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Fire as a Galvanizing and Fragmenting Influence on Communities: The Case of the Rodeo–Chediski Fire

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Large wildfires that burn through the "forest–residential intermix" are complex events with a variety of social impacts. This study looks at three northern Arizona community clusters directly affected by the 2002 Rodeo–Chediski fire. Our analysis suggests that the fire event led to both the emergence of cohesion and conflict in the study area. Community cohesion was evident as residents "pulled together" to rebuild their communities. Examples of cohesion included managers of local businesses staying during evacuation to provide for the needs of firefighters, providing shelter and cleanup help for burned-out neighbors, and the emergence of locally based assistance groups. Several types of conflict rooted in blaming and distribution of firefighting and disaster assistance resources were found: cultural, local versus federal, community versus community, intracommunity, and environmental. We suggest that these responses are most usefully understood using the lenses of social psychology (attribution theory) together with sociology (structuration theory). Issues and dynamics that resulted in controversy or were seen as locally constraining and those that resulted in cohesion tended to relate to specific local impacts and how outsider actions were either consonant or dissonant with the application of local knowledge, local autonomy, and locally desirable outcomes.

Keywords conflict, natural/technological disaster, social cohesion

> I just think it strained a lot of people, taxing them with their stress level; it really tore them apart. It also pulled them together as well, an emotional roller coaster.[1]

Large wildland fires that impact forest-adjacent communities in the western United States have become a seemingly more common story in the 24-hour news cycle during the summer months. The television images have become predictable: dramatic flame fronts, streams of evacuating vehicles, shots of planes dropping slurry, and breathless first-person accounts of how the flames roared through a particular neighborhood. With rare exception, however, what is usually not told in media accounts is what happens to burned communities after the initial crisis is over, the firefighters go home, and the media move on to the next story. What do people in such communities live through in the days, weeks, months, and years after the fire? Do fire events change communities or do they go back to business as usual? Do such events bring communities together or do they create divisive conflict?

This article presents the results of one case study of a particularly dramatic wildfire—the Rodeo–Chediski fire—which occurred in the White Mountains of Arizona in the summer of 2002. Interview data were collected in affected communities to examine the community/social impacts of the fire event. Although both ignitions in this particular event were apparently human-caused (these were two fires that merged into one), fuel conditions in the forest and around the affected communities had been a public issue for some years. The primary research questions addressed in this particular analysis revolve around the extent to which this particular fire event brought the affected community residents together and/or the extent to which it created tension and conflict. As our title suggests, both things happened. This article focuses on a description and analysis of the galvanizing and fragmenting influences of the Rodeo–Chediski fire and a discussion of the lessons to be derived from this particular case.

Cohesion and Conflict

Although there is an extensive literature on human community response to disaster events, there has been relatively little research on the community impacts of wildfire disaster events. We suggest an understanding of responses to such events and the resulting cohesion and conflict is rooted in both social psychology and sociology. To make this case we should begin by admitting that the classification of disasters as "natural" or "human caused" (technological) is a crude one (Berren, Biegal, and Ghertner 1980) and if taken at its most superficial level may mask more complexity in terms of human response than it explains. It should also be borne in mind that the individual circumstances of a particular disaster event, its severity, the particular history and past experiences of the communities involved, and other factors influence individual and community response to such events (Aronoff and Gunter 1992; Kroll-Smith and Couch 1990; 1994; Ladd and Laska 1991). We suggest, however, that this dichotomy provides a *starting point* for understanding some fairly complex human responses to equally complex events.

While wildfires are often viewed as natural disasters, they have elements of both natural and technological disasters (Beebe and Omi 1993; Kumagai et al. 2004a). Wildfires are the result of a complex chain of events in which "nature," humans, and technology play important roles. Wildfire may be caused by an act of nature,

such as a lightning strike or by the act (deliberate or accidental) of humans. Fuel conditions also clearly play a key role and are, in turn, affected by such natural conditions and technological practices as past land management practices, site-specific vegetative conditions, fire history, and weather and climate cycles.

One theme in disaster literature is that natural disasters such as floods and hurricanes, the causes of which are clearly outside of human control, *generally* tend to bring community residents together. Such events may promote, at least in the short term, what has been referred to as the "therapeutic community" (Cuthbertson and Nigg 1987), or social cohesion (Quarantelli and Dynes 1976). This has generally been understood in terms of the famous observation of Georg Simmel that groups tend to increase internal cohesion in the face of outside threats (Wolff 1950). This cohesion emerges after natural disasters as a result of victims feeling "we're all in this together." A natural disaster is seen as an uncontrollable event or "act of God" affecting everyone, with fate determining who is affected. Human-caused or "technological" disasters, however, tend to set the stage for divisive finger pointing and blaming behavior (Cuthbertson and Nigg 1987; Kroll-Smith and Couch 1990; Quarantelli and Dynes 1976). Conflict and anger can become dominant as victims blame what they perceive to be the responsible party (Cuthbertson and Nigg 1987) and disagree over remediation measures (Cuthbertson and Nigg 1987; Kroll-Smith and Crouch 1990; 1994).

Social psychology research suggests that when there is a severely disordering event in an individual's life, there is a tendency at the individual level to look for a human agent to whom to assign or attribute responsibility (Kumagai et al. 2004a,b). Technological disasters tend to create divisiveness among stakeholders, due in part to the fact that technology is a human product. Thus if technology somehow "fails," by definition there has been a human failure and victims tend to search for a culpable party to hold responsible for the impacts they are feeling (Kroll-Smith and Couch 1990). Given the fact that most current-day technological disasters are the result of a complex set of circumstances and the actions of many parties over both time and space, identifying a single culpable party upon which all stakeholders agree is rarely possible and the search for culpability is not without controversy.

Response to disaster events is not simply a matter of *individual* perception or action, however. If and how the attribution process just described unpacks is a function of *sociological* dynamics and depends on particular circumstances at the community level. Sociologically speaking, we argue that community response to a disaster is best understood in terms of both social constructivism and structural constraints. On the one hand, groups develop social constructions to explain events that affect their lives and then act and react on the basis of such constructions (Kroll-Smith and Couch 1994; Homan 2003). Given the fact that most disasters are the result of complex interactions of biophysical and often human dynamics, it should not be surprising that different groups may construct the "cause" of (and therefore often the responsibility and possibly the culpability for) disaster events differently (Aronoff and Gunter 1992; Bucher 1957; Ladd and Laska 1991). Such constructions are partially the product of a group's or community's collective knowledge and experiences with similar events or related issues (Hoffman 1999). Often local groups have extensive and detailed knowledge of and experience with certain realms and less with others. Again it should not surprise us that groups frame social constructions to understand events on the basis of prior experience and collectively held beliefs (Homan 2003) and then act on the basis of such constructions.

