

Tweeting Under Fire

Disaster researcher Jeannette Sutton explores how ordinary people create their own media during crises.

Interview by Jesse Walker

WHEN WILDFIRES swept through Southern California in October and November 2007, everyone with a home near the fire line was desperate for information. But the traditional means of finding time-sensitive news were flawed.

After the crisis, when a trio of disaster researchers asked residents how they felt about mainstream news coverage, the investigators heard complaints that “the information was insufficient, either because it lacked specificity to their area; was biased towards metropolitan areas; seemed focused on the sensational at the expense of those in rural or outlying areas; or was simply inaccurate.” And the government? Sometimes it did a good job of getting breaking news to the public, but other times its outlets were “slow to update information to at-risk and evacuated communities or simply overwhelmed and stymied by on-line traffic.”

Fortunately, there were alterna-



tives. As one interviewee told the researchers, “the only way we all have to get good information here is for those who have it to share it. We relied on others to give us updates when they had info and we do the same for others.” That meant going online, to community forums such as RimOfTheWorld.net and SoCalMountains.com: quick, con-

stantly updated efforts fueled by voluntary, amateur action. Earlier fires, another resident explained, had taught the locals that “there is no ‘they.’ ‘They’ won’t tell us if there is danger, ‘they’ aren’t coming to help, and ‘they’ won’t correct bad information. We have to do that amongst ourselves.”

These do-it-yourselfers were



enormously successful. By the end of the crisis, professional reporters and professional emergency workers alike were relying on RimOfTheWorld.net for the most up-to-date information. It was a bracing lesson not just for anyone who assumes that ordinary people are helpless in the face of disaster but for anyone who doubts that DIY media can ever out-

perform the mainstream press.

The lead author of the disaster researchers' paper is Jeannette Sutton, 38, a sociologist at the University of Colorado's Natural Hazards Center. Sutton, 38, is no stranger to catastrophe. Not long after graduating from the Princeton Theological Seminary in 1996, she worked with trauma patients as a hospital chaplain. After

helping coordinate victim response efforts to the shootings at Columbine High School, it was a natural progression for her to work "in a much larger context but with a similar population: people who were affected by events that disrupted their lives." Sutton went on to earn her doctorate in sociology at the University of Colorado at Boulder, where she became part

of a small, interdisciplinary group of scholars investigating the ways ordinary people use new media during crises. The tools in question range from Facebook to Flickr to Twitter to blogs—any technology that allows people to communicate and collaborate.

“Social media support social networking,” Sutton says. “It’s open. Lots of people can participate. Wisdom is driven up from the bottom. It’s not experts saying *this is what it is*, it’s people collaborating at a grassroots level.”

Managing Editor Jesse Walker spoke with Sutton via phone in May.

reason: One of your papers contrasts “front channel” and “back channel” communications during a disaster. How do the two channels view each other?

Sutton: The front channel is the of-

icial communication from public officials. They tend to rely on the major media to push information out to the public. The back channel is the unofficial communication that’s going on behind the scenes between members of the public. Public officials tend to view back-channel communications with great skepticism. It’s not controlled, it’s perceived as being disorganized, and there’s the potential for misinformation.

Where people use social media to communicate with one another, they’re doing so partly because the information they’re seeing and hearing from public officials and mainstream media is not adequate for what they need. Information from public officials flows very slowly. There are procedures that officials go through: They create a press release, they check it, they double-check it, they triple-check it, they send it up the chain of command—all these different people have to sign off. By the time that information is released, members of the public could have been sharing information at lightning speed through all of these back channels.

People who are using these social media channels have a perception of an information dearth. Policy restricts officials from being able to share information. And the public isn’t waiting for those press releases anymore.

That might be one of the reasons you’re seeing misinformation or what might be perceived as rumors flowing on these different communications channels too. It’s because people are trying to understand what’s happening.

reason: A lot of the recent commen-

tary about new media and disasters has accused Twitter of fomenting hysteria about swine flu.

Sutton: Yeah. (*Sighs.*) Somebody from the Canadian Press called and asked me about my perception of what’s happening online. I said people are *saying* there’s hysteria, and they quoted me as saying hysteria *happens*. But it’s not true!

