

After the disaster

Hurricanes in the US, an earthquake in Pakistan, and last year's tsunami have focused interest on a field now in high demand: disaster research.

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After the rumbles of an earthquake, the winds of a hurricane, or the waves of a flood, first responders lay claim to the most dramatic jobs. But quick on the heels of relief workers come the disaster researchers - people who leave the ivory tower of academia and head to the scene, hoping their analyses can improve people's lives the next time calamity strikes.

"In Katrina, people who have a wide variety of interests can see the applicability [of the social sciences] ... in the disaster context - and when these people come out [of school], they're going to get jobs," says Kathleen Tierney, a sociology professor and director of the Natural Hazards Center at the University of Colorado, Boulder.

Three PhD candidates at Boulder who had never considered disaster research before are now focusing on Katrina, she says. For one of them, "it never occurred to him that social inequality was related in some way to disasters until he saw Katrina, and it was like a light bulb going on."

For researchers who need to collect "perishable data" after a disaster, the Hazards Center awards government-funded quick-response grants. The center's initial 25 hurricane Katrina grants (totaling about \$75,000) included subjects ranging from the experience of evacuees to questions about looting and other crimes.

"We also had significant interest in researching the media ... a fairly new subject for us," says Greg Guibert, manager of the quick-response program.

Lauren Barsky used her grant to study post-disaster looting during a 10-day trip to Louisiana with fellow graduate students from the University of Delaware. "They made a Greyhound bus terminal in New Orleans into a makeshift jail for looters," she says. The majority of cases involved people taking items for survival, such as food. Those who looted other goods "were more likely to have taken part in negative behavior anyway," officials told her.

It was the first field research for **Ms. Barsky**, who switched her major from psychology to sociology because she was inspired by a class on the sociology of disaster. "You feel like you can make a bit of a difference," she says. "It's definitely stressful ... but it's worth it."

When Alice Fothergill arrived in New Orleans this fall, the scene was eerily familiar. Eight years earlier, she had studied women's experiences after the massive flood in Grand Forks, N.D. - the first entire US city to be evacuated after a disaster.

This time around, the University of Vermont professor looked at children's adjustments. She and Lori Peek, a colleague from Colorado State University, had been discussing the need for more disaster research on children, but they had no idea the opportunity would arise so soon, just as the semester was getting under way.

In this "drop everything" discipline, it takes some doing to arrange for substitute teachers and child-care at the last minute, but by mid-October they were in Cajun country, interviewing everyone from parents to shelter workers about children in their care. (They would have had to jump through too many hoops, Ms. Fothergill says, to be able to interview children directly.)

Children's resilience emerges as a theme

Adults often directed children to keep journals or draw pictures about their experience, Fothergill says, but kids also found other ways to process what had happened. "One family lost their house, and every day the boy and girl played evacuation - they'd run around with a bag and start throwing things in it really fast."

This brief exploration will lay the groundwork for a bigger study, Fothergill hopes. In the meantime, it will be published in a Natural Hazards Center collection of post-Katrina research.

Children's resilience emerged as a theme for Jennifer Kirschke, too. A photographer, she was commissioned by the Children, Youth and Environments Center for Research and Design at the University of Colorado to do a project right after Katrina. She traveled the Gulf Coast to conduct interviews and create a series of black-and-white portraits, which are now displayed on campus.

On her way back, she saw the image of a child crying on the cover of a national magazine. "I got a little nervous, because none of my photos look like that," Ms. Kirschke says. "I thought, 'Who's going to be interested in a bunch of photos of smiling children?' " Her interviews, however, revealed how resourceful children had been. One 12-year-old boy saved his family from drowning. "He lives with his grandmother and paraplegic uncle and little brother in Biloxi, Miss.... It was his idea to get the whole family on a mattress and float them out the window to the second story of a house next door."

Disaster research stretches back more than 50 years to World War II and the cold war. By looking at human behavior in a natural catastrophe, researchers thought they could predict how people would behave in war scenarios. They found that under severe stress, panic was actually rare, says Ms. Tierney of the Natural Hazards Center.

At the University of Ohio in 1963, scholars founded the Disaster Research Center, which moved to the University of Delaware in the 1980s. The resulting studies have contributed to everything from the understanding of collective behavior to applications such as business preparedness and emergency management.

The fact that disaster research is more applied than theoretical has sometimes led other academics to look down their noses at it, Tierney says. But Fothergill, for one, has seen attitudes change in the decade since her graduate adviser encouraged her to play down the title of disaster sociologist. She hasn't had trouble finding academic jobs, she says, and universities have been particularly interested in her work since she interviewed volunteers after 9/11.

The number of college-level programs related to hazards and disasters has also grown dramatically in the past decade. In 1995, there were about 10 such programs, compared with 121 today, and another 116 are under development, says Wayne Blanchard, manager of FEMA's Higher Education Project, which contracts with professors to develop new courses.

Job outlook for emergency management

When the project started in 1995, "we knew there were new hazards coming along, like Y2K, terrorism,... climate change.... And some hazards, like flooding, were increasing in intensity and frequency as we develop flood plains," Mr. Blanchard says. Without wanting to seem callous, he describes disasters as a "growth business." Last year, he says, labor statistics forecast a 28 percent increase in jobs for emergency management specialists by 2012.

At the National Science Foundation, social science research gets less than 10 percent of the budget, but interdisciplinary research - conducted by teams of engineers and sociologists, for instance - is on the rise, says Dennis Wenger, NSF's program director for infrastructure management and hazard response.

An increase in research doesn't always yield improved policy, however. The color-coded warning system developed right after 9/11, for instance, ignores some insights offered by the academic community, says Tierney. But over time, she's hopeful that homeland security officials will tune in as much as the emergency management community traditionally has.

The research emerging from the hurricane-ravaged south will be unprecedented because of the sheer scale of the catastrophe, says William Anderson, a longtime leader in the field and director of the Disasters Roundtable at the National Academy of Sciences in Washington. "The impacts [of hurricanes Katrina and Rita] are felt throughout the country and indeed the world. This is a real opportunity to test some of the knowledge that we've accumulated over the past 50 years."