On the other hand, as Aronoff and Gunter (1992, 346) point out:

> Although constructivist analyses of technological disasters counter deterministic assumptions of local disempowerment, if they focus exclusively on the claims-making activities of local actors they may understate the debilitating impacts of these disasters. Theoretical models that fail to consider both constructivist and structural dimensions of these crises ignore the integral relationship between structure and agency reflected in local experiences.

These authors go on to suggest that Giddens's (1984) structuration theory allows the analyst to consider the impacts of social structure *and* social construction simultaneously:

> This approach allows us to understand how structural elements... constrain and enable collective action. At the same time, it encourages a more critical understanding of the long-term constraints on local recovery posed by even the most resilient local response. (Arnoff and Gunther 1992, 346)

Structuration theory allows the sociologist to unveil the complex structural factors behind human responses to disasters of ambivalent origins. Moreover, structuration and related theories help the analyst look more closely at the social systems underpinning cohesive and conflictive responses to fire and the broader social and historical forces involved while at the same time allowing for an understanding of the agency that local residents and community leaders can bring to a disruptive event and its aftermath.

This research found that in the case of the Rodeo–Chediski fire, communities differed in dominant response to the fire depending on perceptions of the appropriateness and adequacy of federal agency firefighting and emergency assistance efforts (Schneider 1992), fairness of aid distribution, and outsider–insider status (Hoffman 1999; Quarantelli and Dynes 1976). When responses generated cohesion, participants tended to report the benefits of local, informal social systems, while negative responses were most often invoked by disembedded rational systems such as command and control bureaucratic approaches to fighting fire and distributing resources, which were in some cases perceived as constraining. In other words, the range of social structures engaged throughout the fire and its aftermath was reported as both enabling and constraining positive action. For instance, when activities happened somewhat spontaneously, such as when an assistance organization was able to stay and provide helping services, people perceived positive outcomes. When the institutional capacity of firefighting systems and aid systems was deemed (by some) to be inadequate or misapplied and spontaneous agency constrained, negative responses from those actors resulted.

After describing the study area and clusters of responses, we look more closely at these galvanizing and fragmenting social forces, concluding with a discussion of how social structure and its enabling and constraining features provide both challenges and opportunities for wildfire response systems and communities in the forest–residential intermix.

Study Area

The study area consisted of three community clusters in the White Mountains of northeast Arizona. This area is forested country consisting of ponderosa pine and mixed conifer forests. The area is largely rural, with no community larger than 20,000 in population. Most of the communities in the White Mountain region were founded in the late 1800s and had resource extraction-based economies, but that has since shifted to tourism and recreation. The area's cool summer climate and proximity to the Phoenix metropolitan area make it a summer vacation retreat. U.S. Census figures (2003) show that 27.4% of the residences are seasonal, recreational, or occasional use in the county studied.

Although the fire occurred in four counties, the communities in this study were located in one county. This county is 113,635 square miles, with a population of 97, 470, and encompasses most of the Fort Apache Indian Reservation and small portions of the Hopi and Navajo Indian Reservations. Native Americans comprise 47.7% of the county's population, and whites 45.9%. However, the communities studied were primarily white (U.S. Census 2003; USFS 2002b).

The Rodeo fire was allegedly started on June 18, 2002, by a part-time Bureau of Indian Affairs (BIA) firefighter from the Fort Apache Indian Reservation. After an investigation, he was arrested and indicted by the U.S. Attorney's office for setting the Rodeo fire. The Chediski fire started on June 20. This fire was started by a woman who had been lost for several days and lit the fire to attract searchers. The federal investigation concluded that she had not acted with criminal intent, but rather to save her life. She was not charged with a criminal offense. Both fires started on the reservation and joined on June 23. This fire complex directly affected a large area of northern Arizona south of State Highway 260 and the Fort Apache Indian Reservation. By the time the combined fire was contained on July 7, it had burned over 460,000 acres and destroyed almost 500 homes and outbuildings (Navajo County 2002). Over 32,000 residents were evacuated from more than 10 communities both on and off the reservation (USFS 2002a).

Indian communities within the Fort Apache Reservation were outside the scope and funding of this project and were not studied here. To the authors' knowledge, research on the impacts of the fire events in those communities has yet to be carried out. There is also reason to expect that residents of other nonreservation communities not in the specific path of the fire may have suffered indirect impacts, but again this analysis did not allow for their documentation.

Methods

The interview data for this study were gathered and analyzed using grounded theory, a qualitative, inductive approach to understanding social phenomena. The process builds an increasingly complex representation of the social dynamics under study through progressive inquiry and conceptualization. In this approach, insights emerge from the data, in contrast to testing data against predetermined hypotheses. Typically, observed patterns emerge early in the data collection and are then tested with additional observations. Data collection is suspended only when patterns stabilize and no novel information is forthcoming from later observations (Strauss and Corbin 1990).

In-depth, semistructured interviews were conducted with residents in communities directly affected by the Rodeo–Chediski fire complex. Initial interviewees were selected on the basis of referrals from U.S. Forest Service managers and knowledgeable locals. Other names were then obtained via chain referral. Interviewing took place in October and November 2002. In total, 75 interviews were conducted by two highly experienced field workers. Due to the qualitative and inductive nature of the study, *theoretical*[2] rather than statistically based sampling (Charmaz 2000; Glaser and Strauss 1999) was used to select interviewees.

Geographic Dimensions

Early in the field work it became clear that the fire event was experienced quite differently in different locations within the study area. These differences were a function of how the fire behaved in different places but also, and perhaps more importantly, the character of the communities involved. On the basis of these different experiences we identified three broad community impact zones within the study area which are described here as Community Clusters A, B, and C, or Centerville, Forestville, and Pioneertown. The distance from Centerville, on the eastern end of the fire, to Pioneertown on the western end is about 65 miles. The three largest, contiguous towns are in Centerville. They are incorporated. Forestville consists of five scattered, small unincorporated hamlets and subdivisions, and Pioneertown has two contiguous small, unincorporated towns and one outlying subdivision.