In the initial days, when the swine flu first got going and Twitter was very, very active, I was online watching how many posts were coming across per second. And there were hundreds and hundreds of people Twittering from around the world on channels that were dedicated to the epidemic. People were using Twitter for sharing information, for confirming information, for asking questions about information, for organizing themselves, for asking questions about where resources are.

Sometimes you might see on those channels sort of a gallows humor. Making jokes about Porky Pig and Miss Piggy, that sort of thing. In the very early days, I saw some people making up all these conspiracy theories. Obama went down to Mexico, and two days later this Mexican official died, and was Obama carrying the disease? All these stories. That, I thought, was really interesting: just watching the evolution of the conversation.

reason: Did you see the hysteria and panic that was being reported?

Sutton: There’s a longstanding myth that’s perpetuated over and over again, in every disaster, about this concept of panic. It’s one of the reasons that public officials hold back information: They have this





fear that if they give out too much information, people are going to *panic*. Their response to the walking well who showed up at emergency departments is that those people are *panicking*.

People are sharing information; they're seeking out information; they're asking questions about whether or not they have the symptoms. Those are not incidents of panic or hysteria. That's rational thinking, where people are asking questions and trying to make decisions based on the information they have available to them.

The best example of a real incident of panic would be in those nightclub fires where people are trapped and the ceiling is burning and the doors have been barricaded and there's only one exit. People then panic because there is no way out. They're completely trapped.

But other times, you see people evacuating buildings in a very orderly manner. They're very calm, they're working together, they're

rescuing their colleagues, they're helping one another, they're very altruistic. You can't say that that's an instance of panic.

reason: How have people used Twitter in other disasters?

Sutton: There's very little research on how people are using Twitter. I did a briefing for people from Twitter a month or so ago, and they said, "This is great, because *we* don't really know how people are using our technology." There's been a great deal of interest and anecdotal information about how people are using Twitter, but I haven't seen a published study on the way people are using Twitter in disasters.

I do have a project that's not published yet that looked at the use of Twitter in the Tennessee Valley coal ash incident. In December of this last year, some coal ash containment ponds ruptured and flooded the Tennessee Valley. I gathered Twitter feeds from that disaster, with the idea that I would see how local people were connecting together to share information. The county had a lot of well-educated people, and I thought they must be using social media to communicate—these were just my assumptions. Stupid assumptions. What I found was that the people who were using Twitter were not locals. They were environmental activists, environmental journalists, people who were concerned about the clean coal issue.

They were located across the country, they were networked, and they had followers who were very concerned about green issues. They consistently backed up their information by tying it to blog accounts, journalistic accounts,

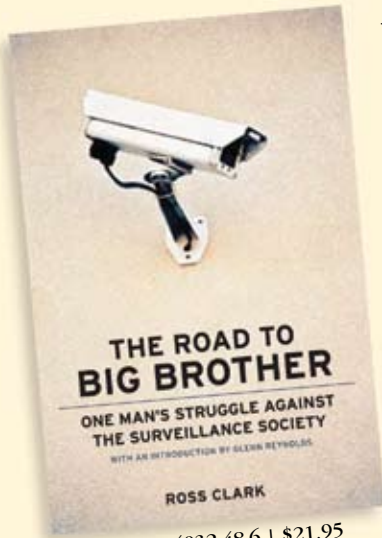
YouTube videos, pictures of the destruction, links to briefings from the Tennessee Valley Authority, and that kind of thing. So in that very small disaster that will have a very long-term environmental impact, people were using Twitter to sound the alarm.

My suspicion is we're going to see that Twitter is used very differently across different kinds of disasters. At the local level, with a natural disaster like the flooding in North Dakota in February, there's a probability that you're going to see locals using it to organize. At a technological disaster like the Tennessee Valley Authority, we didn't see locals using it; we saw environmental activists from across the country using Twitter to share information. With the H1N1 flu, it's a worldwide event. It wasn't localized. So the amount of information flowing on there, the level of chatter, was just immense, and there was a lot of information that could be seen as misinformation and very disorganized.

reason: In your study of the California wildfires, you quoted a resident who told you that the "national news websites were completely worthless as they ignored everything except the comparatively minor Malibu fire which burned near some celebrity homes." So instead they turned to the local professional news and to ultra-local peer-to-peer networks. What were the advantages of those media?

