a firefighter, police officer, or EMS professional. If the first responders are the disaster's own survivors, then policy can rely on and build on the spontaneous impulses of people in disaster-affected communities. Public education and the wider availability of response tools and resources could save lives and preserve communities. Even with mass destruction, immediate survivors are more numerous than professionals—immediately on the scene and motivated.

Shedding some light on this policy question Taylor et al. (1970) focus on individual experiences and stories about the first eight days after a tornado. The study points out that a centralized and coordinating agency was in place and operational immediately after the disaster, but that collaboration stemmed from the collective behavior of individuals in the affected community. The authors clearly state that these groups coalesced during the “stage of community response to disaster” (Taylor et al. 1970: 80). According to Taylor et al., at least “twenty-five similar work groups existed, averaging about eight men per crew,” (p. 105). These volunteers were people “who wanted to evolve, and were evolving, their own” identity during the recovery efforts. Although they didn't ask others or introduce themselves, their individual roles evolved from their relatively defined member status into a specific and functional work role: “The ephemeral role—including its associated position in the ad hoc group—becomes an integral part of a larger emergency social system: a system developing during the hiatus when significant components of the status quo seem ineffectual. The ephemeral role is part of the social mucilage that maintains community cohesiveness in the aftermath of disaster” (Taylor et al. 1970: 105).

Second, the professional responders must be trained and prepared to work with the first-responder community members. Their organizations should recruit from the communities they serve, rather than see the community as helpless. However, there is another caveat.

The disaster studies reviewed here rely on empirical data gathered in the immediate aftermath of disasters, typically a period of several weeks. The study of more recent hurricanes, including the 2005 Hurricane Katrina, illustrates how the process actually unfolds over several or even many years. Response and recovery planning has to consider a longer time horizon.

In Summation

We have looked to 20th century disaster studies scholarship to see what the implications are for practical work in disasters, for social research on disasters, and for policymaking. Before we look back at the two writers who prompted our review, our findings can be summed up as 12 points to take away:

1. Affected communities do respond actively to disasters, and in stages.
2. Help given to one's own family is strongly associated with help to others: a virtuous circle.
3. Members of the affected community respond before others respond.
4. They make superhuman efforts.
5. How others may help depends on the community's self-help.
6. Powerful and contesting interests are at stake.
7. A community's own disaster response depends on preexisting social cohesion.
8. Pre-existing social cohesion can contribute to conflict and transformation.
9. The first responders are not the firefighters, police, emergency medical services, or other emergency personnel.
10. These professional responders work best when they are known in the community.
11. Especially if they are not local, professional responders need training in how to work with affected communities as active responders.
12. Disaster response and recovery can take years; laypeople, researchers, and policymakers all need to work with a longer timeline.

Conclusion

Our scan of pre-1986 disaster studies literature from North America has helped make sense of two recent, sound, but contradictory books. This literature affirms and contextualizes the "paradise" that Solnit (2009) found at the center of disaster response: it is indeed a normal, social, human response, the Utopian period where communities rise to the occasion, help each other, and carry out superhuman tasks. Her question is this: How can we extend this moment? The literature offers two answers: One, by acknowledging and respecting it. This is explicit instructions to all others, especially outside institutions, who join in disaster response and recovery. Two, we cannot extend it forever, because we are not superhuman. But perhaps one source of the hope that Solnit is searching for can be found in the work of Fullilove (2004) who

studied the disasters that late 20th-century African American communities experienced due to economic abandonment combined with so-called “urban renewal.” Fullilove found ways to commemorate the utopian moments that all communities experience; and it may be that remembering will protect and foster more such moments and even prevent or minimize future disasters. “You can make something beautiful from your grief,” one of her respondents told her, and Fullilove describes a key Pittsburgh intersection where community members once posted a billboard manifesto and years later the community accomplished the work of installing a memorial sculpture (Fullilove 2004: 227).

Klein (2009) sounded an alarm regarding the misuse of power in moments of disaster. Here again, the disaster literature reviewed here affirms this factor, and begins to identify the social forces involved, conceptualizing people and institutions as insiders and outsiders and focusing on instances of conflict as well as harmony. Although more work is needed, later work on Hurricane Katrina and the 2005 hurricanes generally (SSRC, n.d., Williams et al., 2007) suggests how far we have come. Internationalizing the review reported here can only sharpen this analysis.

Understanding communities victimized by disasters is vital for development scholars. Amartya Sen’s *Development as Freedom* (1999) takes into account such disasters as economic crisis and famine in communities. But today the world is prey to more frequent and more varied disasters, especially with climate change promising more disastrous impacts ahead. Klein, Solnit, and the disaster scholars discussed here serve to help us interpret and extend Sen’s five freedoms: political freedom, economic facilities, social opportunities, transparent guarantees, and protective security.¹ Sen starts with the assertion that local people’s agency is the concern of freedom and thus agency is critical to development. Likewise, local community agency is the starting point for recovery from disasters.

To end our review, we restate our single most important policy conclusion. After the 2004 Indian Ocean earthquake and tsunami killed at least a quarter of a million people (Jayasuriya and McCawley 2010), technologists and governments alike called for early warning systems to be put in place, no matter the expense. This review suggests that equally valuable *social* mechanisms be put in place—above all, explicit support for the actual first responders, in other words, the members of communities that have been or may be affected by disasters.

¹ Development depends on and is secured by these five freedoms. Navarro (2010) responds to and supplements Sen with a discussion of development and power.

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