Community Cluster A, Centerville

These communities, including their surrounding subdivisions, are widely described as the economic hub of the entire White Mountain area. Although there are many long-time, year-round residents in these communities, there is also a sizable population of seasonal residents. For many full-time residents and perhaps especially seasonal residents, scenery (and in particular the presence of trees) is a major part of the quality of life in the area. Thus, the way of life and the economy of the economic hub of the White Mountains were both threatened by the fire.

Residents of Centerville were evacuated early in the fire event. Evacuation and the accompanying uncertainty caused anxiety and disruptions both in residents' day-to-day lives and in the operations of the many businesses in the communities. Smaller businesses and tourist-dependent businesses in particular suffered as a result, most notably those with perishable inventory such as plant materials and nursery stock. In the end however, the towns proper were spared the brunt of the fire. If this had not been the case and these towns had burned, many who were interviewed for this study felt the entire White Mountain region might have suffered irreparable economic harm.

Community Cluster B, Forestville

While the communities in this cluster are geographically proximate to Centerville, they are quite different historically, socially, and economically from that community cluster. Although these communities have only fire and school districts as units of local governance, they are characterized by the strong presence of the Mormon Church. The economy of this area was once based on timber, but now many

residents commute to work in Centerville. There has also been a recent influx of part-time residents.

The communities and subdivisions of Forestville were evacuated on the first and second days of the Rodeo fire. Some had minimal notice and had little time to pack their key possessions. Forestville, which includes a number of unincorporated subdivisions, suffered the bulk of structural losses from the Rodeo fire including one fire station. County-level figures show that 166 structures in this area were burned, with most of those (106) in a single subdivision (Navajo County 2002).

Community Cluster C, Pioneertown

This community cluster has the highest percentage of part-time residents, close to 60%. Residents describe the two main towns as a place where ''everyone is either a friend or a relative.'' Many part-time residents have been coming to the area for years and are active in the community.

Pioneertown suffered the greatest (numeric) loss, 303 structures, of all community clusters affected by the fire complex and experienced the longest evacuation. Residents of Pioneertown were evacuated the day the Chediski fire started (June 20) and returned on July 2. Despite little preparation time, they were able to plan and hold their Fourth of July parade, described as an act of togetherness and strength.

What made the experience different in Pioneertown, according to those interviewed, was the short notice for evacuation (30 minutes in some cases), the number of homes lost, the lack of media coverage, the length of evacuation (2 weeks), and the delay in finding out about burned homes. In addition, some residents were evacuated twice, once from Pioneertown, and then from Centerville. The Chediski fire burned through each of the two central towns of Pioneertown at two different times and came within one mile of the subdivision on the western edge of the fire.

The Fire Event as a Galvanizing Influence

As we noted, the interview data suggest that the fire event had both a galvanizing and a fragmenting effect on the communities in the study area. In the case of the former, almost every interviewee volunteered the observation that people and organizations in the communities ''pulled together'' during and in the immediate aftermath of the fires. This pulling together included volunteer help with evacuation, sharing food and supplies, and providing transportation and information.

During the fires themselves, a few local retail businesses kept their doors open to provide services and supplies to firefighters and volunteers. One local business manager reported:

> Then on the 21st, they did a total town evacuation, so my whole team left, everyone left, and I elected to stay behind mainly to let the firefighters come in and have some shelter and someplace to eat—because there was nothing open—so they could get food, water, underwear. They had no PX either, so they had nowhere that—the government didn't bring up any merchandise or anything for them to have.

A local Salvation Army Officer who set up portable kitchens to feed firefighters and community leaders and did not evacuate, described a similar scenario:

> I went with the police and I had a key to [grocery store] and it was just kind of a lucky thing. We had made a food order and the guy said, "I am not going to be there, here is the key." So during the evacuation, I knew there was food in there. We would come in with the police and take what we needed out of there and that was really an awesome thing. . . . It was just incredible to operate this way, but I tell you what the town really pulled together, it was neat.

A local cell phone company in Centerville gave free use of phones to any evacuees who asked for the duration of the evacuation. Volunteers hauled people's horses, pets, and livestock to safe places. There was one particularly heroic story of a local veterinarian driving miles to rescue two dogs whose owners were away on vacation when the evacuation order came down and thus were not allowed to return home. The dogs were rescued with only singed fur moments before the house was engulfed. Local public officials and public safety providers worked to the point of exhaustion and then some during the event. Local radio station personnel worked extremely long hours to provide news coverage.

The pulling together continued after people were able to return to their homes with neighbors helping neighbors with such things as providing shelter for those who were burned out, providing each other emotional support and comfort and clearing burned material from neighbors' yards. One local church leader from Forestville reported the following:

> The first thing we did . . . is that we started having a, what is called a welfare committee meet[ing]. . . . We started having meetings . . . every Sunday morning and directing activities that way. Ultimately through that committee, we were involved in all kinds of clean up activities out in ———. We got all kinds of phone calls from all over the western part of the United States, people wanting to come and help.

A woman from a subdivision that was particularly hard hit found she was stepping into a role as informal community organizer, and reported the following:

> We are contacting all the landowners and finding out their needs. . . . - Some say I can take care of it myself, well that is fine, but if you need something, I am your representative. Others say, like I got a call the other day saying "I need hay." . . . Lady who was the volunteer on the truck, says, "I have a truck and I have a horse trailer . . . I can help". So it's all working out.

Another local leader suggested the fire event pulled together the whole White Mountain region:

> The upside to this whole thing is that. . . it's created a regional sense of community much greater than it had before. We're less separated by boundaries, if you will, knowing that we're all in this together. Even to

the point of being able to identify economic boundaries that overact political boundaries.

There was also evidence of local/federal cohesion. One example was the emergence of the federal Type 1 team information officer who handled most of the day-to-day media relations for the Type 1 Team as a popular figure in Community Cluster A. There were signs posted in the community thanking him specifically and he was invited back after the fire event to participate in a community parade.[3]

The Fire Event as a Fragmenting Influence

Interviewees described social cohesion in the communities before the fires as generally strong, and in many respects an increase in cohesion was the dominant social influence of the fires as reported by the interviewees. However, the fires resulted in tension and conflict among various groups affected by the events. In some cases, these were amplifications of existing tensions, in others, seemingly new conflicts were emergent. The nature of these conflicts is perhaps the more complex set of dynamics uncovered in the research.