Sutton: The local news knows the local context. They know the streets that they're standing on when they're making a report, and when you observe them you know that they're standing on that corner

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because you know that corner too. National media that fly into a local community and try to make sense of what’s going on, they don’t know the context.

One of the benefits of tuning in to citizen journalism at a time like that is that local citizens are going to have local knowledge as well. And possibly in a very different way compared to the media that are sharing the information.

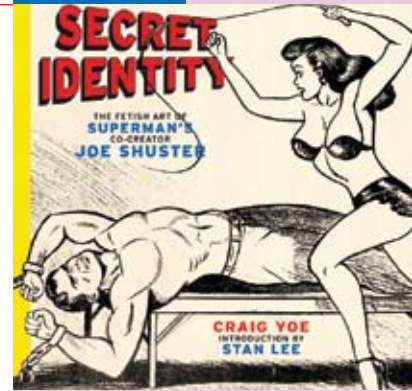
There was a community website in the mountains called RimOfTheWorld.net that became *the* outlet for information dur-

There’s a myth about this concept of panic. It’s one of the reasons that public officials hold back information: They have this fear that if they give out too much information, people are going to panic.

ing the wildfires. That website was developed specifically to deal with seasonal hazards, and it had been put up several years prior to the 2007 wildfires. Not only were other media outlets reliant on information that was being shared through that website, but the public officials became reliant as well. Firefighters became reliant on that citizen website. The Forest Service was reliant. FEMA [the Federal Emergency Management Agency] was reliant.

reason: What was appearing there that people found so valuable?

Sutton: They had volunteers that were monitoring the radio frequencies and putting up information as it was becoming available—monitor-



Super Porn

Do-gooder psychiatrist Fredric Wertham famously declared that the comics of the 1940s and '50s were rife with sadistic and perverted sexual themes. Craig Yoe's book *Secret Identity: The Fetish Art of Superman's Co-Creator Joe Shuster* (Abrams) shines a strange new light on that theme.

In 1954 Shuster, down on his luck after making a bad deal selling ownership of Superman to DC Comics, illustrated a series of cheap and lurid sex and bondage pamphlets called *Nights of Horror*. Those pamphlets were later implicated in a series of notorious youth-gang murders and then banned and destroyed by New York authorities—an act upheld by the U.S. Supreme Court in 1957.

This book reproduces the drawings and contextualizes them. Some of the characters are dead ringers for Clark Kent, Lois Lane, and Lex Luthor. But as Stan Lee writes in his introduction, while Superman was “positive and morally uplifting,” these stories “cater to the basest of man’s character.” They are a fascinating display of comics history nonetheless.—*Brian Doherty*

ing one back-channel communication and putting it up on another. Local residents who had chosen not to evacuate could put up information about what was going on. Following the fires, locals went out and took pictures of evacuation areas, street by street and house by house, and then posted them to the website so people could then see whether or not their homes had been destroyed or damaged. That was not something that public officials would generally do. It’s a different level of information that gets down into the local community.

reason: Do you see any lessons there for newspapers and other outlets dealing with the convulsions in the journalism industry?

Sutton: I think so. Tapping into the information that’s flowing online is going to become very valuable. So many more people have access to these channels for sharing information, and they may find themselves doing so on a routine basis.

reason: The impression I got is that people found them pretty reliable as well. How did people validate them as sources?

Sutton: It’s one source out of many. You can’t mortgage your house on it. It’s a lead, not the end-all of all leads. You have to confirm your sources.

This question about reliability and validity and trust can’t be ignored. I don’t think you just accept anything that comes across a forum. But when other people on the forum validate it and say, “Yes, I’ve seen that too,” that certainly lends credibility to what’s being read.

reason: In a different context—the

shootings in 2007 at Virginia Tech—you wrote about the collective problem-solving that takes place online.