Cultural Tension/Conflict

As already described, the fires affected both tribal and nontribal communities in the White Mountains. It is therefore perhaps not completely unexpected, (particularly given that the Rodeo fire was allegedly set by a tribal firefighter seeking work) that some evidence of cultural tension was uncovered. Such tension was manifest in the statements of a number of interviewees in the nonnative communities that the Bureau of Indian Affairs (BIA) and the tribe "did not do enough" in the crucial early hours of the Rodeo fire while it was still entirely within the boundaries of the Fort Apache Indian Reservation:

> Interviewer: But do you [really] know that [the] fire was not well fought while burning on the reservation?
> Interviewee: Well, we were not allowed to go down and help them. We were not allowed to put resources down there to assist them to fight that fire, and it got bigger.

These individuals made much of the fact that the BIA fire team felt it was unnecessary to accept any suppression help from the Forest Service during the first day of the fire. Among the unsubstantiated rumors circulating was that before the fire could be fought on particular reservation lands, a tribal "Holy Man" had to be brought in to "bless" particular places.

BIA and tribal officials disputed the rumors and the criticisms concerning the level of effort and deployment of resources during the first day of the fire, making the case that they did everything one could reasonably expect to do during the initial attack, and describing at great length the amount of equipment and the number of personnel deployed during the early minutes and hours of the fire.

There were incidents of hostile behavior and language by non-Indians toward tribal members who patronized retail businesses in Centerville after the fire. Both tribal and Centerville officials emphasized that these were isolated incidents and that in

general there was no widespread resentment against the White Mountain Apache Tribe (Blackwood 2002). The mayors of the two largest towns in Centerville did much to alleviate tension stemming from the fire event by publicly pointing out that the tribe had conducted a fairly aggressive prescribed burning program on tribal forest lands adjacent to the two towns and that had this not been the case, the chance of the fire moving into the communities would have been much higher.

Local Versus Federal Tension/Conflict

The research uncovered two main foci of local versus federal conflict in light of the fires. One of these concerned the firefighting itself. Some residents of Pioneertown and Forestville blamed the BIA and Forest Service for letting the fire get out of control by what they viewed as non-aggressive initial attack. They also blamed the federally led interagency Type 1 Team for the loss of homes and property. In this regard, this team was accused of, in effect, letting homes burn by not allowing firefighting equipment into threatened residential areas in the hours and days before the flame front arrived. "Equipment was lined up along the highway and they didn't use it" was a common refrain. Nonagency personnel involved with the fire (contractors etc.) added that the daily shift changes as well as the Type 1 Team changes led to downtime when people and equipment were not being used effectively, thus leading to loss and damage of property. The following is from an interview with one local firefighter whose fire company was subsumed under the federal Incident Command System[4]:

> So, at the one building, there was a gal in charge of that engine....She said: "We are going to work so many hours, and then we will have to say we have to lay down and go to sleep." They slept right there, but they should have gone out....They did damn little protection up there and I lost my mine [home]. I have a neighbor over here that lost his; and the next one over lost his—that is just right here. And, this goes back to a continuing inability for Forest Service people to do a good job firefighting.

Another local fire chief had this to say about relations with the Type 1 Team leadership and their seeming lack of utilization local firefighters' knowledge of the community:

> We played with the [fire for] two or three days [when] the Type 1 team came in and wouldn't let my people participate. We had 30 volunteers at the time down there with their homes burning. Three of my guys lost their homes. We had places in the ——— area here that burned badly ... we lost most of our homes. It's so treacherous with the hills, streets, cul-de-sacs—that unless you know the areas you're lost in there. Well, the Type 1 team far as I'm concerned wrote us off and didn't do anything for us; they were gone to protect [another larger community in Centerville]....That is only my perception but I was out there long enough to know where the line was cut and they were not being cut in my fire district, so I had to have words with them, very irate words....Once we got it straightened out that my area was just as

important, my homes were just as important as any home that anybody had to fight fire on, we got together and everything went smoother.

In Pioneertown and Forestville, this conflict reached the point that homeowners and local volunteer firefighters rebelled against the Incident Command System for a time and earned the moniker of ''renegades'' in the local press. This controversy also led to the resignation of a fire chief in Forestville and his replacement with one who favored more aggressive and independent action.[5]

It should be noted that this conflict was largely confined to Pioneertown and Forestville and that city officials from Centerville and from the county were effusive in their praise of the Type 1 teams and their leadership and critical of some of their fellow local fire officials in the other two areas. One fire chief from the Centerville community cluster stated:

> The Forest Service and the management teams have been accused of focusing all their resources to save [Centerville] and let the others burn, which is totally wrong. Having been part of the decision making process and the management team, that's not the case at all. . . . It's created some negative impact amongst fire departments because there were some things that went on in some of the outlying fire departments that aren't conducive with standard operation procedure, following the incident command system.

Another point of conflict was between some local people and the Federal Emergency Management Agency (FEMA), which moved a field office into the area after the fire. Local town and county officials generally praised FEMA, pointing out in particular the programs the agency sponsored to provide wood chippers to the county to help process postfire brush and woody debris, and the grant that supported the White Mountain Recovery Project, a mental health and counseling effort aimed to help anyone living in the affected area. On the other hand, homeowner-interviewees who had sustained losses tended to be very critical of FEMA, saying the agency initially gave them the impression that there was a possibility of financial help and encouraged them to fill out ''mountains of paperwork.'' Only later did FEMA inform them of the criteria for receiving help, criteria homeowners found so restrictive that they felt ''they never had a chance'' of help in the first place. Registration and application procedures were reported as confusing. Several interviewees stated that their frustrations in dealing with FEMA added insult to the injury of the fire itself.

The American Red Cross[6] also became the subject of local controversy to the point that the organization was picketed by locals in Centerville. One local informant explained the situation as follows:

> What really was the tough thing on the community was that they [the Red Cross] would line the people up around the building and they would say, ''Okay, we will start taking you in, one at a time,'' and they would make them stand out there in the heat, and it was frustrating for a lot of people. And towards the end of the day they would say, ''Okay, you have to come back tomorrow. . .'', and [the people would say ''[W]ait a minute, I have been waiting here for five hours.'' They would go out,

and the nice people, the locals, working for the Red Cross would go out and say, "...you are old, and it's hot out here why don't you go home and just come back, we will be here, we will help you later, you don't need to be standing out in the sun" and so a lot of elderly folks went home. And then they come back another day and the [Red Cross] folks had cleared out....[T]his is really the first negative thing I have ever said about the Red Cross, they were poorly orchestrated.

Community Versus Community Tension/Conflict

As we noted earlier, the fires affected each of the three community impact areas differently. As has been the case in other fire-affected localities (Carroll et al. 1999; Rodriguez-Mendez et al. 2003; Hoffman 1999), these differences in impacts, differences in local circumstances, and associated events all contributed to tensions and conflict among communities in the three areas.

Because the Centerville locale was threatened early in the fire event (but in the end sustained the least damage), it was the first nonreservation area to which a federal Type 1 firefighting team was assigned. As we noted earlier, it was also the area that received the most outside media attention during the fire and thus the largest number of offers of help from ordinary people and helping organizations wanting to contribute money and other resources to aid in recovery.[7] All of this help and attention was not lost on the other two areas, whose residents suffered more tangible damage and loss. Little of this local–federal tension was apparent in the Centerville area. These differing experiences also contributed to the feeling on the part of many in the other two areas that this area got the lion's share of the attention, sympathy, and outside help, while others suffered greater losses in relative obscurity.

Within-Community Tension/Conflict

As we noted earlier, the disaster literature is replete with examples of communities suffering internal conflict in the aftermath of disaster events. Evidence of internal community conflicts stemming from the fire event was fairly sparse. There is, as we have noted, evidence of conflict within one volunteer fire department, which led to the very public resignation of the chief and several firefighters during the fire itself. In Pioneertown, there were strong feelings of anger at the woman who allegedly started the Chediski fire. These feelings led to some tension between those who publicly stated they had moved beyond their anger at the woman in question and those who chose to hold on to their anger. Some interviewees told field workers that they stopped attending public meetings on fire recovery because they did not want to "deal with the anger of their neighbors."

Environmental Conflict

Environmental conflict played a role in residents' perceptions of the root cause of the fire event. Most interviewees said that poor forest conditions, that is, many small-diameter trees that contributed to high fuel loads, were the main cause of the destructiveness and intensity of the fires. Debate over forest conditions and conflict over management of national forest lands in this area existed before the fires and was aggravated by the fire event. The environmental conflict also included disagreement

over how to treat the burned-over forest, that is, how much or whether salvage logging should occur. Many traditionalist locals were concerned that any Forest Service plans to conduct salvage logging would be appealed or litigated, thus destroying the economic value of rapidly deteriorating burned timber.

If there is one area of agreement among virtually all interviewees, it is that the forest in the study area is not currently in a ''healthy'' condition. However, to understand people's perceptions for how to return the forest to a healthy condition, one must understand their historical perspective on how it got to an ''unhealthy'' condition in the first place. For most people interviewed, current forest conditions were chiefly seen as a function of the reduction of active management generally, and logging in particular, on national forest lands. This was seen largely as the doing of environmentalists and their litigation.

However, local environmentalists (although admittedly few in number) rejected the notion that reduced logging was the problem. They placed the blame on past logging practices together with fire exclusion, arguing that the net effect of the agency's timber sale program and questionable silviculture over the past 50 years or so was the removal of too many large trees and harvest blocks that were too large and/or in the wrong location relative to critical habitat.

In summary, it is fair to say that with the exception of intercommunity tension/ conflict, the bulk of the local conflict generated as a result of the Rodeo–Chediski fire was seen locally as a being in response to the actions (or inactions) of nonlocal entities. Even in the case of intercommunity conflict, the main issues revolved around the perceived differential response of outside[8] groups (firefighters and helping entities) to local needs. A significant proportion of internal conflict that did occur within communities was over differing internal responses to outside groups. This quote from a woman who lives in Forestville epitomizes this insider–outsider distinction:

> Arizona is a pioneering state—a long history of fighting. Some of it comes through those who pioneered this area, whether they were here as cattlemen/settlers. We have that, and I have seen a lot of that in here—it is a strength. And, there is independence in here—I see that coming. We will survive in spite of environmentalists/our government, or whatever—we are going to make it work. This will be the third time (in this same spot) Charlie will build a house—we will survive.

Discussion

It is fair to say that residents of different territorially based clusters of communities outside the reservation experienced the fire differently. These differences were a function of how the fire behaved in different places but also, and perhaps more importantly, of the character of the communities involved. These experiences and community character led to somewhat different social constructions of the fire event in the three areas and different expressions of local agency, depending on the specific circumstances and needs in the communities. That conflict and cohesion were most noticeable and expressed most strongly in the community clusters most directly affected by the fire (Forestville and Pioneertown) lends credence to Homan's (2003, 147) remark that ''the greatest need to understand comes from those that have experienced the greatest losses.''

For most residents in Centerville, there were fewer postfire disruptions in day-to-day life, whereas in Forestville and Pioneertown reminders were constant—burned landscapes, the threat of flooding, rebuilding homes, and so on. An oft-repeated theme in the latter community clusters even for those whose homes did not burn was that the surrounding forest would "never be the same" in a living person's lifetime. The residents of Centerville could afford to be more philosophical about the fire. For them, the fire event, its impacts and consequences—and those seen to be responsible (or not) for such impacts—were more distant matters.

Cohesion

Social cohesion and a strong sense of local agency were evident in the wake of the Rodeo–Chediski fire. Residents were determined to stay and help each other rebuild their lives, homes, and communities. They wanted their lives to return to normal and were focused on the future. There was local recognition that the presence of outside helping organizations would be short term. Community-based assistance organizations emerged to provide longer term financial and counseling services and to assist those whose needs were not met by the outside organizations. Interviewees in all areas attributed the pulling together to the small-town, helping, friendly, and independent nature of their communities. They also credited the long-term ties among residents, strong churches, familiarity with the area, and the people. Mentioned as well was a mutual "old-time dependence"—all people have is each other. You don't turn down a request for help because *you* may need help one day. This was nothing new for them; they had come together previously in times of need. However, nothing of this magnitude had happened locally before.