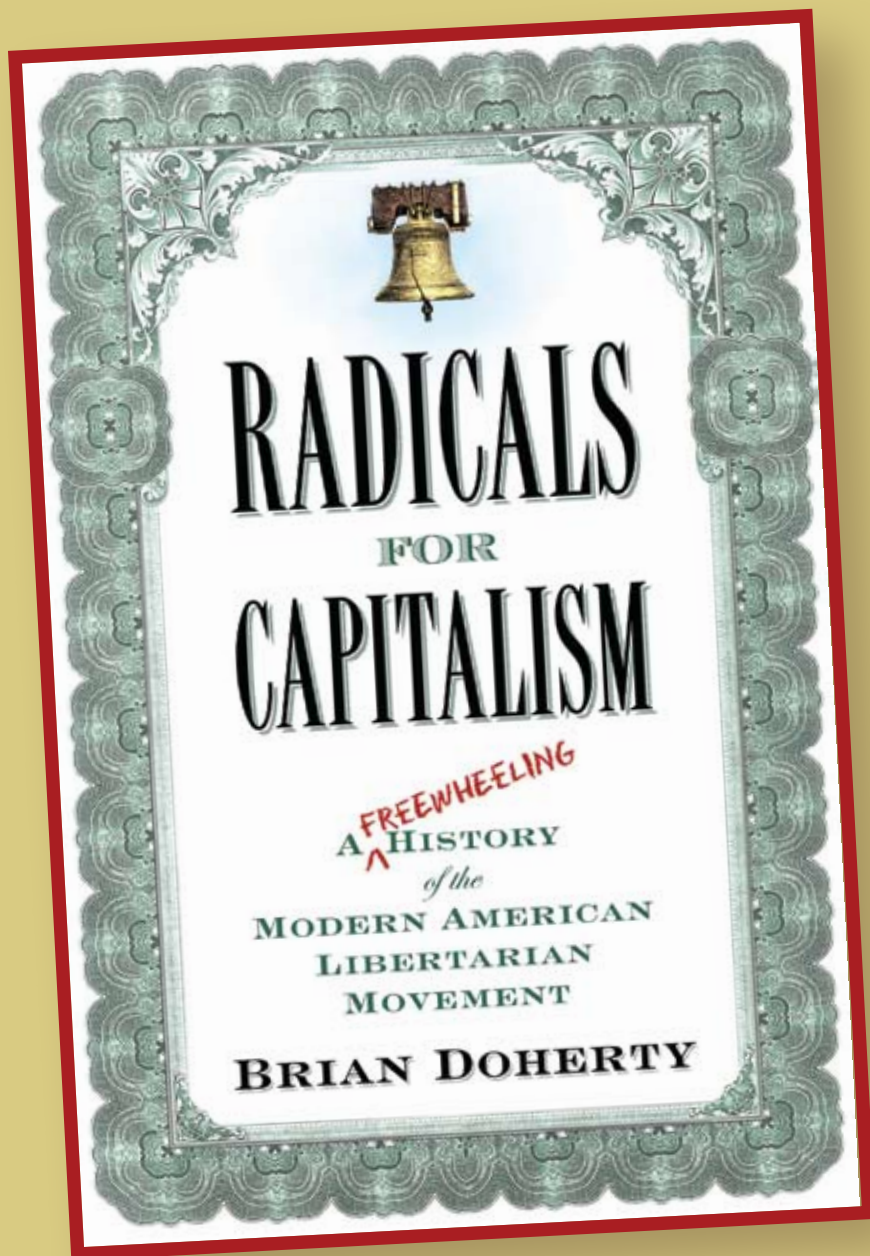
Sutton: That was an interesting study about this question of reliability. Once Virginia Tech said that 32 people had been killed, people on Facebook started gathering names and sharing them with each other and creating these lists: “We know that John and Sally and Sue and Peter have been killed.” They kept adding to that list until, by the time Virginia Tech had actually released the names of those that had been killed, all the names had been identified across all the lists that we looked at. And not one time did they incorrectly identify a name.

This idea that members of the local public are going to be sharing misinformation and doing it in a really disorganized way is really challenged when you look at situations like Virginia Tech. People were *very* careful, they *always* validated what they said, and if they didn’t back up the information, someone else online would say, “Where did you get your information from, and how can you confirm it?” The crowd is not always wrong.

reason: To what extent are these uses of new media extensions of familiar behavior during disasters, and to what extent do they mark a rupture with previous patterns?