Local, traditional social systems were engaged and enabled residents and organizations to take action—to do something to help the situation. This contrasts with the social systems that evoked negative responses. These tended to be the disembedded, rational systems engaged by extralocal entities such as the nonlocal elements of the Forest Service, Red Cross, or FEMA.

Conflict

We suggest that the conflicts that emerged or were amplified in the fire event are partially explained by social psychology (attribution) and partially by the interaction of social structure and social construction. As we have noted, there is literature to suggest that blaming behavior is common in technological disasters (although certainly not unheard of in natural disasters) (Kroll-Smith and Crouch 1990; Kumagai et al. 2004a), and this was evident in the study area. As we have also noted, residents of Forestville and Pioneertown in particular tended to blame a variety of entities for the occurrence and magnitude of the fires. Victims blamed the alleged igniters (one of whom was a tribal member) for causing the event. Federal firefighting agencies were also blamed by some for alleged "ineffective" firefighting tactics. Environmentalists and traditionalists both blamed federal land management agencies for prefire land management practices that they claimed led to unhealthy forests and a build-up of fuels. From the perspective of local critics, the institutional capacity of firefighting systems became overwhelmed, while command-and-control operating procedures inhibited local volunteer efforts to compensate for limitations.

Issues of structure and agency also played important roles. The White Mountains as an economic region had been historically timber based and, due in large part to changes in federal timber policy, had gone though a period of economic transition. The result of these changes was the virtual disappearance of the timber industry by the early 1990s. The economies of the two community clusters in the study area most affected by the fires happened to have been especially timber-based. Thus, the Rodeo–Chediski fire can be viewed as the latest episode in a turbulent period for these communities. From the point of view of many in these communities, the Forest Service (particularly at the regional and national level) has been in the forefront of changes imposed by larger external forces over which the communities had little influence but to which they had little choice but to adapt. In this context, locals attempted to exert a modicum of power by resisting authority and critiquing the actions of authorities such as the Forest Service. This extended even to some local firefighters, who wanted to extend an all-out effort to save homes and property, in some cases against the orders of federal fire team leaders and even their own leadership. These agency–structure relationships illustrate Giddens's concept of the duality of social structure—that is, "the structural properties of social systems are both medium and outcome of the practices they recursively organize" (Giddens 1984).

Attitudes toward the Red Cross and FEMA were the result of a large perception gap between what fire victims expected and what they received (Schneider 1992). A common theme encountered in the interviews was that individual residents expected, on the one hand, a better organized and more effective distribution of financial recovery resources and, on the other, a more sympathetic and caring response than they actually received. Nonetheless, many found ways to utilize grants and donations and formed organizations that met the needs of the people in their communities and functioned long after Red Cross and FEMA left. In this way, social structure both enabled and constrained effective action, with nonlocal, bureaucratically rational systems found wanting.

The conflict over the firefighting itself was perhaps the most intense of the post-disaster conflicts. It is worth repeating that there were great differences in different communities over the perceived effectiveness and organization of the federal firefighting efforts. There appear to be several underlying reasons for this. These include causal attribution (blaming) by fire victims (see Kumagai et al. 2004a), a focus by the Type 1 team leadership on the big picture of the fire as a generalized event versus a more place-specific view (Scott 1998), differences in culture and bureaucratic norms between large government agencies and local communities, and genuine differences in values and priorities over how to fight fires and what level of risk to firefighters to tolerate in order to protect homes and property (Cortner and Lorensen 1997).

There is a tendency on the part of higher level federal firefighting decision makers to depersonalize a fire event much as a military commander would depersonalize a battle plan. Such depersonalization, while undoubtedly helpful for clear analytic and strategic thinking, grates on local residents and local firefighters, whose *particular* homes and special places are at risk. For Type 1 team decision makers, firefighting is a matter of logistics, organizational decision making, and trade-offs; for locals it is a highly place-specific defense of homes and landscapes. One Forest Service district-level firefighter interviewed related a conversation he had with a fellow local crew member that captures this dynamic. He reported that the Type 1 person told the crew member he was taking the fire "too personally." The interviewee's reaction was that they "were taking it personally because they live here."

Perhaps most fundamentally, the conflicts over firefighting boiled down to issues around federal authority and local agency. Local volunteer firefighters and even some locally based federal firefighters felt constrained by the rules and decisions made at higher levels and not valued for their knowledge, skills, and commitment. In addition, in such situations there is seemingly unavoidable confusion and frustration at the ground level (not unlike that of the fog of war) when a large-scale, military-like operation is mobilized and particularly when it attempts to utilize or interface with personnel whose training, orientation, and background are very different from those of its own people.

Disagreement over the allocation of resources (Quarantelli and Dynes 1976; see also Hoffman 1999) was present in some of the conflicts. Intercommunity conflict focused on the allocation of firefighting, helping resources, and media attention during and after the fire. The incorporated communities of Centerville were able to access external financial resources more readily. Stoking the bad feelings was the fact that Centerville suffered the least fire damage, yet received most of the attention and resources during and after the fire. The Red Cross was criticized for its handling of aid distribution in Centerville. In Pioneertown, residents expressed concerns that donations of food and supplies were handed out to anyone who came by without verifying actual need. Some felt that the handout of free tools for property cleanup hurt local business owners who sold those items. Whether due to the dynamics of the fire itself, or because institutional capacities were quickly exceeded given the magnitude of the fire, the relative inflexibility of rational, bureaucratic systems was seen as unable to adapt to quickly-changing conditions, something at which the spontaneous creation of local helping systems seemed more adept.

Insider/outsider dynamics were also at play in local response to the event and its aftermath. While outsider assistance organizations such as Red Cross and FEMA were maligned, insider organizations such as the Salvation Army, White Mountain Recovery Partnership, and Pioneertown Community Recovery Team received better local reviews. For example, in Pioneertown, informants from the Salvation Army and the Baptist Church said that their involvement in emergency services during and after the fire made the community more aware and more accepting of their organizations; in effect, they went from outsider to insider status. Interestingly, local residents also extended the insider designation to part-time summer residents as well. As far as the fire was concerned, they were considered part of the community, had experienced the disaster, lost their homes, and therefore were included in the recovery efforts.

Conclusion

Sociologists since W. I. Thomas have argued that how people perceive and define situations has very real consequences for their behavior and indeed their lives. The results here suggest that nowhere is this clearer than in the case of local response to wildfire. The biophysical reality of a wildfire is undeniable, but the natural and technological aspects of such an event are sufficiently complex and ambiguous that there is much room for human interpretation of the true nature of the event. Our results suggest that the interpretation of wildfire events has a profound influence on the human response. The other side of the coin is that such interpretations and the responses that follow are shaped by structural attributes such as the economic and social histories of the communities affected, as well as the place-based versus

disembedded systems enacted during and after the fire. Thus, we are not arguing that the interpretations applied locally to the fire events were entirely unique to this particular case. In fact, similar constructions were found in other cases (Rodriguez-Mendez et al. 2003). It is fair to posit, however, that the fires might have been very different events if they had occurred around communities with less of an ethic of individual and community self-reliance. The historical circumstances and current conditions of the communities were both constraining and enabling in terms of responses to the fires and their aftermath.

On the positive side, this fire event and the associated restoration, rebuilding, and community fire planning efforts will likely provide opportunities for residents to engage with locally based fire management officials and systems and develop the trust and shared understandings necessary for effective concerted action. On the negative side, we documented a number of ways in which the fire event contributed to fragmentation within and among the communities and between communities and outside agencies. Future research should attend to how local and extra-local institutions and practices are remodeled in the aftermath of catastrophic wildfire.

An additional point to make is that although the literature might lead one to anticipate the conflict and cohesion produced by the Rodeo–Chediski fire, this should not be interpreted to mean that specific outcomes are inevitable or that the issues that people came together over and those they fought about are not important in their own right. Thus we would caution policymakers and decision makers against dismissing all conflicts resulting from fire events as an inevitable product of such occurrences. To suggest that there is a tendency toward cohesion and conflict is not to say that there are not genuine substantive issues to be addressed in dealing with future fires. Giddens's concept of social structure as both enabling and constraining effective responses to disaster should prove useful as future analyses draw out more specific policy lessons from this and other case studies of fire events.

If one looks for a single unifying theme in the results of this case, it can be said to be local agency. Or, as one anonymous reviewer of this manuscript observed, "*the local matters.*" Issues and dynamics that resulted in controversy or were seen as locally constraining (i.e., federal firefighting, outside aid, "others'" cultural perspectives), and those that resulted in cohesion (shared losses, common evacuation experiences, heroic animal rescues) all boiled down to particularistic local impacts and whether outsider actions (even those of other communities) seemed to consider or enable the application of local knowledge, local autonomy and locally desirable outcomes.

The case for more effective and respectful integration of local knowledge and perspectives with the technical and scientific knowledge base often underlying extralocal agency decision making has been made by a number of authors (Daniels and Walker 2001). We believe this case study suggests that this principle extends to fire-related issues as well (Daniels et al. 1996). In particular, its use by interagency fire suppression teams and outside assistance organizations during and after fire events appears to be a key in engaging local social systems and reducing one source of arguably unnecessary and often destructive social conflict.

As sociologists we recognize that one's location in social structure matters; therefore, we are not so naïve as to believe that there will ever be a perfect coincidence of views and perspectives between federal land managers and other extralocal entities and local actors. In addition, we recognize the need for clear lines of authority and decisive action in the midst of fire emergencies. We do believe, however, that progress can be made in better utilizing the energy, resources, and knowledge

of local actors in such emergencies. While space here does not permit detailed discussion of the practicalities of such efforts, it can be said that a key would be more highly developed and systematic agency/community *prefire* event coordination and planning. This extends to fuel reduction and other prevention activities,[9] as well as preparing communities for possible fire emergencies in the event preventive actions fail. In the case of firefighting, evacuation, and relief efforts, such coordination and planning should be integrated with rather than superseded by the ICS, external aid organizations, and other entities in the event of a large fire.

Research on community and institutional responses to wildfire offers an opportunity to view the effects of social constructions and social structure simultaneously. In this way we can examine local reactions arising in reaction to given conditions and institutionalized nonlocal responses in the context of local culture, history, and economy in order to understand why wildfires and all that go with them affect people and communities in ways that both draw them together and pull them apart.

Notes

1. Local informant from "Centerville" referring to the impacts of the Rodeo–Chediski Fire.
2. Theoretical sampling focuses on identifying and then sampling from relevant categories of interview subjects rather than on the basis of their statistical frequency or distribution in the population. Thus categories of subjects relevant to the social phenomena are identified and then sampled from, rather than randomly selecting subjects from a given population (Singleton and Straits 1999). In this study, the categories of interview subjects included personnel from firefighting agencies, evacuees, ordinary full-time and seasonal residents (some who suffered property damage, some who did not), local physical and mental health care providers, business owners, and local, state, county, and federal government officials. The number of respondents interviewed is a function of the complexity and diversity of the population relative to the issues of interest to the research rather than the size of the population.
3. As we detail later, this individual and the entire Type 1 team structure developed a very different reputation among some in Community Clusters B and C.
4. The Incident Command System (ICS) was developed to coordinate the many jurisdictions and agencies involved with disaster response. It is employed by many municipal, county, state, and federal agencies. In the case of large project fires on federal land, the responsible agency dispatches an incident command team of trained, experienced fire command officers from state, federal, and local agencies. Type 1 teams are the most highly trained and experienced of the incident command teams. They are dispatched to large, complex fires, such as the Rodeo–Chediski. Rules limit these teams, as well as on-the-ground firefighters, to 2 week tours of duty. Due to this and the changing nature of a fire, there is usually more than one incident command team on a project fire as the complexity and size change and as tours of duty expire. On project fires, the ICS supersedes any existing local interagency cooperation agreements. There were four Type 1 teams on the Rodeo–Chediski incident.
5. It is not the place of the authors of this analysis to reach any judgments about the efficacy of federal or local firefighting any more than it would be to take sides in

forest environmental conflicts. What is appropriate for present purposes, however, is to document the conflict and comment on its potential impacts on future federal/local relationships in the study area.

6. While the American Red Cross is not a federal agency, its national presence and appearance at disasters nation-wide warrants its inclusion in this section.