Sutton: We have almost a century of research on how people behave in disasters, and it’s a consistent pattern. We’re just seeing it in a new space. People don’t really change the way that they act, but technology is facilitating new activities online.

We’ve always looked at this phenomenon of emergence: emergent activities, emergent groups, emergent networks to meet unmet needs. The classic example is the activity of search and rescue following a disaster. People often say that the first responders are the fire personnel that arrive on the scene and start to dig people out. That’s not true. The first responders are the local citizens who have no knowledge of how to effectively conduct a search and rescue and yet they dive into the rubble and start digging people out.



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Future Biotech Farmers of America

“The farmer and cowman should be friends,” the cast of *Oklahoma!* famously sang. Now the more vicious conflict is between organic and biotech farmers. *Tomorrow’s Table* (Oxford), by Pamela C. Ronald (a crop biotechnologist at the University of California, Davis) and Raoul W. Adamchak (a farmer who runs the university’s student organic farm), tries to bring the two sides together.

Adamchak points out the benefits to soil fertility and water retention that organic cultivation brings. Ronald makes a persuasive case for the safety of biotech techniques. No one has ever been harmed by growing or eating genetically engineered crops, she notes. Since the technology is contained in the seed, biotech crops especially benefit resource-poor farmers. By boosting food production, biotech crops use less land.

Part memoir, part almanac, part cookbook, part scientific treatise, the book shows that farming doesn’t have to be just organic or biotech; it should be both.—Ronald Bailey

That’s an emergent activity that we see over and over again.

It’s also an example of *convergence*. Convergence is where people come to the scene and participate in some way, by digging people out or by coordinating or by blocking traffic or by requesting more resources or by sending information to the Office of Emergency Communications—any new activity that’s meeting an unmet need.

So now we’re seeing emergence and convergence online. If you look at what was happening on Twitter and on Facebook during the Fargo floods, people were using those media to organize one another, to share information about evacuation zones, to encourage people to come to places where they needed additional help sandbagging and building up the dikes. It became a second level of warnings and alerts and organizing people and drawing resources to the necessary sites.

reason: You’ve written that the popular mythology about civic behavior during a crisis—that people are “hysterical, prone to error, and even dangerous”—now “pervades current disaster management policy and technological orientations.” You mentioned one example earlier, the reluctance to release information. What else did you have in mind?

Sutton: One of the reasons there is such a lack of attention to social media across the board—at city level, state level, federal level—is that governments restrict access. Their employees, in general, don’t have access outside of their intranet. So they can’t get streaming video, they can’t get on social net-

working sites, they can’t get onto the Internet in general, they can’t read or post to blogs. The first step is just lifting the restrictions so they have access.

After that, they’re trying to figure out how to use these technologies. But it’s a Pandora’s box. There are so many levels of policy that have to be addressed. We haven’t even got into the issues of privacy. This raises a lot of questions about Big Brother and surveillance. The government can now look in on citizen communications in ways it couldn’t before. Law enforcement gets into Facebook and MySpace groups. The way Twitter is designed, anybody can see what you’re saying to somebody else. If citizens are using these technologies with the idea that their communications might be in some ways private, they are misinformed.

It might affect the way they communicate with one another as well. People might choose to use a pseudonym so information can’t be tracked back to them.

reason: There are advantages to having an open system that anyone can read during, for example, the wildfires. And I can imagine times when it might be advantageous to have an anonymous channel as well, in case somebody has important information but doesn’t want to implicate himself in something. So people should understand whether a system is private, and the government should respect the privacy of an anonymous system. Is the legal issue more complicated than that?

Sutton: It may not be too much more complicated than that. It may be more about the perception of whether people have privacy. It raises questions.

I guess that’s my biggest point. There are so many policy issues that have not been addressed. The law moves so slowly, and technology moves so fast. ■

Managing Editor Jesse Walker (jwalker@reason.com) is the author of Rebels on the Air: An Alternative History of Radio in America (NYU Press).