7. This may have been partially due to the fact that because of dangerous conditions during the fire itself, media people were initially restricted to the Centerville area but then later established an information center in a nearby non-threatened community. For reasons of first safety and later privacy for residents who suffered property damage, access to the other communities was not granted until the evacuation order was lifted.

8. The terms *insider* and *outsider* do not necessarily refer to geographic locations (Quarantelli and Dynes 1976).

9. Community Wildfire Protection Plans authorized under the Healthy Forests Restoration Act are a step in this direction. This is a community-initiated, collaborative planning process for the development of hazardous fuel reduction projects.

References

Aronoff, M. and V. Gunter. 1992. Defining disaster: Local constructions for recovery in the aftermath of chemical contamination. *Soc. Prob*. 39(4):345–365.

Beebe, G. S. and P. N. Omi. 1993. Wildland burning: The perception of risk. *J. For*. 91(9):19–24.

Berren, M. R., A. Biegel, and S. Ghertner. 1980. A typology for the classification of disasters. *Commun. Mental Health J*. 16(2):103–111.

Blackwood, A. 2002. Out at last, but Apaches feel tainted. *Nations Native News J*. 16(13):1, 5A.

Bucher, R. 1957. Blame and hostility in disaster. *Am. J. Sociol*. 62(5):467–475.

Carroll, M. S., A. J. Findley, K. A. Blatner, and S. Rodriguez-Mendez. 1999. *Social assessment for the Wenatchee National Forest wildfires of 1994: Targeted analysis for Leavenworth, Entiat and Chelan Ranger Districts*. Portland OR: U.S. Forest Service, Pacific Northwest Station. PNW-GTR-479.

Charmaz, K. 2000. Grounded theory: Objectivist and constructivist methods In *Handbook of qualitative research*, ed. N. K. Denzin and Y. S. Lincoln, 509–535. Thousand Oaks, CA: Sage.

Cortner, H. J. and T. Lorensen. 1997. Resources vs. structures: Fire suppression priorities in the wildland/urban interface. *Wildfire* September:21–33.

Cuthbertson, B. H. and J. M. Nigg. 1987. Technological disaster and the nontherapeutic community: A question of true victimization. *Environ. Behav*. 19(4):462–483.

Daniels, S. E. and G. B. Walker. 2001. *Working through environmental conflict: The collaborative learning approach*. Westport, CT: Praeger.

Daniels, S. E., G. B. Walker, M. S. Carroll, and K. A. Blatner. 1996. Using collaborative learning in fire recovery planning. *J. For*. 94(8):4–9.

Giddens, A. 1984. *The constitution of society*. Berkeley: University of California Press.

Glaser, B. G. and A. L. Strauss. 1999. *The discovery of grounded theory: Strategies for qualitative research*. New York: Aldine de Gruyter.

Hoffman, S. M. 1999. The worst of times, the best of times: Toward a model of cultural response to disaster. In *The angry earth: Disaster in anthropological perspective*, eds. A. Oliver-Smith and S. M. Hoffman, pp. 134–155. New York: Routledge.

Homan, J. 2003. The social construction of natural disaster: Egypt and the UK. In *Natural disasters and development in a globalizing world*, ed. M. Pelling, 141–156. London: Routledge.

Kroll-Smith, J. S. and S. R. Couch. 1990. *The real disaster is above ground: A mine fire and social conflict*. Lexington: University Press of Kentucky.

Kroll-Smith, J. S. and S. R. Couch. 1994. Environmental controversies, interactional resources, and rural communities: Siting versus exposure disputes. *Rural Sociol*. 59(1):25–44.

Kumagai, Y., J. C. Bliss, S. E. Daniels, and M. S. Carroll. 2004a. Real-time research on causal attribution of wildfire: An exploratory multiple methods approach. *Society. Nat. Resources* 17(2): 113–127.

Kumagai, Y., S. E. Daniels, M. S. Carroll, and J. C. Bliss. 2004b. Social-psychological reactions to wildfire: Implications for agency–community interactions and communication strategies. *West. J. Appl. For*. 19(3): 184–194.

Ladd, A. E. and S. Laska. 1991. Opposition to solid waste incineration: Pre-implementation anxieties surrounding a new environmental controversy. *Soc. Inq*. 61(3):299–313.

Navajo County. 2002. *Listing of affected structures* [online]. Accessed 13 December 2002. http://www.co.navajo.az.us/Rodeo-Chediski%20Fire/StructuresDamagedTally_NCBOS.pdf

Quarantelli, E. L. and R. R. Dynes. 1976. Community conflict: Its absence and its presence in natural disasters. *Mass Emerg*. 1:139–152.

Rodriguez-Mendez, S., M. S. Carroll, K. A. Blatner, A. J. Findley, G. B. Walker, and S. E. Daniels. 2003. Smoke on the hill: A comparative study of wildfire and two communities. *West. J. Appl. For*. 18(1):60–70.

Schneider, S. K. 1992. Governmental response to disasters: The conflict between bureaucratic procedures and emergent norms. *Public. Admin. Rev*. 52(2):135–145.

Scott, J. C. 1998. *Seeing like a state. How certain schemes to improve the human condition have failed*. New Haven, CT: Yale University Press.

Singleton, R. A. and B. C. Straits. 1999. *Approaches to social research*. New York: Oxford University Press.

Strauss, A. L. and J. Corbin. 1990. *Basics of qualitative research: Grounded theory procedures and techniques*. Newbury Park, CA: Sage.

U.S. Census. 2003. *State and county quick facts* [online]. Accessed 11 July 2003. http://quickfacts.census.gov/qfd/states/04/04017.htm

U.S. Forest Service. 2002a. *Rodeo–Chediski post fire information, Apache-Sitgreaves National Forest* [online]. Accessed 25 November 2002. http://www.fs.fed.us/r3/asnf/

U.S. Forest Service. 2002b. *Social analysis for the Rodeo/Chediski fire salvage on the Black Mesa District of the Apache-Sitgreaves National Forests, and the Payson District, Tonto National Forest* [online]. http://www.fs.fed.us/r3/asnf/salvage/publications/proj_record/034_SocialAnalysisForCEs.pdf

Wolff, K. H., ed. 1950. *The sociology of Georg Simmel*. New York: Free Press.